



AN ANALYSIS OF THE BARRIERS ENCOUNTERED BY WOMEN IN THE
ZIMBABWEAN SMALL-SCALE MINING SECTOR

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By Rudo Sarah Muzamani

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Approval of Thesis

AN ANALYSIS OF THE BARRIERS ENCOUNTERED BY WOMEN IN THE
ZIMBABWEAN SMALL-SCALE MINING SECTOR

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Abstract

AN ANALYSIS OF THE BARRIERS ENCOUNTERED BY WOMEN IN THE
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Despite the government's efforts to enhance women's status, there are deeply rooted gender-based disparities that affect their active participation in the small-scale mining sector (Ibrahim et al., 2020). This study analysed the lived experiences of women in the small-scale mining sector with emphasis on the gender-based disparities and challenges women encounter in their endeavour to participate in the sector. The study focused on identifying potential survival strategies to counter these challenges. An interpretivist philosophical paradigm culminated in using a qualitative data collection approach, incorporating 60 key informant interviews with women in small-scale mining. It was established that restricted immovable property rights, limited financial opportunities, inadequate technical skills, insufficient legal recognition, and gender stereotypes are subtle obstacles to the advancement of women in the small-scale mining sector (Valadares et al., 2022). The existence of patriarchal cultural norms perpetuates male dominance in the small-scale mining sector and significantly contributes to gender disparity (Mugo et al., 2021). These circumstances give rise to women encountering sexual harassment, job segregation, wage disparities, and challenges in managing work-life balance (Arthur-Holmes et al., 2023). The study concludes that critical success factors for women in the small-scale mining sector are defined by their ability to leverage strategic networking with other women who have successfully navigated through glass ceilings and glass cliffs. The study recommends leveraging the

transformational leadership dimensions of inspirational motivation, intellectual stimulation, and individualised consideration from successful female role models in the small-scale sector, which are strategically important for women's effective participation. Advocating for gender-sensitive legislation that rectifies gender imbalances in the mining sector is crucial for increasing women's participation in the sector.

Key words

Gender imbalances, gender stereotypes, wage disparities, male domination, small-scale mining,

Declaration

I declare that this thesis was composed solely by me, and it was not submitted either in part or in whole in any previous application for a degree. Except where stated otherwise by reference or acknowledgement, the work presented is entirely my own.

AI Acknowledgement

The artificial intelligence tools that were used in the compilation of the thesis included Quill Bot (<https://quillbot.com/grammar-check>), and Grammarly (<http://www.grammarly.com/>), specifically for the correction of grammar and spelling mistakes.

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Dedication

I dedicate this thesis to my family, my husband, and my children. Thank you all for your support and understanding throughout my studies

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My sincere gratitude goes to my supervisor, Dr. Fanice Junge Nafula, for her invaluable and incredible patience and feedback that have kept improving my work and motivating. I could not have undertaken this journey without my defence panel, who generously provided knowledge, expertise, and corrections to make my work better and worthwhile. Additionally, this endeavour would not have been possible without the emotional support of my office mates, who allowed me space and free time to attend webinars, which would always commence during working hours. I am grateful to my student advisor, Mr Clever Gideon, for his assistance and patience in explaining how the system works when I got stuck.

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LIST OF ACRONYMS

EMA	Environmental Management Authority
FPR	Fidelity Printers and Refineries Pvt Ltd
FPR	Fidelity Printers and Refineries Pvt Ltd
GDIF	Gold Development Initiative Fund
NSSA	National Social Security Authourity
OHS	Occupational Health and Safety
SADC	Southern African Development Community
UREC	UNICAF Research and Ethics Committee
ZELA	Zimbabwe Environmental Law Association
ZIMRA	Zimbabwe Revenue Authority
ZMF	Zimbabwe Miners Federation
ZRP	Zimbabwe Republic Police

CHAPTER 1: INTRODUCTION

1.0 Introduction

The contribution of women in the family unit and society at large cannot be overemphasised. However, the contribution of women in mainstream economic and business affairs remains overshadowed by a multiplicity of dynamic and compounding variables (Traoré, Hilson & Hilson, 2024). Conditions where women survive well, their families and communities survive well too, is a commonplace observation that justifies their participation in mining activities, just like men, for livelihood (Dzvimbo, Ncube & Monga, 2020). The study focuses on women's lived experiences linked to their participation in small-scale mining operations. It further articulates ideal strategies to address the gender-related constraints that women in small-scale mining/ face in Zimbabwe.

Small-scale mining is characterised by rudimentary methods of mineral extraction carried out legally or illegally. Some operations in small-scale mining are bastions of criminality, banditry and immorality (Katz-Lavigne, Mkodzongi & Nyandoro, 2024). The term rudimentary is a key distinguishing characteristic of small-scale mines since they utilise ordinary equipment, like shovels, ropes, picks, and blasters, and manpower (Nyavaya, 2021). This distinguishes informal mining from established mining entities that use complex machinery for prospecting and mineral extraction. Occupational health and safety is a cause for concern for women participating in small-scale mining operations, with increasing operational hazards being reported (Singo, Isunju, Moyo, Bose-O'Reilly, Steckling-Muschack & Mamuseet, 2022). Limited government support and a lack of legal recognition affect the operation of operations in small-scale mining (Shagdarsuren & Purevjav, 2022).

There are challenges in ascertaining the actual size of small-scale mining systems in the public domain. Conservative estimates by the Parliament of Zimbabwe suggest that the small-scale mining sector comprises around 500,000 miners, mainly gold miners, who support up to 3 million dependents (Nyavaya, 2021). Most of these small-scale miners operate outside government policy, regulation, and support (Gyan & Behrends, 2024). This implies that most government departments, such as the National Social Security Authority (NSSA), do not have a direct bearing on activities taking place in the small-scale mining sector (Mkodzongi, 2024). This study examines the effects of barriers on women's active engagement, with a particular focus on operations in small-scale mining in Zimbabwe, and proposes adaptive strategies to improve the life chances of women participating in small-scale mining.

1.1 Background to the study

The rich pickings associated with operations in small-scale mining have attracted many people to try their luck in a largely unregulated sector (Dzvimbo *et al.*, 2019). The active participants include women who venture into small-scale mining operations in search of favourable economic fortunes. The conceptual appeal of operations in small-scale mining is reflected in Zimbabwe's national income statistics. In the 2024 financial year, small-scale gold miners delivered gold with an estimated market value of US\$23,745.64 to Fidelity Printers and Refineries. This is in contrast to gold worth US\$12,741.11 per kilogram, which is produced by many gold mines in Zimbabwe (Sungiso, 2025). This demonstrates that small-scale miners accounted for 65% of the value of gold distributed to the authorised buyer in Zimbabwe.

These statistics illustrate the significant contribution of small-scale mining to Zimbabwe's economy. It suffices to say that operations in small-scale mining are not confined to the extraction of gold; they also involve other high-value minerals, such as the recently

discovered lithium ore, alluvial diamonds, and chrome (Nyavaya, 2023). However, the most prominent mineral that attracts many small-scale miners is gold, due to its high value and the relative ease with which miners can access it using rudimentary methods.

Women comprise most of the Zimbabwean national population, accounting for 52% of the 15,178,957 people in Zimbabwe (ZimStat National Census Report, 2022). This is equivalent to 92 males per 100 females. However, this dominance is not represented in the influential positions, particularly in small-scale mining. Current statistics indicate that women may make up only 10% of the 535,000 small-scale miners in Zimbabwe (Chimoio, 2022). The gendered cultural prejudices against women's effective participation in mining activities are well documented in the literature.

The historical legacy of gender-based occupational segregation in mining has been attributed to the 19th-century gold rush, when workplace assignments were based on gender. Most men pursued professions in the construction and mining sectors of the economy, with women occupying peripheral service sector professions (Aguilar-Gomez & Benshaul-Tolonen, 2023). The systemic cultural prejudices against women were documented in different economies, such as the Netherlands, Romania, Belgium, Brazil, Bulgaria, and New Zealand, and in South Africa (Romano & Papastefanaki, 2020).

The work of Parmenter, Leroy-Dyer and Holcombe (2024) reiterate that the gender-based occupational segregation of women regarding their participation in the Australian mining activities led to women occupying lower echelons in the hierarchy. Their prospects are determined by racism and sexism in the experience. Similar beliefs and perspectives were evident in Brazilian mining activities, where women's active participation was primarily determined by traditional roles, resulting in fewer women occupying influential leadership

positions (Silva, Silva & Fontana, 2023). Cultural legacy against the penetration of women in a sector predominantly male has more often resulted in their stigmatisation in the Indonesian context, despite being a constitutional right for women to work with men in different fields

Religious beliefs have compounded the gender-based occupational segregation and restriction of women from actively participating in small-scale mining in Indonesia (Priandhita & Lahiri-Dutt, 2023). The key constructs that were brought about, which contributed to the gender-based occupational segregation of women participating in small-scale mining operations, related to the misfortunes they bring, especially for menstruating women (Mensah, 2024). The cultural taboos against women's in small-scale mining in mineral-bearing areas are intensifying the systemic exclusion of women from actively contributing to the small-scale mining activities (Dzvimbo *et al.*, 2019).

The African context is a hotbed of cultural taboos that systemically exclude women from actively participating in small-scale mining. Research in the DRC demonstrates that beliefs have restricted women from entering small-scale mining sites associated with misfortunes for diggers (Bashwira & van der Haar, 2020). The exclusion of women on account of the purported misfortunes is documented in other African settings, such as in Ghana, where a patriarchal culture perpetuates male domination to the disadvantage of women (Buor & Ayim, 2019). The systemic cultural prejudices against women have been justified on their biological inability to operate in harsh operating conditions that require higher levels of physical endurance (Valadares *et al.*, 2024).

In addition, research has shown that the existence of culturally gendered norms contributed significantly towards deterring the active interaction and the active participation of women in mining in Sub-Saharan Africa (Buss *et al.*, 2021). These challenges are linked with

the culturally assigned gender roles of people who are not physically strong to operate effectively in a manual operating environment, which characterises operations in small-scale mining. (Baumann-Pauly, 2023). The systemic relegation of women in small-scale mining operations was attributed to the existence of weak regulations, which perpetuated the systemic segregation of women regarding the control of immovable property rights to women. This is used as the basis for securing collateral from the financial sector (Mafongoya *et al.*, 2021).

Mensah (2024) specified that patriarchy, which characterises male-based decision-making and tenure, has led to the marginalisation of women through affecting their ownership of immovable property in the African context. Related beliefs and perspectives were expressed in small-scale mining because of cultural insecurities and unsafe working conditions (Bryceson *et al.*, 2021). Research in the Zimbabwean district of Gwanda underscored that, apart from the positive benefits associated with gold panning, the active participation of women in small-scale mining operations was constrained by unfavourable working conditions, which pose a threat to occupational health, safety and sanitary conditions (Ncube *et al.*, 2022).

Complexities associated with women's active participation in small-scale mining have been a key focus of research in Ghana, where the isolation of women was a significant obstacle to their empowerment in informal mining activities (Adam *et al.*, 2022). A related study in Ghana from the works of Arthur-Holmes and Abrefa Busia (2021) reiterated that the gender-based occupational segregation of women in the informal mining segment is overshadowed by the culturally assigned gendered roles that hinder the active inclusion of women and push them to the fringes of the mineral ore extraction sector. Similar beliefs and perspectives were supported by a study undertaken in the eastern DRC, where the active participation of women in the informal mining activities remains overshadowed by gender-based occupational

segregation, discrimination and sexual exploitation and violence (Bashwira & van der Haar, 2020).

The hindrances posed by discrimination and sexual violence against untrained women are heavily entrenched in nations that actively engage in illegal and informal mining setups, confining women to the periphery. Buss *et al.* (2021) reiterate that in Mozambique, women are more likely than men to fall victim to informal mining activities due to cultural legacies and gendered roles that confine women to supportive tasks (Chikwanha, 2024). Research in Zimbabwe underscored the social exclusion of women participating in informal mining in the Midlands province. Most women occupy peripheral roles as labourers, entertainers, and other supportive roles for male miners (Dzvimbo *et al.*, 2019). The study confirmed that cultural taboos negatively affect women's active engagement in this sector, leading to several women being participating as nightclub entertainers and occupying peripheral roles in informal mining activities, such as fetching water and firewood for cooking (Jackline, 2022).

The exploitative view of women as objects of sexual pleasure, especially in informal mining communities, has been documented in the Solwezi mining town in Zambia, where sexual exploitation and commercial sex work against women are prominent (Johnston *et al.*, 2024). Women who participate in the informal training sector are most prominently commercial sex workers who provide alternative forms of entertainment for male mining workers. This derogatory view of women's contributions to informal mining activities has often attracted ridicule, leading to very few women eager to be part and parcel of such activities under unregulated conditions. In addition, researchers confirmed that women come across intense gender-based violence which affects their emotional, sexual and physical well-being, arising from the culturally conflicted view of women as second-class citizens (Tiernan & O'Connor, 2020).

The exploitation of women and their underrepresentation in informal mining activities comes against the backdrop of increasing pressure for women's emancipation, to enhance the economic fortunes and life chances of women in environments predominantly male. Nevertheless, women are still facing extreme hurdles due to unfavourable cultural and social norms, favouritism, and a culture predominantly male (Arthur-Holmes & Abrefa Busia, 2021). Moreover, the absence of comprehensive and supportive legal frameworks, which are influenced by suppressive cultural norms, intensifies the systemic segregation of women from actively participating in small-scale mining, given that the legal system is heavily stacked against them (Chikwanha, 2024).

The presence of gender-based occupational segregation against women's participation in informal mining activities is a violation of their rights to fair employment opportunities to explore economic fortunes in the sector. Occupational discrimination against women has ethnic and cultural origins related to religion, race, health status, and the economic and social standing of women (Jackline, 2022). Research in Ghana confirmed a tendency for cultural and spiritual sanctions that limit women's active engagement in gold mining activities (Omotehinse & Ogunlade, 2022). Results show poverty is heavily stacked against women, even though it is ubiquitously defined across the diversity of the social, religious and cultural beliefs in Africa. This has been one of the key drivers of women's entry into operations in small-scale mining as an ideal and economically viable way to earn additional income and alleviate poverty.

Extant studies have shown that courageous women who penetrate operations in small-scale mining were either married with children or had divorced children, which drives the need to seek a means of sustenance through mining activities (Omotehinse & Ogunlade, 2022). It was established that there is no correlation between religion and the ease with which women are prepared to venture into operations in small-scale mining. Alternatively, Baddianaah *et al.*

(2022) has confirmed that people of Islamic faith have a higher proclivity to engage in informal mining activities compared to those who believe and observe the traditional African religion

In Zimbabwe, informal gold mining is a lucrative way for households to supplement family income, especially for women. This results from the progressive deterioration of economic fundamentals, characterised by a hyperinflationary environment, exchange rate instability and the general decline in the formal employment statistics. (Chimoio, 2022). The intensity in the deterioration of economic fundamentals in Zimbabwe has been the key driving force behind the increasing demand for small-scale mining in Zimbabwe by females (Mkodzongi, 2023). This has more often led to gold rushes across various mining areas in Zimbabwe. The unregulated nature of informal mining activities and the failure to observe acceptable occupational health and safety protocols, a significant number of injuries and fatalities recorded across the country (Makoto & Ngendakumana, 2023).

Most of these injuries have almost exclusively included men who are actively participating in the actual mineral ore extraction underground, albeit in the absence of safe and secure ways of extracting minerals (Al Jazeera, 2024). The insecurities and the occupational hazards associated with the extraction of minerals from the earth's crust, especially in small-scale mining, can be used as the trump card to relegate women to supportive roles in the small-scale mining activities systemically (Johnston *et al.*, 2024).

Zimbabwe has one of the highest inflation rates in the world, pushing the majority of people to survive below the poverty datum (Mhonyera, Masunda & Meyer, 2023). Despite the threats and occupational hazards associated with operations in small-scale mining, the sector has managed to attract a huge following from women (Makoto & Ngendakumana, 2023).

The high rates of unemployment in Zimbabwe, estimated at 85% in the formal sector, are an impetus for women to engage in small-scale and informal mining activities (UNICEF, 2024). These unfavourable economic fortunes have been compounded by climatic change in Southern Africa, characterised by severe aridity and droughts due to poor rainfall patterns. Reliance on climate-based agriculture has proven futile, with a sizeable number of women considering venturing into street vending or informal mining as appropriate income-generating methods (Chigudu, 2021).

The Zimbabwean government, through Fidelity Printers and Refineries Pvt Ltd (FPR), the country's sole gold buyer, has provided a US\$20 million loan facility specifically for women lived experiences in small-scale mining operations through the Gold Development Initiative Fund (GDIF). Apart from these funding initiatives, there is still a gap in the uptake of these loans by women miners in Zimbabwe. This is a serious concern, as it indicates the existence of gender-based challenges to the uptake of financial packages for women lived experiences in small-scale mining operations that warrant research (Chinembiri, 2019). The Gold Development Initiative Fund was earmarked for resolving some of the financial constraints faced by women miners. The rationale behind allocating only US\$20 million to women out of the \$150 million loan facility has raised questions about gender disparity. Women have formed groups in most of the provinces around Zimbabwe to help each other with ideas to tackle any challenges they may come across, as their circumstances differ from those of men, but most of them have remained unresolved (Chimoio, 2022).

Several initiatives have been proposed to address the systemic challenges women experience in small-scale mining. Some of these initiatives incorporated the formation of women empowerment groups that advocate for women's rights in small-scale mining. Perhaps the success story of women's empowerment in small-scale mining is that of Dr Smelly Dube,

who was conferred with an honorary professorship by the El Roi London University in recognition of her outstanding contributions to mining and industrial development across Africa. Dube is a co-director at Tebekwe Mining in Shurugwi, Midlands Province. The mining employs over 200 employees and 1,000 dependents, benefiting from the revenue generated from mining activities (Chadenga, 2024). This showcases the success story of women participating in small-scale mining and gives credence to calls for active involvement and the inclusion of women in mineral ore extraction activities, especially in positions of responsibility, as they have proven pivotal to the sector's development.

There is a huge deficit regarding the number of women in positions of influence and leadership in small-scale mining in Zimbabwe. However, the national director of women's empowerment in mining in Zimbabwe, Mrs Chipangura, believes that women are making inroads in the mining value chain from extraction to the provision of services (The Herald, 2023). At the grassroots level, women involved in small-scale mining earn an average of between \$5 and \$10 per day, an amount adequate to supplement family income and reduce dependence on men.

The success story of Dr Dube and the vision of women's experiences in small-scale mining, as per Women's Empowerment in Mining in Zimbabwe, was captured by Machinga (2019), who stipulated that the efforts by the Zimbabwe Environmental Law Association (ZELA) to promote environmental justice and sustainable and equitable use of natural resources amplified the voices of small-scale women miners in Zimbabwe. The goal was to empower women to compel the government and other businesses to address the barriers they face. Regardless of these efforts, ZELA still points out women's impediments in trying to operate their mining businesses successfully (Chinembiri, 2019).

1.2 Statement of the Problem

The predominance of men in small-scale mining, rooted in the historical cultural legacy in which men have traditionally held the privilege of occupying leadership positions and influencing various sectors of the economy, has led to poor integration of women in the sector (Chinembiri, 2019). This is intensified by the cultural manifestations of a patriarchal society that undervalues women's active engagement in small-scale mining and undervalues the contributions they make in the sector (Mkodzongi, 2024). Religious beliefs and myths restrict women from performing certain activities in small-scale mining, where the presence of women in proximity to ore-bearing areas is thought to bring misfortune and the disappearance of minerals. Chenjerai (2019) cited that some Zimbabweans are withdrawing from pits due to the cultural belief that they bring misfortune to mining pits during their menstrual period. Cultural myths serve to obscure the exclusion of women from operations in small-scale mining and to confine them to household chores (Mwandiringana & Ye, 2023). *Women and Law in Southern Africa* (2019) noted that, though Zimbabwean mining policies, laws, and institutions are gender-neutral, the gendered exclusion of women from small-scale mining persists. This is notwithstanding the amended Constitution of Zimbabwe No. 20 of 2013 that encourages gender equality in employment, representation, and decision-making. Nevertheless, sectoral gender inequalities are linked to current mining laws and practices, which favour men over women in granting mining licences, as most women lack collateral security (Mining Zimbabwe, 2019).

Women's integration and participation in small-scale mining have progressed slowly due to the challenges they face, considering that women in mining were allocated 13.3% of the

US\$150 million in loans. However, only US\$20 million was allocated to women miners. This comes against the backdrop of the efforts by the Zimbabwean government to provide loans to women miners through the Gold Development Initiative Fund (GDIF), which is supported by Fidelity Printers and Refineries Pvt Ltd (FPR) (Chinembiri, 2019).

The lack of collateral security has exacerbated women's inability to access adequate loans from the financial sector to finance their small-scale mining businesses (Chinembiri, 2019). The contributions of the current research are to explore possible solutions to the systemic challenges women encounter in their efforts to actively participate in small-scale mining. Emphasis is on exploring the gender-based cultural myths that affect the participation of women in small-scale mining operations in Zimbabwe (Chikwanha, 2024). This study examines the generic barriers that women miners encounter in Zimbabwean operations in small-scale mining and possible coping strategies to navigate these challenges.

1.3 Purpose of the Study, Research Aims, and Objectives

This study examines the gendered barriers women face in Zimbabwean small-scale mining operations. The study highlighted unresolved gender effects that hinder the full representation of women's experiences in small-scale mining operations (Miyen *et al.*, 2022). Women are underrepresented in decision-making and policymaking. Contributing to their withdrawal from mining pits due to a cultural belief that they are not allowed underground, their presence during the menstrual cycle is believed to cause misfortune and the disappearance of minerals (Chenjerai, 2019).

Medically, menstruation is a regular cycle of monthly shedding of the lining of a woman's uterus, which has nothing to do with small-scale mining businesses (Chenjerai, 2019;

Priandhita & Lahiri-Dutt, 2023). This cultural taboo lacks a scientific justification, implying that it is a deliberate ploy to systematically exclude women from the small-scale mining sector.

The study sought to explore the complex dilemmas facing women experiencing in small-scale mining operations, including receiving only 13.3% of loanable funds for mining development (Chinembiri, 2019). Women still face financial challenges in acquiring small-scale mining equipment. However, the financial providers and other stakeholders are being offered to them because they must meet the requirements to qualify. According to Chimoio (2022), these challenges women experience in this sector are causing scepticism, and the analysis exposes the barriers that prevent women from breaking through and making a difference in Zimbabwe's economy.

Small-scale mining differs from large-scale mining in requiring no educational qualification but physical ability and resources. Nevertheless, technical know-how is essential in using small-scale equipment and handling dangerous chemicals like cyanide, mercury, and blasting explosives. Moreover, administrative training is necessary for running small-scale mining as an enterprise, as in these operations, most miners run from hand to mouth due to poor fiscal management of income and expenditures (Chinembiri, 2019).

The predicament that women face in small-scale mining operations is partly attributed to the negative impacts of patriarchal systems in the Zimbabwean cultural norms. Zimbabwean women could only claim or own land through their husbands or male relatives, which might be a factor in their failing to meet the collateral requirements to access the financial assistance the government offers them. The presence of women in small-scale mining operations is often overlooked due to patriarchal systems.

1.4 Nature and Significance of the Study

This study adopted a mixed research approach and an exploratory design. The target population consisted of women directly involved in small-scale mining across Zimbabwe's gold-mining hotspots. An exploratory design was selected to enhance the understanding of the phenomenon. According to Schindler (2022). Exploratory research examines hypothetical or theoretical ideas that must be clearly defined, and it is most appropriate in this study to clearly understand the existing problem. This design further lays the basis for forthcoming studies or determines whether a prevailing theory can elucidate what is detected. As a result, this study employed a mixed-methods approach to gather information on the phenomenon in question, with a small amount of quantitative data when numerical data was necessary.

The target population included women who own or work in the Zimbabwean operations in small-scale mining. The contact methods involved conducting key informant interviews with these participants, who were reached through a combination of judgmental and snowball sampling. Concerning ethical issues, informed consent preceded data collection. Confidentiality and anonymity were ensured to protect participants' identities. A non-probability sampling technique was employed as the methodology does not allow estimations, and it allowed the researcher to carefully choose the inquiry units, constituting a sample representative of the entire population. Judgmental sampling was most suitable for drawing samples from that part of the population conveniently, with fewer rules to follow, and purposive sampling was suitable for relying on judgment when choosing the survey participants. The researcher chose participants in this study based on their accessibility to the

study. Face-to-face interviews were applied to easily interpret body language and facial expressions

An exploratory approach enabled the study to reach out to participants believed to have specific information that would shape its course. The frame of reference for this study led to a sample size of 60 women participating in small-scale mining operations.

The data collection process incorporated conducting physical interviews. The electronic version of the interview guide provided convenience for participants to preview the interview questions and prepare for the interview. This approach provided data collection benefits because the interview data form provided instructions to be answered before the survey questionnaire could be submitted. However, some participants in this study preferred in-person interviews due to the sensitivity of the issues under consideration. The data collection instruments included a combination of closed and open-ended questions. Close-ended questions were measured using the 5-point Likert scale for ease of responses. The Likert scale helped quantify the barriers that women participating in small-scale mining operations in Zimbabwe have encountered, as well as the extent of seclusion due to the inaccessibility of funds.

This approach provided participants with the option to indicate their level of agreement or disagreement with the gender-based challenges women face in their efforts to actively contribute to small-scale mining activities. The research instrument included three sections. The first section measured the imbalances endured by women participating in small-scale mining operations. The second section focused on women's challenges and generic barriers in small-scale mining. The third section emphasised the coping strategies to assist women to circumvent the injustices they face in the sector. The third section of the research instrument

included open-ended questions to provide participants with a platform to share their opinions on strategies to improve their life chances in the sector.

The study used a research instrument with both open-ended and closed-ended questions, as they enabled participants to express themselves freely and provided opportunities for further probing. Specific predetermined questions contained a degree of flexibility, allowing for the inclusion and pursuit of evolving themes as issues emerged throughout each interview. The flexibility enabled richer insights from participants by creating an interactive environment that allowed personal ideas, feelings, and motivations to be expressed freely; hence, this study applied them to identify barriers.

Thematic analysis was employed to analyse qualitative data. This approach to data analysis was appropriate for classifying the gathered data into themes and sub-themes, facilitating ease of comparison and contrast. As such, thematic analysis simplified information and produced outcomes that were easy to measure qualitatively. Despite prior research, this study's uniqueness lies in its emphasis on gendered challenges women encounter in Zimbabwean operations in small-scale mining, rather than mining in general, as each sector has different setups and hence different challenges. While prior research has been undertaken, the results were not conclusive as to the context-specific socio-economic hindrances affecting the participation of women in small-scale mining operations.

1.5 Research Objectives

The main aim of this study is to explore the gender-based cultural beliefs affecting the participation of women in small-scale mining operations in Zimbabwe (Chikwanha, 2024). The specific objectives are to:

RO1: Assess the barriers encountered by women in progressing in the small-scale mining in Zimbabwe.

RO2: Examine the gendered imbalances faced by women in male-dominated small-scale mining in Zimbabwe.

RO3: Propose coping strategies that women participating in small-scale mining operations can explore to navigate through the challenges they encounter.

1.6 Research questions

Given the qualitative nature of the enquiry, the following research questions were examined.

RQ1: What are the gender imbalances that exist in small-scale mining in Zimbabwe?

The scope of this research question was to address existing gender imbalances that affect women's active participation in small-scale mining in Zimbabwe. The need to explore gender imbalances comes out of the realisation that extensive literature has emphasised a patriarchal culture of male domination as one of the key stumbling blocks towards the upward progression of women in different sectors of the economy, including operations in small-scale mining (Ochir et al., 2023; Sudaryat et al., 2024; Valadares et al., 2024). In this regard, the current research sought to explore whether gender-based imbalances significantly influenced the proclivity of women to venture into and occupy influential positions of power and responsibility in small-scale mining, given the existing power dynamics in other sectors of the economy, such as politics and industry.

RQ2: What challenges do women participating in small-scale mining operations face in Zimbabwe?

The scope of this study objective was to explore generic challenges that women might face in their endeavour to participate and contribute meaningfully towards the development of operations in small-scale mining. Literature has identified a variety of hurdles to active engagement of women participating in small-scale mining operations, especially regarding the failure to control immovable property rights (Ochir et al., 2023), which was closely related to the challenges in accessing finance that women usually face when they apply for loans or lines of credit in the financial sector. Some of the challenges highlighted in literature are relics of an exploitive legal system which fails to recognise women as independent people who can enter enforceable contracts and control the means of protection. These challenges compound the gender-based segregation endured by women in the small-scale mining sector.

RQ3: What are the coping strategies used by women to navigate through the challenges they face in the small-scale mining sector?

Ultimately, the study intended to devise mechanisms that women actively involved in small-scale mining can utilise to improve their emancipation and empowerment. The scope of these strategies helps women navigate the gender-based barriers and other systemic challenges they encounter in their journey towards economic freedom and participation in small-scale mining. It is anticipated that the formulation of coping strategies will help create a salubrious environment and favourable legal frameworks that can recognise women's contributions to date and benefit from their inclusion and active participation in the sector.

1.7 Significance of the study

The relevance of this study was premised on its contribution to the existing knowledge base regarding theory development, practice, and methodology.

1.7.1 Theoretical Contributions

From a theoretical perspective, the research provided key insights into the applicability of theories that seek to explain the systemic challenges women experience in their drive to achieve social recognition. Of particular interest is the biological theory, which tries to explain the systemic exclusion of women from a predominantly male-based sector on the basis of their sexual orientation, which determines their life chances and the careers that they can advance later in life. The outcomes of this study aim to critically evaluate the biological theory's explanatory power with respect to the limited contribution of women participating in small-scale mining operations.

In addition, the theoretical significance of this study lies in its contribution to the appreciation of the relevance of the glass ceiling theory, which explains the systemic segregation of women from achieving success and advancing up the corporate ladder. The legal system is adversely stacked against the interests of women when it comes to ownership and control of immovable property rights, which are critical in improving the proclivity with which women can get access to finance for their small-scale mining ventures (Hilson et al., 2025). Ultimately, the outcomes of this study tend to validate existing theories that seek to explain gender-based occupational segregation of women from the perspective of women participating

in small-scale mining in Zimbabwe. Previous research was conducted in jurisdictions other than Zimbabwe, which makes the challenges faced by women in Zimbabwe unique.

From this perspective, this study provides an empirical contribution regarding the gender-based barriers and challenges faced by women and the proposition of the strategies to navigate through these challenges, propelling women participating in small-scale mining operations towards achieving their goals and occupying influential leadership and financially lucrative positions in the sector.

1.7.2 Practical Contributions

The practical relevance of this study is grounded in the lived experiences of women who directly interface with operations in small-scale mining. The intention of the study was not necessarily to generalise the experiences of women but to contextualise them in the framework of the existing socio-economic and cultural dispensations that were proven to have a significant influence on the legal environment, which appears to systemically reduce the contribution and conceptual appeal that women can make in small-scale mining. From this perspective, the study inspired collective action and advocacy initiatives for women's empowerment and the legal instruments that potentially improve the life chances of women participating in small-scale mining operations.

This comes out of the realisation that the current framework does not assign prominence to the independence of women in the ownership and control of property, which deters women from seeking lines of credit from financial institutions that demand collateral security as a precondition for granting financial assistance. Moreover, from a practical perspective, the study proposes the establishment of gender-specific initiatives to improve women's skills and

competencies development, thereby potentially enhancing the contributions women make in the sector.

Outcomes of the research contributed towards the revision of existing cultural beliefs and taboos that have proven to systemically exclude women from contributing to the small-scale mining activities in patriarchal societies. Modern societies are evolving, even though they maintain their cultural beliefs; there is a need to revisit some of these cultural beliefs when it comes to the active participation of women in income-generating and economic affairs. The results of the study stand to propose an advocacy perspective to recognise cultural dynamism to reduce the intensity of gender-based occupational segregation. It is envisioned that the findings of this study.

In addition, this study sought to unlock the adaptive strategies that women can employ to emancipate and empower themselves to challenge the patriarchal system, which perpetuates male domination in small-scale mining. The proposed coping strategies are based on initiatives women can take to encourage each other to sail through the complexities in the sector.

1.7.3 Contributions to Innovation

The study adopted the stance that social and economic development cannot be complete without the active involvement of women, particularly in the Zimbabwean case, where women occupy 52% of the national population, with the ratio of 92 men for every 100 women, according to the 2022 national population centres statistics (ZimStat National Census Report, 2022). Riding on this popularity, this study believed that the active participation of women in decision-making circles in previously male-dominated industries, such as small-scale mining, can help restore sanity, given the prevalence of social crime and the omnipresent lack of occupational safety, which pose a serious threat to sustenance and human welfare. This study

argues that adopting a feminist perspective in small-scale mining can introduce sustainability requirements, encouraging other women to protect and contribute to the sector's growth and development. The government of Zimbabwe recognises the small-scale mining sector as a dominant contributor to gold output, which in the 2024 financial year accounted for 65% of all gold delivered to Fidelity Printers and Refineries in Zimbabwe.

This study argues that the active participation of women in small-scale mining operations can inspire a paradigm shift away from past manual-based methods of mineral ore extraction towards automation and women's empowerment. It is believed that the active participation of women, coupled with their capacity-building in human capital development and the automation and mechanisation of sector activities, is a positive step towards innovation in gold ore exploration and marketing. Women participating in small-scale mining operations can leverage technologies such as artificial intelligence, global positioning systems, and other mining-relevant technologies to enhance their contributions. The innovative contributions of this study take cognisance of existing literature that argues that the gender-based occupational segregation of women from actively participating in the sector is justified from a biological perspective, where they are recognised as the weaker sex who may not have the required strength to withstand the demands of operations in small-scale mining.

1.7.4 Empirical Contributions

This study is not isolated from existing literature on the challenges faced by women, but it stands to complement and make contributions from where other studies have been conducted. Previous and empirical literature has well documented that women from different social and cultural backgrounds have been historically and systematically excluded from mainstream activities and from holding influential leadership positions that might enhance the

life chances of other women. This has culminated in many empirical studies applying theories like the biological and glass ceiling theories.

Based on this, the research has identified several knowledge, methodological, and literature gaps in previous studies regarding differences in the social, economic, and cultural perspectives that shape women's interests and, in some cases, hinder their advancement across different sectors of the economy. Apart from the wealth of literature, there is limited research on gender-based barriers and coping strategies that might be used to improve the life chances of women, from a phenomenological mixed-methods approach in a developing nation perspective that heavily relies on mineral ore extraction as a form of sustenance.

Several studies have been undertaken in distinguished nation-based contexts, such as in Brazil, Indonesia, China, Ghana, the Democratic Republic of Congo, Mozambique, and Zimbabwe. This study's contribution to the existing literature relates to the distinctive circumstances, especially following the COVID-19 pandemic, which redefined the role women can play in their own economic emancipation due to the communicable disease's disruptive nature, which challenged men's dominance as breadwinners. The restrictions tied to measures to contain the spread of the coronavirus, specifically between 2020 and 2021, resulted in a significant number of people losing their formal jobs, which in turn led to an exponential rise in informal activities, including participation in small-scale mining. This study interrogated women's active participation during the COVID-19 pandemic, one of the key events that has inspired women's participation in an environment previously predominantly male. Previous studies have documented the systemic segregation of women; however, the contribution of this study lies not only in identifying these challenges but also in proposing solutions that could be implemented to address them.

Ultimately, the relevance of this study is reliant on the insights it creates to entrepreneurial dreams of women who intend to penetrate operations in small-scale mining through improvising the risks associated with participation in the sector and to carve a niche through the adoption of strategies to circumvent limitations to take part in the study. The study's results contributed favourably to the embracement of a change in thinking among women through advocacy, empowerment, and emancipation, transforming perceptions of the cultural legacy assigned to women's active participation in previously male-dominated arenas. The results of the study reinforced women miners' cues, competence and capabilities in the context of the social and cultural support they receive and give each other to realise their potential to grow and enjoy economies of scale and scope through an innovative approach to small-scale mining in Zimbabwe.

1.8 Research Proposition

The drafting of this report was premised on the proposition that there is a complexity of social, legal, and cultural injustices and prejudicial treatment in small-scale mining that contribute to the systemic segregation, occupational discrimination, and sexual exploitation of women who intend to participate in the sector. In addition, this study believes that a patriarchal society that does not recognise the education of the girl child as an achievement has led to a sizeable number of women not acquiring the required skills and competencies, education, and necessary exposure to compete head-on with men in the sector. Inadequate education contributes to women's passive participation in small-scale mining. This makes it challenging for them to freely express their views and opinions for fear of reprisals and victimisation.

This study is based on the claim that a male-dominated cultural legacy associated with operations in small-scale mining systemically excludes and undervalues women's contributions

to the development of the sector. From this perspective, the vantage point, thoughts of females insofar as they can contribute to the sector are unrealised and, at their worst, ignored. In the complex web of prejudice against women participating in small-scale mining operations. The present study was based on the proposition that leveraging feminine pressure groups can help women immerse themselves in the struggle for recognition, power, influence, and leadership in small-scale mining.

The research claims that the participation in small-scale mining is typified by a culture of impunity where social issues such as gender-based violence, gender-based occupational segregation, and discrimination against women are the order of the day, with no recourse against perpetrators. Measures to put an end to these injustices against women's rights can help to infuse a culture of tolerance in small-scale mining. This can positively contribute to women's willingness to actively engage and participate in the growth and development of the sector, which is recognised as a key contributor to the national fiscus through the gold deliveries to Fidelity Printers and Refineries.

Considering the inquiry conducted by WLSA (2019) together with other stakeholders to further investigate the systemic barriers affecting women's participation in the small-scale mining sector in Zimbabwe, the statistics highlight that women are not yet fully represented in leadership and decision-making roles. Through the lens of the legislative and policy, the Government of Zimbabwe advocates for gender equality, employment, representation, decision-making positions, immovable property rights, and access to resources, thus according to the Constitution of Zimbabwe Amendment number 20 of 2013, when there is no equality in the distribution of resources evidenced by the 13.3% share of financial loans accessed by small-scale women miners (Chinembiri, 2019). Women lack the knowledge, skills, and competencies

in small-scale mining activities, and some form syndicates to help each other pool resources and share knowledge, thereby avoiding standalone mining businesses (WLSA, 2023).

As reported by the United Nations (UN Women) (2023), Zimbabwe still performs poorly on the Gender Inequality Index, which raises concerns. At the time of reporting, leadership and decision-making roles were still below 50 per cent, which is evidence enough that women's participation remains compromised. This inequality is attributed to a need for greater knowledge and expertise in running mining businesses, as critical roles require educational qualifications rather than just exposure to mining activities.

1.9 Chapter Summary

The central theme, which becomes the focus of this study, is the realisation that, while women are in the majority in the national population, their contributions to operations in small-scale mining are overshadowed by systemic challenges they face due to a patriarchal cultural legacy. However, they do not value the essence of women's inclusion in a predominantly male sector. Available statistics show that women account for only 10% of the reported 535,000 registered small-scale miners, representing only 53,500 women in the lucrative sector of the economy. Statistics on access to finance show that of the US\$150 million available for funding small-scale miners, women have taken up only US\$20 million, representing just 13.33%, suggesting that a very significant share of the funds is allocated to male small-scale miners.

The literature has shown that access to finance significantly constrains women-owned small-scale mines' contributions to output and revenue generation. Apart from these financial challenges, the literature has documented a multiplicity of sociocultural constraints that shape belief systems, norms, and values that have heavily influenced the recognition and acceptance of women participating in small-scale mining. It was highlighted that the existence of cultural

belief systems against the active participation of women in small-scale mining operations stemmed from the alleged misfortunes that can befall miners if women, particularly those who are menstruating, are actively involved in mining activities. This cultural taboo has been reported in various small-scale mining areas in Africa, including the Democratic Republic of Congo, Mozambique, Ghana, and parts of Zimbabwe, particularly where informal gold mining is practised. Related cultural taboos have been reported in other jurisdictions, such as Indonesia and Brazil, where women are systemically segregated and alleged to be weaker and might contribute less to transport and even lead to the perpetuation of occupational challenges.

Operations in small-scale mining of high-value minerals like gold ore are central to this study, given the significant contribution small-scale miners have made to annual gold deliveries, which accounted for 65% of total deliveries in the 2024 financial year. The rich pickings in financial fortunes associated with the extraction and trade in gold have attracted a gold rush across the country, which has brought in women who participate in small-scale mining in different capacities. Available literature shows that progressive deterioration in Zimbabwe's economic performance, compounded by the prevailing climate change, which has resulted in severe drought, has been an impetus for women to engage in good planning and participate in extractive activities in informal operations in small-scale mining in Zimbabwe. Changes in the economic structure have led to a significant reduction in dependence on men, with women taking a leading role in caring for the family or supplementing family income, particularly through economic activities such as gold panning.

In light of these realisations, current research seeks to explore three main objectives, which incorporate the identification of gender-based imbalances that appear to militate against the active participation of women in small-scale mining operations, to unlock the challenges that women come across in their efforts to be participating in the sector, and to propose key

strategies that women might employ to empower themselves and encourage each other towards improved performance in small-scale mining in Zimbabwe.

The introductory chapter highlights that the contributions of this study are the additions it makes to theory development to inform practice, innovation, and empirical studies. Through theoretical lenses, this study interrogated the relevance of biological theory, symbolic interactionism, and the glass ceiling theory to the central claims that contribute to the systemic segregation of women from actively participating in influential positions. These theories are, by nature, generic and were not aligned to a specific industry. Which implies that applying such theories in this study can help to contextualise these theories by providing a sector-based view of the experiences of women regarding the biological imbalances of the sofa on account of being women, and the challenges they come across from a glass ceiling perspective as they endeavour to achieve influential positions of leadership in small-scale mining.

From a practical perspective, the outcomes of this study are intended to inspire collaboration and advocacy by women's pressure groups, especially by focusing on transforming legal instruments that might influence the formal recognition of women as independent parties able to enter into valid and enforceable contracts. Such a paradigm shift is of paramount importance, as it enhances women's ability to participate in small-scale mining operations and access lines of credit from the financial sector. Ultimately, the study is expected to culminate in the formulation of strategies that women can leverage to navigate the complexities of operating in an environment previously predominantly male.

This study consolidates existing literature on other social and cultural dimensions, both in Africa and beyond, and focuses on the constraints women experience in their career progress in business, in general, and in mining activities in particular. The study evaluates the extent to

which it can contribute to the existing literature by examining studies undertaken in other settings, such as Australia, Brazil, Indonesia, the DRC, Ghana, Angola, Mozambique, and, more specifically, Zimbabwe. The identification of different knowledge, research and literature gaps in empirical studies helps to reinforce the contribution and essence of the current standing in the framework of existing literature and the contributions that it tends to make to the body of knowledge in the development of if we make that can enhance the active participation of women in small-scale mining operations.

Considering the existing nature, structural makeup and composition of operations in small-scale mining in Zimbabwe, the study proposed that the recognition and appreciation of women's participation in the sector is likely to ignite innovation and help the sector migrate from the current menial activities towards using technologies that can enhance productivity and the contribution the sector makes to the economy of Zimbabwe. The innovative contributions and significance of the study relate to capacity-building initiatives for women, which tend to enhance their contributions in the sector, particularly by bringing sanity and holism to operations while at the same time reducing the incidence of criminality and indiscipline.

The next section of the research is focused on providing a serialising account, given the previous literature on women's involvement and participation in mining activities. The structure of the makeup of the chapter is inspired by the three main objectives, which determine the inclusion of both converging and diverging perspectives in this respect to the gender imbalances, systemic challenges, and strategies that can be employed to assist women in coping with the constraints, they come across in their efforts to a degree to participate and be recognised in small-scale mining.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

In society as a whole and in business in particular, women experience structural obstacles that affect their career progress. This chapter aims to consolidate the background and research objectives formulated in the introductory chapter and provide a critical, thorough, and systemic assessment of the literature. The literature review focuses on the gender imbalances and challenges women experience across various areas of their social and economic lives. Emphasis was placed on the lived experiences of women participating in small-scale mining operations in resource-constrained settings. These challenges have ramifications for the contributions women make in small-scale mining. These challenges affect their representation at the executive level, cascading down to the grassroots. The goal of this critical literature review was to highlight what has been done and achieved so far to address the obstacles and gender imbalances that prevent women from advancing in their chosen career pathways. The scope of the literature review focused on the gender imbalances that women participating in small-scale mining operations encounter, rather than the generic challenges they face across industries and sectors of the economy.

The chapter begins with an outline of theoretical frameworks proposed to explain the challenges women experience when they try to rise the corporate ladder. The rest of the chapter was organised along the objectives of the study and focused on emphasising the gender imbalances that women experience in small-scale mining, the challenges and generic barriers that women experience, and coping mechanisms to improve the representation and participation of women in leadership positions in the small-scale mining activities and in business in general. Empirical literature was critically reviewed to highlight what has already

been covered, focusing on the challenges and systemic barriers women experience along their career paths.

Using the advanced search feature in popular electronic databases, primarily EBSCOHOST, ProQuest Central, Emerald Insight, Google Scholar, Taylor and Francis, and Science Direct, led to a logical literature search for pertinent literature to critically evaluate the experiences and challenges that women experience in mining. Based on the identified concepts, a comprehensive search query was created using synonyms and related terms to ensure a thorough search. The search query included terms such as “women participating in small-scale mining operations” “female miners” “gender challenges in mining” “women’s experiences in mining”, This included “women participating in small-scale mining operations” “challenges faced by women participating in small-scale mining operations” “challenges faced by women in artisanal mining” “women in leadership” and “coping mechanisms for women in leadership”. Only peer-reviewed academic journals published between 2019 and 2025 were displayed after filtering using the advanced search function.

To refine the literature search, search operators such as” AND,” “OR “” NOT, and truncation (*) were used to increase the chances of finding relevant articles. Using the phrase “women and mining” assisted in finding articles that include both terms. Relevant databases were accessed, and the search query was input using the identified search operators and truncation. The search results were filtered based on relevance, date, or other specific search parameters. Any relevant articles or keywords found during this search were taken note of. The literature search results were evaluated, noting any highly cited articles or relevant sources. After completing the search in each database, the list of articles found was reviewed. The abstracts were reviewed to identify relevant articles on women's challenges in small-scale mining. Besides the databases mentioned, the researcher taken to be additional sources, such

as relevant books, reports, conference proceedings, and dissertations, which provided valuable insights.

In searching for literature, emphasis was placed on peer-reviewed publications published in the past five years. This helped explain and put the current study in its proper context, as it focused on the challenges women experience in Zimbabwean operations in small-scale mining. The literature search emphasised comparative literature where studies have been conducted in similar social and economic conditions in other economic jurisdictions globally, in the African region, in the Southern African Development Community (SADC) and in Zimbabwe. This approach was necessitated by the need to conduct a comparative analysis of whether women's systemic challenges in small-scale mining were uniform across the board or varied by body and specific social and economic jurisdiction. By drawing these comparisons, the current study was put into perspective regarding making additional contributions to the existing body of knowledge regarding the challenges that women experience and how best coping mechanisms can be activated to improve their life chances and the occupation of leadership positions in other positions of influence in small-scale mining activities.

2.1 Theoretical Framework

Theoretical frameworks assisted in contextualising a study by reviewing previous literature and models proposed and tested in prior research. Reviewing theoretical literature was paramount, as it helped shape the study by clarifying the key building blocks and the tenets that must be acknowledged. This was instrumental in identifying both areas of agreement and points of difference as articulated in previous theories. This appreciation was imperative for contextualising this study within the existing body of knowledge and for properly analysing the barriers encountered by women in the small-scale mining sector.

This study is shaped sociologically, seeking to explain the phenomenon of relationship building within a society by drawing on leading biological, my biological, symbolic interactionist, social conflict, and gender schema perspectives. Several theories have been proposed to explain the systemic challenges women experience in their chosen careers in different facets of society, including economics, politics, and general management. These theories were specifically reviewed to highlight their relevance regarding the challenges met by women participating in small-scale mining operations. Given the qualitative foundations of the current research, theories were applied as a framework for explaining the systemic challenges women experience, drawn from psychology, sociology, and anthropology. The most prominent theoretical frameworks that have been incorporated to enhance our understanding of the genealogical foundations behind the underrepresentation of women in leadership positions include the social learning theory, the theory of symbolic interactionism (Charmaz et al., 2019), the advantage theory, the social conflict theory, the theory of structural functionalism, the gender schema theory, the glass ceiling theory, and the socialisation theory.

2.1.1 Biological theory

The biological theory of gender development was proposed by Money (1973) Theory attributes human behaviour to genetics, hormones, and evolutionary processes. The key premise of the biological theory of gender development, known as biological determinism, is the attribution of human behaviour and differences between men and women exclusively to biological factors such as genetics, hormones, and evolutionary processes. From the lenses of the biological theory of gender development, an individual's sexual orientation at birth determines their life chances and prospects later in life, regarding how far they can advance along their career pathways (Nuralievich, 2022).

The central tenet of the biological theory of gender development is that society accepts general laws according to sex. As a result, women are supposed to take on occupations that involve compassion and sensitivity, whilst men are expected to perform tasks that call for strength and agility and are viewed as more powerful. The legacy of the biological theory of gender development has implications for women's active participation in predominantly male arenas, such as operations in small-scale mining. This has been well documented in the literature, especially during the gold rush, when men occupied professions in mining and construction, while women were assigned service-based careers (Aguilar-Gomez & Benschaul-Tolonen, 2023). From this perspective, the assignment of roles based on gender is primarily a result of the operationalisation of the biological theory of gender development. These assignment of gender roles is even prevalently defined in modern-day careers, resulting in a systemic segregation from occupying some professions that are largely perceived to be male-based.

The existence of the biological theory of gender development perpetuates and reinforces the prevalence of gender inequality and rigid gendered cultural norms between men and women (Pasterski *et al.*, 2022). The biological determinism perspective proposes the idea that males are stronger, more adaptable, and expected to work in vocations like mining, while women are responsible for preparing for marriage and raising children (Valadares *et al.*, 2024). From this perspective, it is apparent that the biological determinism theory perpetuates gender inequality while at the same time violating women's rights. Biological determinism theory justifies the systemic discrimination against women and takes advantage of the professional advancement of women (Buhai & van der Leij, 2023).

Apart from the conceptual appeal of the biological theory of gender development in explaining the systemic challenges women experience in small-scale mining, some have cast

aspersions on its universal applicability. One of the key limitations associated with placing reliance on the biological theory to explain the challenges faced by women participating in small-scale mining operations is that theory may not directly explain or have relevance to our understanding of the challenges faced by women participating in small-scale mining operations since these challenges can predominantly emanate from a complex mixture of religious, cultural, social, economic, and political factors rather than purely biological differences (Parmenter et al., 2024; Romano & Papastefanaki, 2020; Silva et al., 2023; Sudaryat et al., 2024).

Buhai and Van der Leij (2023) highlights that women systematically experience unequal access to resources, which reduces their advocacy and bargaining power regarding their inclusion in the sector. Insights from Adomako and Hausermann (2023) concur that the systemic challenges that women experience in small-scale mining are historically linked to a patriarchal culture that limits access to education and decision-making power. Romano and Papastefanaki (2020) underscore that preference is given to the boy child rather than the girl child in the provision of education, especially in prehistoric periods. The existence of socially and traditionally assigned gender roles, which are primary socio-cultural fixes for women's progress, rather than primarily being a matter of biological differences. Moreover, the experiences of women in small-scale mining are shaped by various intersecting factors such as race, ethnicity, class, and geography (Jackline, 2022; Parmenter et al., 2024; Romano & Papastefanaki, 2020; Silva et al., 2023; Sudaryat et al., 2024).

Given the above considerations, the biological theory of gender development fails to account for these intersecting dimensions that significantly impact women's challenges in small-scale mining and tends to oversimplify the complex reality women experience in this context. Small-scale mining is deeply influenced by the sociocultural norms, traditions, and

power dynamics of the specific region or community in which it takes place (Tobalagba & Vijayarasa, 2020). In addition, the biological theory of gender development overlooks these contextual factors, which greatly shape the specific challenges faced by women participating in small-scale mining operations.

Understanding the challenges faced by women participating in small-scale mining operations involves recognising their unique skills and competencies and abilities to navigate them (Kumah *et al.*, 2020). The biological theory of gender development often depicts women as passive recipients of their biological traits rather than acknowledging their agency to challenge and overcome obstacles (Omotehinse & Ogunlade, 2022). However, the challenges that women come across in small-scale mining are often the result of structural factors like a lack of legal protection, limited access to education or healthcare, unregulated working conditions, and inadequate social support. The biological aspects of gender development do not adequately account for these factors since they just focus on the gender of a person in assigning what their life chances are supposed to be. It stands to reason that the biological theory of gender development does not adequately address the systemic factors that significantly contribute to the challenges faced by women, particularly in the small-scale mining sector (Mamuya *et al.*, 2020).

Overall, theoretical perspectives that incorporate biological determinism are instrumental for understanding role assignment and for determining appropriate careers based on a child's biology. However, when we consider the complexity of challenges faced by women participating in small-scale mining operations, it is imperative to note that relying exclusively on the principles of the biological determinism theory may not be universally applicable when it comes to evaluating the challenges experienced by women participating in small-scale mining operations, given that there are a variety of social, economic, cultural, and political

factors that contribute to the structural inequalities that women experience in mining (Buss *et al.*, 2021). Hence, it might not be appropriate to attribute the systemic challenges that women experience in mining purely to biological determinism. It is imperative to adopt an interdisciplinary approach that integrates diverse theories and perspectives to holistically appreciate and address these challenges.

2.1.2 Theory of symbolic interactionism

Symbolic interactionism is a sociological theory highly relevant to the study of the challenges women face in small-scale mining. Symbolic interactionism is a sociological theory that emphasises the importance of symbols, language, and shared meanings in shaping social interactions and individual behaviour (Baddianaah *et al.*, 2022). The main principle behind symbolic interactionism is that men and women are expected to behave in specific, socially constructed, acceptable norms. This implies that people must adhere to symbolic interactionist expectations to conform to the available schema (Shangase, 2022). In the context of women participating in small-scale mining operations, symbolic interactionism helps us understand how women interpret and make sense of their experiences within their social and cultural environments (Mugo *et al.*, 2021). The incorporation of symbolic interactionist perspectives allows for an appreciation of how women interact with others and create and interpret symbols and meanings related to their roles, identities, and experiences.

Symbolic interactionism holds that perceptions and views of gender roles in society are influenced by social pressure and behavioural norms (Meitzer & Petras, 2023). In this context, symbolic interactionism theory can shed light on the various challenges these women experience in small-scale mining (Mugo *et al.*, 2021). Symbolic interaction can explore how women's gender identity and societal stereotypes shape their experiences and opportunities in

small-scale mining. It can explain how they negotiate power dynamics and social hierarchies in predominantly male workplaces. Through the lens of the theory, individuals are maltreated depending on the decisions they make. Social attitudes and behavioural norms influence individual perceptions (Charmaz *et al.*, 2019). The importance that society accords to women's contributions determines the extent of their career advancement. In line with this theoretical perspective, women are more likely to succeed in low-stigma, supportive socialisation, which encourages their advancement and respect within a particular sector.

In addition, symbolic interactionism uncovers the social and cultural factors that shape women's experiences and perceptions in small-scale mining. It can analyse how societal norms, values, and beliefs contribute to discrimination, unequal treatment, and limited access to resources for women participating in small-scale mining operations (Mugo *et al.*, 2021). The essence of the symbolic interactionist perspective is that it enables researchers to explore specific challenges that persist in a community. Moreover, this theory provides additional insights into strategies that can help women cope with the complexities of operations in small-scale mining (Dzvimbo *et al.*, 2019). Theoretical principles that underpin symbolic interaction emphasise how individuals negotiate and interpret symbols and meanings in their interactions, highlighting the agency and resilience of women participating in small-scale mining operations.

An assessment of the key principles of symbolic interactionism indicates that it is a relevant theoretical framework that can be relied upon to explain the systemic exclusion of women from active participation in small-scale mining. Theory presents compelling arguments for segregating duties and assigning roles based on socially constructed general roles. Since theory attempts to justify assigning roles to different genders, it fails the test of legitimacy, as

it does not recognise that women can pursue and perform exceptionally well in tasks and responsibilities that are primarily perceived as the domain of men.

2.1.3 Social conflict theory

The social conflict theory, which is crucial to this study, emphasises the existence of social conflicts surrounding women participating in small-scale mining by limiting their ability to advance in their careers and carry out tasks that can increase their competitiveness in the industry (Mugo et al., 2021). According to the social conflict theory, patriarchal systems that restrict women's rights and privileges are to blame for the challenges they experience in society due to the unequal distribution of power and influence (Kühne, 2020). The development of this idea encourages sexism and makes it challenging for women to exercise their fundamental rights, such as choosing their desired job route and advancement violence (Bashwira & van der Haar, 2020).

The social conflict theory is relevant in explaining the systemic challenges faced by women participating in small-scale mining operations. This theory suggests that society is divided into different groups with conflicting interests, and these conflicts arise from the unequal distribution of power, resources, and opportunities (Ofosu *et al.*, 2022). From the perspective of social conflict theory, the principle of gender-based discrimination can be viewed as a stumbling block to promoting women participating in small-scale mining. From this perspective, the traditional operations in small-scale mining are constructed as predominantly male, resulting in discriminatory practices against women who intend to partake in the sector on an equal footing with men (Shagdarsuren & Purevjav, 2022). This is evident in hiring practices, promotion opportunities, pay gaps, and the subtly visible gender-based occupational segregation in the small-scale mining sector. In light of this, the social conflict

theory explains that the perpetuation of these discriminatory practices is a result of power struggles between the predominantly male industry and women seeking fair representation and equal opportunities, which eventually results in the acute segregation of women's participation in the small-scale mining activities (Otoijamun *et al.*, 2021).

The social conflict theory emphasises that limited access to financial and other supportive resources and restrictive possibilities are to blame for the underrepresentation of women participating in small-scale mining operations. Women participating in small-scale mining operations often struggle to gain attention and the requisite skills and competencies, competencies, and capacity-building initiatives they need to advance in their career pathways. Their limited scope of networking opportunities in the small-scale mining sector, combined with limited access to influential mentors, may contribute to the gender gap in the sector. The social conflict theory articulates these conditions in terms of the inherent power dynamics that allow certain groups to dominate and control opportunities and resources over others.

Sexual and emotional harassment and violence are attributed to the social conflict theory, resulting in a lower representation of women participating in small-scale mining operations (Cheek *et al.*, 2023). According to the social conflict theory, operations in small-scale mining have been notorious for instances of sexual and emotional harassment and violence against women (Grech *et al.*, 2023). The social conflict theory provides a framework for understanding these issues, given power imbalances and struggles for control within the industry. Theory highlights the role of those in power trying to assert dominance and maintain control over women in the industry (Dzvimbo *et al.*, 2019). In addition, a lack of gender sensitive, supportive policies contributes to women's limited participation in small-scale mining. The absence of supportive policies and regulations aimed at gender equality aligns with the social conflict theory (Yakovleva *et al.*, 2022). It suggests that those in power may

resist implementing measures that promote gender equality in small-scale mining (Arora *et al.*, 2023). This resistance can be seen to maintain their dominance and protect their interests.

In conclusion, social conflict theory is important for understanding the structural challenges women experience in small-scale mining (Tobalagba & Vijayarasa, 2020). It emphasises gender-based discrimination, power dynamics, unequal distribution of resources and opportunity, and opposition to implementing gender equality statutory laws. Social conflict theory can be utilised to understand these concerns and inform the development of strategies and policies to address the issues faced by women participating in small-scale mining operations.

The incorporation of sociological theories into understanding the gender imbalances and challenges women experience in small-scale mining is instrumental in generating fresh insights into the systemic challenges they encounter. The key insights from social conflict theory can underscore the power dynamics created by culture, where women have been assigned to specific roles that are supportive and ancillary to those held by men. These culturally assigned roles have often contributed to the gender-based occupational segregation of women, which has resulted in calls for the observance of gender equity and equality in different sectors of the economy, including operations in small-scale mining. Perhaps the most intriguing characteristic of the sector is its apparent lack of recognised structure, which intensifies the severity of social conflicts between men and women, leaving no room for redress for disgruntled women who intend to enter the sector.

2.1.4 Gender schema theory

The gender schema theory was proposed by Sandra Bem (1981), and it examines in detail how gender roles affect women's self-esteem and personal growth and development. The main insights from the gender schema theory focus on men as strong, independent, and aggressive, whereas women are seen as sentimental, submissive, and delicate. These perceptions affect how women develop and the social duties expected of them (Belle, Tartarilla, Wapman, Schlieber & Mercurio, 2021). The professional growth of women, who are expected to adhere to existing presumptions, is impacted by the imposition of positions on men and women based on their perceived strengths or limitations (Canevello, 2020). The gender schema theory supports the assertion that operations in small-scale mining are better suited to men than to women, given their demanding nature.

Theories reviewed so far focus on gender imbalances and the challenges women experience across various aspects of their social and economic lives (Njonge, 2023). The premise behind these theories is that men and women agree that women experience systemic challenges in their career progression. However, they tend to disagree on the key contributors to such challenges. Prevailing debates are centred on analyses and perspectives regarding the root causes of the dynamics underlying disparities in gender and career prospects, particularly in mining activities (Ibrahim et al., 2020).

Views from structural-functionalists, intersectional theorists, and Marxist feminists appear to support the notion that women's career challenges are justified by existing cultural and social norms regarding the roles and responsibilities they are expected to play in society. This is notwithstanding the level of education or competency that women may possess, which

can sometimes be superior to that of men. Existing theories appear to specify the essence of women's conformity to their assigned societal roles in line with the socialisation framework.

The gender gap that is evident in the context of operations in small-scale mining might be attributed to the prevalence of the biological theory of gender development, which proposes that the biological disparities between men and women affect the segregation of employment in favour of males, since operations in small-scale mining is primarily perceived as a sector of the economy (Jackline, 2022). From this perspective, employers do not have an obligation to recruit women. However, they are free to do so if they want to show their support for the current women's quota or for efforts in line with its guidelines, according to the tokenism hypothesis. This is a gross violation of women's rights and of fair employment opportunities as prescribed by the labour law. As a result, women continue to face discrimination and challenges in their efforts to maximise their career potential, given the systemic lack of appreciation for their contributions to business (Bashwira & van der Haar, 2020). According to Marxist feminist theory, gender inequality is supported and encouraged by current political, social, and economic systems.

Different viewpoints that might contribute to gender inequity in small-scale mining are infused by intersectionality theory. Numerous factors that interact to limit women's engagement in small-scale mining cannot be held responsible for their underrepresentation (Silva *et al.*, 2023). While socialist contends that gender roles and personalities are socially built and sustained by cultural norms, principles, and expectations, essentialists contend that gender distinctions can be attributed to biology. In-depth research into the root causes of gender inequality and the development of processes to increase gender representation and involvement are prerequisites for qualitative investigations into women's participation in mining (Hutchings

et al., 2020). The research community can understand the obstacles, discrimination, and problems that women in business face and develop more effective coping mechanisms.

2.2 Gender imbalances against women participating in small-scale mining

Gender imbalances refer to the unequal representation of men and women in specific fields or industries. From the perspective of the current research, the concept of gender imbalances is located through the lens of operations in small-scale mining (Yakovleva *et al.*, 2022). This sector is selected primarily because it is predominantly male. The works of Grech *et al.* (2023) stress that the principle of gender imbalances is discussed by paying particular attention to the unequal representation of women participating in small-scale mining operations. Relatedly, Arthur-Holmes *et al.* (2023) specify that women participating in small-scale mining operations face numerous gender imbalances and challenges that hinder their full participation and the provision of equal opportunities in the sector. When discussing gender imbalances in small-scale mining, several key factors need to be taken to be.

In small-scale mining, women are notably underrepresented due to institutional and cultural restrictions, biases, and a lack of equal opportunity (Bashwira & van der Haar, 2020). This comes from the realisation that mining has historically been categorised as an occupation predominantly male, and the active participation of women has remained elusive, historically barred and discouraged (Mwandiringana & Ye, 2023). Gender imbalances are not a construction since they have a historical legacy. The challenges that women experienced can be traced back to the 19th-century gold rush, when workplace assignments were based on gender. Using this basis, most men during that era pursued professions in the construction and mining activities of the economy that are primarily predominantly male, with women

occupying various supportive and service sector professions (Aguilar-Gomez & Benschaul-Tolonen, 2023).

Apart from these gender imbalances and segregation, women remain underrepresented at all levels, from entry-level jobs to high managerial positions (Schrenker, 2023; Shangase, 2022). Visible segregation of women was evident in wage disparities between men and women in the mining sector (Schrenker, 2023). A comparison of women's earning capacity with men's revealed wage discrepancies. Through the lens of this study, the principle of gender imbalances forms the central theme, given that it contributes to additional layers of occupational, cultural, and legal segregation against women. These forms of injustice have been observed in the failure to control intellectual property rights and land and tenure rights, and in the inability to enforce effective mechanisms for occupational health and safety in small-scale mining.

Other key attributes associated with gender imbalances include limited access to financial resources, challenges in obtaining loan approval from financial institutions as an independent woman, and the inability to control immovable property rights and to present collateral security. Other gender imbalances have a historical legacy related to the level of education provided to the girl child during the formative years, which later affects them, especially when they wish to venture into technical fields such as construction and operations in small-scale mining.

2.2.1 Immovable property rights

One of the most prominent gender imbalances across the globe, which negatively affects the growth prospects of women, has been the lack of immovable property rights (Mwanderingana & Ye, 2023). In many countries, women have limited or no ownership rights to mining lands or mineral resources. Furniss (2022) stressed that the lack of legal recognition

and insecure tenure make them vulnerable to involuntary land grabs, displacement, and exclusion from critical and strategic decision-making processes. The relative lack of control of land and other immovable property rights reduces women's bargaining power in entering into contracts, since they require a man or a husband to enter into a contract on their behalf (Kamundala, 2025).

Literature indicates that the effects of a lack of immovable property rights as a barrier to women's advancement are significant and multifaceted. Iguma *et al.* (2021) concur that immovable property rights encompass the legal ownership, control, and access to land, housing, and other assets. Dzvimbo *et al.* (2021) assert that in most developing social settings, women are denied the privilege of owning immovable property rights, as they are assumed to be second-class citizens with minimal decision-making power over immovable property. Buss *et al.* (2020) specify that when women lack secure immovable property rights, it hinders their opportunities for economic, social, and political empowerment. Mwandiringana and Ye (2023) confirm that this reduces the power to enter enforceable contracts, implying a limited scope for making judgment calls about investment opportunities, especially in the context of operations in small-scale mining.

The lack of bargaining power regarding securing immovable property rights for women reduces the ease with which they can independently obtain lines of credit from financial institutions to support their mining ventures. Women without immovable property rights often struggle to access loans or credit facilities needed to start or expand businesses (Schwartz, 2020). This restricts their ability to generate income and accumulate wealth. Most women's inability to provide collateral security implies that, if they are to obtain lines of credit, they must do so at very high interest rates, which reduces profitability and heightens the risk of failure, especially in volatile markets and industries such as small-scale mining.

From another perspective, the works of Yakovleva *et al.* (2022) reiterated that women experience unequal pay and limited job opportunities without immovable property rights. They often lack control over their income or assets, rendering them financially dependent on others. Danielsen and Hinton, (2020) stress that a lack of immovable property rights prevents women from making independent choices regarding family, household matters, or land use. Women with limited economic and decision-making power typically have limited say in significant decisions that impact their lives and the community (Iguma Wakenge *et al.*, 2021).

Women without property ownership face higher risks of domestic violence and may struggle to access legal protection from an abusive partner (Buss *et al.*, 2020). It is well documented that women in developing economic and social settings are more susceptible to being dispossessed or evicted, as they lack the security conferred by immovable property rights. Women's exclusion from immovable property ownership hampers their participation in decision-making processes and political institutions (Furniss, 2022). They are often underrepresented or excluded from governance structures, impeding their ability to influence policies important to them.

Danielsen and Hinton (2020) goes further to attest that without material and immovable property rights, women have limited voices and influence in the public sphere. Schrenker (2023) concurs that women experience challenges in shaping legal frameworks and policies that address gender equality issues and protect women's rights. Rutherford and Chemane-Chilemba (2020) comments that the relative underrepresentation of women in corridors of power and decision-making perpetuates the lack of incentives for economic investments and productivity. It has been proven that in societies where women lack immovable property rights, they are less motivated to invest in improving their economic prospects and productivity. This hampers overall economic development through weakened social cohesion and community

development (Grech *et al.*, 2023). When women are marginalised due to a lack of immovable property rights, it affects the social fabric of communities and hinders collective initiatives, community development, and social cohesion (Arthur-Holmes, Yeboah, *et al.*, 2023).

Addressing poverty and achieving sustainable development goals are hampered when women lack secure, immovable property rights. The lack of immovable property rights limits their ability to participate fully in economic activities, hindering poverty reduction efforts (Adomako & Hausermann, 2023). The works of Tobalagba and Vijeyarasa (2020) stress that a lack of immovable property rights is a significant barrier to women's advancement. Dzvimbo *et al.* (2019) relate that the lack of property rights for women participating in small-scale mining operations has an adverse impact on their economic, social, and political empowerment, and hampers overall development efforts. Recognising and promoting women's immovable property rights is crucial for fostering gender equality and achieving sustainable societal progress (Shagdarsuren & Purevjav, 2022).

Overall, challenges and gender imbalances arising from the lack of ownership and control of land and tenure, and the general inability to control immovable property rights, appear to be the most significant stumbling blocks to the growth and development of women-owned businesses, particularly in the mining sector. As a result, many women are pressured into entering strategic partnerships with men, whom they can use to secure lines of credit in exchange for a stake in the business. Such conditions reduce the conceptual appeal of entrepreneurship. It demonstrates that women entrepreneurs are not receiving the full return on their investments, as they are recruiting individuals who, under normal circumstances, would not be essential if they do not add value to the enterprise. This highlights the weaknesses in existing legal frameworks that persist, where men have the right to own and control property, and women are often dependent on men to enter legally binding and enforceable contracts.

2.2.2 Occupational Health and Safety

Occupational health and safety (OHS) issues are one of the key stumbling blocks when it comes to the conceptual appeal of operations in small-scale mining, especially to women (Singo *et al.*, 2022). The unregulated nature of small-scale mining activities posed significant challenges in establishing robust occupational health and safety protocols to protect participants' interests. Mkodzongi (2023) underscore that the unregulated nature of most small-scale mining frequently includes dangerous working conditions, posing risks to workers' health, such as exposure to toxic substances, rock falls, or mining collapses. Arthur-Holmes and Matey (2025) stress that women's safety concerns are routinely disregarded, leaving them more exposed to disasters and health problems with insufficient protective measures. In this regard, poor occupational health and safety protocols are used to systematically segregate women from active engagement in the small-scale mining sector.

Despite these challenges, occupational health and safety procedures are essential for maintaining worker safety and well-being in all industries, particularly in small-scale mining (Chen *et al.*, 2020). However, the circumstances in small-scale mining are in stark contrast to the occupational health and safety standards followed by established mining entities (Devenish *et al.*, 2023). The largely unregulated nature of small-scale mining operations may make it difficult to enforce sound occupational health and safety protocols. Organisations meant to enforce occupational health and safety and promote employee welfare lack adequate mechanisms to monitor and control the activities of most small-scale mining operations operating in the underground economy.

Challenges in enforcing acceptable occupational health and safety principles have been a key deterrent to attracting women, especially during the extraction phase of operations in

small-scale mining (Singo *et al.*, 2022). A significant number of women directly involved in small-scale mining usually participate in alluvial gold panning activities at the surface (Arthur-Holmes & Abrefa Busia, 2022). This process is relatively safer than going underground without adequate occupational safety gear. The frequent number of mining accidents in Zimbabwe supports the poor adherence to occupational health and safety standards in most small-scale mines.

From this perspective, it can be argued that apart from the cultural value systems that appear to exclude women from active engagement in the sector, the inherent risks associated with unorthodox methods of extracting minerals from beneath the earth's surface in an unsafe manner are contributory factors in limiting the engagement of women participating in small-scale mining operations (Tomassi, 2024). The absence of sound operational health and safety protocols in the informal mining setups appears to support the principles of the biological determinism theory, which assigns gender roles based on the sex of an individual (Cossa *et al.*, 2021).

However, it is crucial to evaluate whether occupational health and safety regulations hinder women's employment in informal mining activities. In the past, the small-scale mining activities were thought to be centred around men, and cultural and societal preconceptions and hurdles may prevent women from working in the business (Rasool *et al.*, 2020). These broader cultural considerations may be a bigger barrier for women entering the sector than occupational health and safety regulations alone. While conducting physically taxing tasks, including heavy lifting, exposure to severe temperatures and long hours, are part of the daily activities in small-scale mining. Such conditions are not favourable to the greater part of women (Serwajja & Mukwaya, 2021).

Even though occupational health and safety regulations are in place to safeguard all employees regardless of gender, some scholars contend that, due to physiological distinctions such as endurance and strength, women may be more adversely influenced by the physical demands that characterise operations in small-scale mining (Eren & Tuzkaya, 2019). Due to increased levels of weariness, harm, or discomfort, women's participation in the sector may be impacted. As a result, existing literature suggests that a substantial number of women hold peripheral roles in the sector.

Serwajja and Mukwya (2021) Specify that there is a category of workers' safety in small-scale mining that should be prioritised equally in occupational health and safety procedures. However, further consideration is required since women may experience unique safety issues in workplaces where men are predominant (Buhai & van der Leij, 2023). Issues related to occupational health and safety were raised at the height of the COVID-19 pandemic, when it was protocol to provide personal protective equipment as part of initiatives to create a safe working environment. Otoijamun *et al.* (2021) believe that providing efficient reporting channels for incidents of harassment or discrimination can encourage women participating in small-scale mining operations to engage in the sector without worrying about being mistreated.

On the other hand, research indicates that employees in small-scale mining are frequently required to work rotating shifts or reside in remote locations, which can have an impact on their ability to maintain a healthy work and life balance, especially for women who may be responsible for childcare (Adomako & Hausermann, 2023). These challenges can be lessened, and women's participation in the sector can be encouraged with adequate support mechanisms, such as readily available childcare services, flexible work schedules, and maternity leave accommodations (Buss *et al.*, 2019).

The works of Shangase (2022) stress that occupational health and safety regulations should not obstruct women from advancing in the small-scale mining business. All employees, including women, should have access to training programmes, and possibilities for professional advancement should be equally distributed (Block, 2023). Entrepreneurs in small-scale mining must encourage inclusive workplaces that value diversity and guarantee that everyone has an equal opportunity to advance in their careers (Ajith & Ghosh, 2019).

Best practices in employee safety propose that occupational health and safety regulations must be followed to avoid unintentionally discouraging women from working in the small-scale mining activities, even if they are essential for promoting worker safety (Shangase, 2022). Promoting equitable representation and advancement for women requires addressing broader societal hurdles, offering suitable support networks, and creating inclusive workplaces (Otoijamun *et al.*, 2021). The notion of occupational health and safety has emerged as a key stumbling block towards the unbridled participation of women in small-scale mining operations, particularly in artisanal mining that is inundated with occupational hazards (Otoijamun *et al.*, 2021).

The threats posed by the insecurity in small-scale mining are not only confined to occupational health and safety issues (Jackline, 2022; Omotehinse & Ogunlade, 2022). Research has proven that sexual exploitation of women is rife in most small-scale and informal mining areas, with some women playing a dual role of selling a variety of wares during the day and engaging in commercial sex work during the night. Such incidents have been well documented in the Solwezi area in Zambia, where informal miners are popular with commercial sex workers (Johnston *et al.*, 2024).

Apart from the apparent health risks associated with engaging in casual sexual relations, most small-scale mining areas are characterised by insecurity and higher levels of criminality and gangsterism (Mkodzongi, 2023; Mkodzongi & Mujere, 2025). This incident could threaten the sustainability and contribution that women can make in the sector, since they are the first victims of such criminality and social ills (Arthur-Holmes et al., 2023).

The small-scale informal mining activities in Zimbabwe are prone to violation of immovable property rights through the invasion of illegal miners (Mkodzongi & Mujere, 2025). Over and above, they are reported cases of criminality and incursions with the law enforcement officers that are not creating a salubrious environment for the sustainable coexistence of women participating in small-scale mining operations (Baddianaah et al., 2022). Moreover, there are several occupational hazards, such as the collapse of mining shafts, leading to fatalities, with most of these fatalities being men who risk their lives to go underground to extract minerals in a safe operating environment (Ochir et al., 2023; Serwajja & Mukwaya, 2020).

In the final analysis, the literature appears to suggest that occupational health and safety issues surrounding small-scale and informal mining activities leave much to be desired, particularly in terms of the active participation of women. Critical points noted include the lack of sound occupational safety measures due to using rudimentary methods of mineral ore extraction, which, in most cases, violate health and safety protocols. It was documented that given the risky nature of activities that accompany the rudimentary mineral ore extraction methods, women who are pushed to the periphery in small-scale mining usually end up providing support services and entertainment that perpetuates a health risk of contracting communicable and sexually transmitted diseases. Women are readily available in lower echelons in the artisanal mining sector as a result of deficiencies in skills and competencies and

capabilities, relatively lower echelons of education, and the presence of discriminatory cultural norms (Paschal & Kauangal, 2023). The prevalence of commercial sex work in the informal mining activities has been well documented in the Solwezi area in Zambia, where informal miners are popular with commercial sex workers (Johnston *et al.*, 2024).

2.2.3 Limited access to financial resources

Women's challenges in accessing finance have been attributed to the interplay of several factors. Literature has documented the disruptive effects caused by the cultural legacy of a patriarchal society, which gives the power of attorney to the husband or the male child to the disadvantage of the female child (Adam *et al.*, 2022; Mensah, 2024). The lack of entitlement of women to property and other fixed assets affects the life chances and decision-making power of women later in life, since they cannot use the same assets as collateral security to get access to finance (Adam *et al.*, 2022; Koomson-Yalley & Kyei, 2022; Parmenter *et al.*, 2024). It becomes a vicious cycle for women who are stripped of immovable property rights through inheritance, to be given preference in accessing lines of credit from the financial sector (Baddianaah, 2024; Jackline, 2022; Serwajja & Mukwaya, 2020).

The lack of control over the means of production has adversely impacted on the viability of women's entrepreneurial drives in the operations in small-scale mining, who often lack collateral security, thereby limiting their access to financial resources such as loans and credit (Guo *et al.*, 2021). Alternative perspectives suggest that the challenges some women come across in accessing financial resources may result from limited financial education and literacy regarding available financial options that can be exploited to fund operations in small-scale mining (Ibrahim *et al.*, 2020).

The notion that financial literacy has gained traction in the research community is one of the key determinants of the proclivity with which women in general are capable of accessing a variety of financial instruments that they can use for economic emancipation (Osei & Yeboah, 2023). Ventre et al. (2024) underscore that the lack of mastery of financial literacy is associated with inconsistent financial decision-making that does not improve the life chances of women in business. Al-shami et al., (2024) stressed the essence of digital financial literacy as a key determinant of financial inclusion and active participation in the financial system. Cervellati et al. (2026) highlighted that women are less likely than men to seek financing, which is largely a result of the failure to appreciate the operations of the financial system, which is attributed to relatively lower levels of financial literacy.

This phenomenon is attributed to a lack of security and limited knowledge of the available financial support programs (Kasamatsu *et al.*, 2023; Singo, Isunju, Moyo, Bose-O'Reilly, *et al.*, 2022). Access to finance, loans, and mining supplies, including machinery, technology, and tools, can sometimes be challenging for women (Devi *et al.*, 2024). Challenges in women's access to finance have been linked to their reduced capacity to successfully engage in viable business activities, which in turn affects their profitability and potential for sustainable income generation (Parvin *et al.*, 2020). The lack of access to finance as one of the challenges faced by artisanal and small-scale miners in general, implying that women participating in small-scale mining operations are not exempt from this challenge. However, insights from Jackline (2022) reiterated that providing finance to women in artisanal and small-scale mining enhances their empowerment in settings where the contribution of women participating in small-scale mining operations has been recognised.

Literature suggests that the growth of women, especially in predominantly male fields such as mining, has been heavily impacted and negatively hindered by the lack of resources

available to them. Women need to have access to resources like learning, medical care, financing, and technological advancements for them to be empowered and realise all that they can achieve (Busia et al., 2023). Restricting women's access to opportunities has a variety of negative repercussions on their growth (Otoijamun *et al.*, 2021). Some of the adverse effects associated with limited access to finance include lack of independence, minimal empowerment and emancipation of women as stand-alone entities in the small-scale mining activities (Devi *et al.*, 2024). This phenomenon perpetuates the existence of gender differences in skill development and literacy, apart from efforts to eliminate them. (Danielsen & Hinton, 2020). Without proper access to higher learning and professional development, women may have limited employment options and struggle to advance into higher-paying professions or leadership positions.

The capacity of women to tackle health concerns and seek emergency medical care is hampered by the limited availability of medical facilities (Schrenker, 2023). Increased mortality rate for mothers and unfavourable health outcomes may arise from this. The inability of women to access finance and banking facilities limits their capacity to launch or grow enterprises, make investments in income-generating sources, or build savings (Iguma Wakenge et al., 2021). Unpaid attention to work, such as housework and parenting duties, frequently falls disproportionately on women (Singo *et al.*, 2022). Their capacity to participate in activities that generate revenue and pursue financial development is constrained by a lack of facilities and assistance for childcare and household duties (Sasikala & Sankaranarayanan, 2022).

The digital divide between men and women gets wider as fewer people have access to innovations like smartphones, internet access, and digital platforms (Arora *et al.*, 2023). Female access to knowledge, interaction connections, and online markets may be restricted, which can have an impact on their chances for employment and higher education (Cheek *et al.*, 2023).

This limited access is often tied to the principle of financial literacy, which hurts women in low-income resource contexts. (Arthur-Holmes & Abrefa Busia, 2021). Women's participation in creativity, risk-taking and the online economy is hampered when they are denied access to technology tools (Romano & Papastefanaki, 2020). This line of reasoning is tied to the principle of digital and information literacy, which is critical in providing the required knowledge and techniques necessary to utilise digital financial options as a suitable social funding for entrepreneurial ventures, particularly for women (Ibrahim et al., 2020). Arthur-holmes *et al.* (2023) argue that the lack of resources contributes to prejudice and stereotypes about gender, preventing women from advancing and limiting their possibilities for managing and making decisions in positions of influence.

Extant research indicates that women who have limited possessions and finances may be less able to flee violent circumstances or seek protection from law enforcement, which increases the likelihood of exposure to gender-based violence (Silva *et al.*, 2023). Alternative views have proposed the need to embrace a holistic approach in ensuring that there is financial education and the empowerment of women in order for them to challenge the discriminatory, patriarchal and societal norms which assign a second-class citizenry to their lives (Romano & Papastefanaki, 2020).

2.2.4 Gender stereotypes and cultural norms

Gendered stereotypes and rigid cultural norms have been identified in literature as a stumbling block towards the career progression of women in different sectoral and industrial contexts (Ofosu et al., 2022). In Zimbabwean society, customary gendered norms and preconceptions often prevent women from taking advantage of small-scale mining prospects (Mwandiringana & Ye, 2023). Women are frequently stereotyped as carers and domestic

workers, as opposed to participating employees in industries like small-scale mining (Canevello, 2020). These gendered stereotypes are related to the biological theory of gender development, which assigns career rules based on the sex of an individual (Cheek *et al.*, 2023). The gendered stereotypes are often associated with a lack of encouragement from colleagues and neighbours, and bigotry and harassment in the workplace (Silva *et al.*, 2023). These promote the systemic exclusion of women from active participation in small-scale mining (Buss *et al.*, 2021).

In small-scale mining, women are more frequently found in operational, compassionate, and non-technical positions, whereas men predominate in technical, operational and strategic responsibilities (Pasterski *et al.*, 2022). On account of this occupational discrimination, women endure obstacles in obtaining higher-paying and executive positions, which restricts their ability to advance professionally and financially in the industry (Arthur-Holmes & Mengba, 2024). The prevalence of problematic gender stereotypes has intensified the already lopsided work and life balance, which is not in favour of women participating in small-scale mining (Sudaryat *et al.*, 2024)

Jackline (2022) highlighted that the assumption that operations in small-scale mining are geared towards men, as perpetuated by conventional predominantly male stereotypes. Tobalagba and Vijayarasa (2020) confirm that preconceived notions like these deter women from actively participating and perpetuate cultural and social barriers that prevent them from engaging in decision-making and accessing opportunities. Insights from the works of Ibrahim Rutherford and Bus (2020) examining the factors that led women in Sierra Leone to choose small-scale mining over other sustainable livelihoods, such as agriculture, apart from the presence of rigid gendered cultural norms surrounding operations in small-scale mining.

Key insights from the study highlighted that, apart from the intentional marginalisation of women participating in small-scale mining, an increasing number of women in Sierra Leone are engaging in small-scale mining, defying existing rigid gendered cultural norms. Apart from the increased participation of women in small-scale mining operations, the study highlighted that women's participation is often temporary, as it may not lead to a strategic contribution towards the development of operations in small-scale mining (Ibrahim, Rutherford, and Buss, 2020). On the contrary, research indicates that efforts to create synergies and collaboration amongst women in Northern Ghana were rendered futile following the systemic discrimination and favouritism in the artisanal mining activities (Arthur-Holmes & Mengba, 2024). The relevance of these outcomes points to the notion that there is a male domination in the artisanal mining activities, such that women's empowerment is rendered powerless to dislodge the patriarchal value system.

Ibrahim, Rutherford, and Buss (2020) emphasised that, as things stand, women in Sierra Leone are in a worse social and economic position than men; additionally, because they lack immovable property rights, their ability to participate in small-scale mining is constrained. The systemic exclusion of women from operations in small-scale mining in Sierra Leone is exemplified by licensing requirements and land ownership, which often require immovable property rights that most women do not possess. As a result, women participating in small-scale mining operations are often forced to engage in ancillary tasks that do not pay well, to improve their social and economic standing. Most of the low-paid tasks performed by women in small-scale gold mining include panning, washing, transporting, and food vending.

The study highlighted that developing sustainable strategies can help women actively invest in and contribute to the development of mining activities in Sierra Leone, while combating negative stereotypes associated with women's participation in mining. It was

highlighted that, apart from women comprising 50.9% of the population in Sierra Leone, scant attention has been paid to their economic opportunities and employment, particularly in small-scale mining. Ibrahim, Rutherford and Buss (2020) established that 73.4% of women are illiterate, which stands in favour of men's ever-significant control over women, especially when it comes to participation in the small-scale mining activities in Sierra Leone.

It was highlighted that women with high rates of financial illiteracy have limited economic power and are in an unfavourable position to make decisions that can enhance the development of the industry. The emancipation of women in the small-scale mining sector has been found to effectively combat gender inequality by developing gender-sensitive statutory laws that can be passed to enhance the independence and empowerment of women, promoting their participation in leadership positions across various economic sectors and influencing favourable outcomes regarding women's participation in mining.

Results from a study by Ibrahim, Rutherford and Buss (2020) have significantly impacted how we interpret women's status in Zimbabwe's operations in small-scale mining. Some parallels can be drawn between the social and economic circumstances of women in Zimbabwe and Sierra Leone. Given that women comprise most of the population in Sierra Leone, it is noteworthy that this demographic is underrepresented in small-scale mining in Zimbabwe. Unlike Sierra Leone, Zimbabwe has seen incredible advancements in women's economic standing and educational attainment. However, apart from these advancements in women's social and economic positions, they have not actively participated in the nation's operations in small-scale mining. Establishing the systemic issues women experience in Zimbabwe's small-scale mining and how they relate to those identified in the study by Ibrahim, Rutherford, and Buss (2020) is noteworthy.

2.2.5 Lack of technical skills, competencies and knowledge

Research indicates that many women participating in small-scale mining operations lack the technical expertise and understanding needed for effective, secure mining practices. These have been attributed to the scant provision of mentorship, which is instrumental in the assistance and guidance, a lack of instructional programmes expressly geared towards women, and restricted educational options. Access for women to mining-related professional and technical education programmes is frequently constrained (Baddianaah *et al.*, 2022). Their ability to successfully take part in mining, obtain better-paying jobs, or explore alternate sources of income is hampered by this (Otoijamun *et al.*, 2021).

From a strategic management perspective, it can be argued that most women with an interest in small-scale mining lack the requisite dynamic capabilities to enable them to navigate through the complexities they face in the sector (Botha & Venter, 2022). This gives credence to the lack of sensing, seizing and reconfiguring capabilities that are essential in navigating through the challenges characterising operations in small-scale mining (Dess & McNamara, 2021).

Research confirms that women's challenges in acquiring technical skills and competencies stem from a lack of scientific expertise and abilities (Serwajja & Mukwaya, 2021). Conversely, men leverage their capabilities, skills and competencies to attract others to venture into small-scale mining (Antwi *et al.*, 2024). Many careers demand specialised technical skills and competencies, and understanding, especially in technological and historically dominated sectors (Awais, 2022). Lacking such skills and competencies, women may struggle to find employment, which could hinder their professional development (Adam *et al.*, 2022). Due to the traditionally low representation of women in scientific professions,

there are few possibilities for networking and mentoring. This reinforces gender preconceptions, making it even harder for women to obtain the information and expertise needed to improve their careers (Arthur-Holmes, Yeboah, *et al.*, 2023).

In some areas, women may not have as much access to high-quality educational and training opportunities, which contributes to the gender disparity in technical ability levels (Grech *et al.*, 2023). Professional growth is hampered by a lack of economic or readily available possibilities, which can perpetuate conventional, rigid gendered cultural norms (Osei & Yeboah, 2023). Impostor syndrome, in which women feel a sense that they are foreigners or have inferior talents to men, is a typical occurrence (Mugo *et al.*, 2021). Apart from having the requisite skills and competencies, this cognitive barrier can keep women from embracing technical responsibilities or career development (Danielsen & Hinton, 2020). Institutional conventions and socio-cultural preconceptions frequently dissuade women from pursuing specialised careers. This disincentive may restrict their access to technological scaling and job prospects, impeding their capacity to acquire necessary competencies (Valadares *et al.*, 2024).

2.2.6 Limited access to mining equipment and technologies

Access to suitable mining equipment and technology is frequently a barrier for women working in small-scale mining (Valadares *et al.*, 2024). Women commonly find it challenging to acquire or afford these resources because they are usually pricey and frequently owned by mining companies or firms with a male predominance (Arthur-Holmes *et al.*, 2023). Women's professional advancement in small-scale mining may be significantly hampered by constrained access to extraction equipment and technologies (Sasikala & Sankaranarayanan, 2022).

The availability of extraction technology and supplies is crucial for skill development in small-scale mining. Without proper access to these resources, women may struggle to

expand their understanding and get hands-on expertise (Cossa *et al.*, 2021). This could hinder their ability to advance professionally in an industry predominantly male, where real-world experience is highly valued (Shangase, 2022). Technological advancements in mining equipment are critical for ensuring safety and reducing workplace hazards (Ofosu *et al.*, 2022). Women are more at risk than men because they have less access to appropriate devices and methods. This safety gap may deter women from entering the mining industry or make it more challenging for them to advance in this field (Arora *et al.*, 2023). With cutting-edge technologies such as machine learning, satellite imaging, and digitisation, operations in small-scale mining are expanding rapidly (Otoijamun *et al.*, 2021).

However, a lack of access to these technologies may make it challenging for women to keep apprised of the most recent methods of mining and to advance in their careers (Njonge, 2023). Women could find it challenging to perform with their male counterparts and succeed in their occupations if they are not exposed to these improvements (Yakovleva *et al.*, 2022). Exposure to extraction machinery and technology offers chances for working together and interacting with individuals in the sector (Ayaaba *et al.*, 2024). If they are unfamiliar with the tools and technology frequently employed in the small-scale mining activities, women may find it challenging to network and gain knowledge about apprenticeship initiatives (Jeche, 2022). This restricts their options for career advancement because collaboration is crucial for moving up the corporate ladder and finding new employment (Botha & Venter, 2022).

As per Valadares and Diniz (2021) restricted accessibility to mining tools and technology may indicate that insufficient resources are being allocated to advancing women in the industry. Buhai and Van der Leij (2023) stress that investing in these tools and ensuring that women have the same opportunities can help advance their careers in mining by fostering gender diversity and an inclusive workplace. Buss *et al.* (2020) reiterated that restricting skill

development, raising security worries, preventing encounters with technology breakthroughs, lowering chances of connecting, and signalling insufficient budget allocation, restricted accessibility to mineral resources and technology work as barriers to women's professional growth. Establishing equal opportunities for women and improving women's job chances in the small-scale mining activities requires removing these obstacles (Cheek *et al.*, 2023).

2.2.7 Lack of legal recognition and protection

In developing social and legal setups, women frequently lack an independent legal status, as in small-scale mining (Bussa *et al.*, 2020). This includes issues like a lack of fundamental immovable property rights, a cap on the number of mining licences that may be obtained, and a dearth of efficient legal avenues for dealing with gender-specific intimidation and assault at mining sites (Arthur-Holmes, Yeboah, *et al.*, 2023). Lack of legal protections and accreditation can be a significant barrier to women's advancement in the workplace (Cheek *et al.*, 2023). Insights from Koomson-Yalley and Kyei (2022) stressing that the prevalence of hegemonic characteristics in the small-scale mining industry is deeply entrenched in the patronising livery system, which prefers men to access and control rights to land and acquire mining licences and other legal provisions at the expense of women. Mkodzongi (2023) believes that women's opinions and voices are frequently absent from forums for making decisions, organisations that promote mineral exploitation, and debates held at the local level. Huggins *et al.* (2024) highlighted that this inhibits the capacity they have to affect laws, rules, and practices that have an immediate impact on their lives and means of subsistence. Arthur-Holmes and Matey (2025) confirmed that women are influenced by socioeconomic and political inequalities, which deter them from pursuing careers in small-scale mining

Ngwerume (2023) stress that women are more susceptible to workplace harassment if it is not recognised by law or protected. Mkodzonge (2023) agrees that women may experience discriminatory hiring procedures, unfair remuneration, and limited development opportunities. Their abilities may be restricted, and their career development may be hampered by gender discrimination (Silva *et al.*, 2023). Addressing and combating sexual misconduct in work environments requires legal acknowledgement and protection. It was established that women who lack the legal means to hold abusers responsible or seek redress may feel threatened, which increases tension and lowers their satisfaction with their jobs (Yakovleva *et al.*, 2022). This may ultimately impact their professional trajectories. The works of Ofosu *et al.*, (2022) underscore that, apart from the legal hurdles affecting women's active participation in small-scale mining, Ghana has made significant headway in regulating the small-scale mining sector and recognising women's equality in it. Furniss (2022) share related beliefs and perspectives that women's job success is considerably aided by legal acknowledgement of a balance between work and life, and policies that are supportive of families

However, Buss *et al.* (2020) argue that the inclusion and legalisation of women participating in small-scale mining in Kenya remains largely rhetorical. Valadares *et al.*, (2024) supports this idea by stating that in many countries, legal protections for women's rights during pregnancy and following childbirth are lacking. Insights from Mugo, Mwaura, *et al.*, (2021) reiterate that women struggle to balance their careers and family obligations in the absence of suitable parental or maternity leave regulations. Bashwira and van der Haar (2020) concur that women are ultimately forced out of the workforce in the operations of small-scale mining due to career gaps and diminished progression chances. Without these safeguards, women struggle to balance their professional and personal lives, which forces them to make challenging decisions that may limit their ability to advance professionally (Otoijamun *et al.*, 2021). The

cumbersome registration process leaves most women operating in small-scale mining illegally (Dzvimbo et al., 2019).

Mugo *et al.* (2021) emphasised that providing redressal and options for addressing gender-based harassment and bias, ensuring equal recognition, and safeguarding are crucial. Njonge (2023) emphasised that women experience fewer opportunities to advance professionally and experience long-term career setbacks, as they often find it challenging to confront discriminatory practices or seek recourse. Legislative structures that uphold women's liberties, advance equal rights for women, and provide channels for recourse are necessary for removing these obstacles (Furniss, 2022). In addition, institutions and companies must promote inclusive and diverse working environments that foster career progression for women and provide equal opportunities for advancement.

The existing literature suggests that, in most social settings, there is a lack of legal instruments that support women in their employment and emancipation endeavours. This results in systemic segregation of women, especially in the small-scale mining activities and other careers that are ascribed to be predominantly male. The absence of favourable legal instruments is even more entrenched in small-scale mining, given the sector's unregulated nature and the often-lacking legal frameworks. It is in the scope of this study to ascertain the effect that the lack of legal recognition and protection has on the ability of women to participate in small-scale mining successfully.

2.2.8 Inadequate support services and infrastructure

Inadequate support and infrastructure for services, such as safety and medical places of work, educational centres, and accessibility to markets, are a problem for Zimbabwe's operations in small-scale mining (Mwanderingana & Ye, 2023). Women are most negatively

impacted, which makes it harder for them to participate in the business. Insufficient facilities and support systems can indeed be a significant obstacle to women's job advancement (Njonge, 2023). Women's ability to pursue career advancement is hindered in many nations by the scarcity of affordable, accessible childcare. Women are frequently compelled to give up on their career goals because they lack the assistance needed to care for their children (Danielsen & Hinton, 2020; Sasikala & Sankaranarayanan, 2022). The presence of weak legal frameworks affects the ability of women to recoup their investments in small-scale mining (Mugo et al., 2021).

Women may be deterred from taking on challenging work roles due to insufficient maternity leave policies (Cossa *et al.*, 2021). In addition, women may find it challenging to manage their personal and professional lives in the absence of rules that support a harmonious balance between work and life, such as programmable schedules or remote employment possibilities, which might impede their career advancement (Njonge, 2023; Schwartz *et al.*, 2021). In organisations with insufficient assistance programmes, discrimination on the job and prejudice based on gender may be prevalent (Gyan & Behrends, 2024). Accessing mentoring, networking opportunities, or training programs that could advance their careers may be challenging for women. In addition, gender-based preconceptions may prevent them from being taken into consideration for managerial positions (Danielsen & Hinton, 2020).

A lack of mentors or sponsors who can encourage and champion women in their professions could result from insufficient support services (Njonge, 2023). Access to knowledgeable individuals who can offer direction while opening doors to opportunity is essential for job growth. Women's capacity to get the certifications and competencies required for job advancement may be hampered by limited accessibility to educational institutions and

training courses (Valadares *et al.*, 2024). In some businesses or sectors, the gender gap is maintained through unequal access to education and growth in career (Johnston *et al.*, 2024).

Women may find it challenging to succeed in their employment if there is inadequate infrastructure, such as inadequate safety precautions, accessible facilities (Stewart *et al.*, 2020), or transit options. If organisations are not created to meet women's demands, they are less able to concentrate on their professional development. Inadequate infrastructure and support systems prevent women from advancing professionally by restricting their ability to access secure workplaces, supervision, education, and parenting options. Furniss (2022) emphasises that these challenges must be addressed for women to have equal opportunities and advance in their careers.

Insights from Furniss (2022) focused on the perspective of inadequate legal and social exclusions of women participating in small-scale mining operations in the Democratic Republic of the Congo. It was highlighted that the active participation of women in small-scale mining operations in the DRC is hindered by some illegal social barriers. These obstacles included sexualised violence against them, such as rape. Although the 2018 Mining Law 18/001 promotes women's involvement in mineral ore extraction, it prohibits pregnant women from actively participating in small-scale mining in the DRC due to health risks to both the unborn child and the pregnant mother (Schwartz *et al.*, 2021). It appears that existing legal provisions contribute to the exclusion of women from participation in small-scale mining in the DRC (Furniss, 2022).

Numerous barriers, including gender biases and restrictions, contribute to the underestimation of women's labour and achievements in small-scale mining, which is a significant factor in the insufficient involvement of women in these activities. The study

adopted an anthropological approach in the northern Kivu region of the eastern DRC (Iguma Wakenge et al., 2021). The artisanal miners in the Northern Kivu district were interviewed informally through participant observation, key informant interviews, and unplanned conversations.

The study's results confirmed the areas' findings regarding male domination in this small-scale mining activity, which is attributed to the belittling of women's contributions in the industry. An original contribution that emerges is the acknowledgement of the dominant narrative that surrounds the extraction of conflict minerals in the Eastern Democratic Republic of the Congo, which persists and supports an unworkable one-dimensional portrayal of Congresswomen as those who are targeted for sexual abuse in the small mining activities (Furniss, 2022).

Furniss (2022) noted that cultural taboos, such as the notion that women entering operations in small-scale mining could cause the minerals to be depleted, contribute to excluding women from large-scale mining. In the DRC, some mining zones are more common than others due to these cultural beliefs. The research's contribution to the current study highlights important social and legal impediments that may limit women's participation in and contributions to operations in small-scale mining. They began to recognise that the conflict zone, which has led to the sexualisation of violence against women who want to participate actively in the mineral ore extraction, is the fundamental element of the Democratic Republic of the Congo.

2.2.9 Limited networking and business opportunities

Women working in small-scale mining sometimes experience loneliness and lack networking opportunities. Due to this, they are unable to access crucial market data, prospective clients and investors, and other commercial prospects that can enable them to develop and extend their mining business (Buhai & van der Leij, 2023). Indeed, a lack of business and networking opportunities might hinder women's job advancement. A lack of networking opportunities may make it more challenging for women to find positive role models and mentors who can provide them with guidance, support, and assistance (Ibrahim *et al.*, 2020). An equal power dynamic between men and women characterises gold trading conditions in Indonesia (Devi *et al.*, 2024).

Mentorship relationships frequently have an impact on decisions regarding employment and advancement, while without them, women may pass up beneficial opportunities for growth (Hutchings *et al.*, 2020). Female professions may become less visible due to limited networking opportunities and fewer commercial prospects. They may find it more challenging to demonstrate their abilities, successes, and potential because of this lack of visibility (Buss *et al.*, 2019). As a result, this may negatively affect their chances of getting noticed and taken to be for advancement.

Gaining knowledge of impending opportunities, both inside and outside one's existing organisation, is frequently the result of networking (Buhai & van der Leij, 2023). Women may miss out on essential information about hiring opportunities, new initiatives, or partnerships due to a lack of networking opportunities, which puts them at a disadvantage compared to their male coworkers (Silva *et al.*, 2023). It can be challenging for women to join certain professional networks, as they are often predominantly male. These networks often provide users with

access to influential individuals, commercial opportunities, and high-level connections (Sasikala & Sankaranarayanan, 2022). Women's prospects for advancing their careers and gaining access to new business opportunities are limited when they are excluded from these networks.

Due to the lack of networking options available to them, female entrepreneurs may have more challenges obtaining investment and financing for their company endeavours (Danielsen & Hinton, 2020). Through networking, many investment opportunities are discovered. Dzvimbo *et al.* (2019) reiterate that women may find it challenging to secure the funding they need to expand their enterprises if they are shut out of these networks, which could impede their ability to advance professionally. Shagdarsuren and Purevjav (2022) concur that limited networking opportunities for women participating in small-scale mining operations may perpetuate adverse prejudices and preconceptions. Sasikala & Sankaranarayanan (2022) weigh in that the perception that women tend to be less qualified or determined might be perpetuated if they are not represented in influential connecting circles. The abilities they possess might be underestimated as a result of this bias, which would limit the opportunities for career progression (Buss *et al.*, 2019).

2.3 Challenges experienced by women participating in small-scale mining

Various factors, including the industry's reputation, children's and adults' knowledge of careers, selection criteria, recruiting practices and operations, discriminatory attitudes, a culture predominantly male, and the workplace environment, have been identified as barriers to women entering and working in small-scale mining in the literature. Operations in small-scale mining have long been seen as a male domain, where common impediments to professional progression for women have been noted (Jackline, 2022; Koomson-Yalley &

Kyei, 2022). While the pay disparity between men and women has shrunk in some industries, such as the hotel and restaurant industry, it has increased in the mining business.

The focus of Valadares and Diniz (2021) was on the overt discrimination and obvious barriers that women participating in small-scale mining operations must overcome. The research supported the idea that persistent preconceptions discourage women from working in mining activities, such as the notion that having women actively participating in the industry is unlucky. Valadares and Diniz (2021) highlighted that key informant interviews were conducted with women who work actively in mining for a multinational corporation in Brazil as part of the Couples and Compass research method. Using a qualitative study technique opened new avenues for investigation into the problems experienced by women participating in small-scale mining operations.

The fact that the research was conducted in a structured mining environment helps illuminate why the women who participated had relatively greater educational attainment and worked as geologists and mining engineers. A large majority of contestants played supporting roles. The participant population includes women aged 29 to 49, married, single, or without children. The study's findings demonstrated that, apart from respectable mining companies employing women, they faced entrenched disadvantages that hindered their ability to grow personally and professionally. There are glass ceilings that restrict women from advancing in their professional lives to positions of power, as evidenced by the underrepresentation of women in significant and senior roles in small-scale mining. This is true even though the Brazilian mining facility has a rule against sexual and emotional harassment in place to promote justice and equality between men and women.

Valadares and Diniz (2021) mentioned that many Brazilian mining activities cause women to struggle to strike a healthy work and life balance, notably if they must stop working to provide care for young babies. Although laws and other measures have been established to safeguard the ethical and financial well-being of such employees, this is nonetheless the case. Motherhood would have a detrimental impact on women's engagement in small-scale mining, potentially hindering their growth in the profession.

Apart from being a formal and professional undertaking, the research conducted by Valadares & Diniz (2021) contributes to the body of expertise because it recognises the methodical challenges that women still face in small-scale mining. The distinction can be explained by the research's emphasis on the systemic challenges women experienced in a formal mineral ore extraction organisation as opposed to the current investigation, which is centred on the challenges women experience in the unstructured mining activities in a developing economic climate.

2.3.1 Occupational Segregation against women in small-scale mining

Glass ceilings in the workplace have become more prevalent due to employment segregation. Hutchings *et al.* (2020) reiterated that the gender-based occupational segregation of women has an impact on Zimbabwe's small-scale mining industries. Ragins and Scandura (2018) highlighted that, provided that they are primarily taken to be male areas, the involvement of women in these professions is relatively low. Marshall *et al.* (2018) emphasises that women leaders are concentrated in specific job types, mainly clerical and assistant roles, even though the general labour market continues to be severely divided by gender. Most women at the most senior levels in most businesses come from non-operating assistance fields like staff members, HR, and public relations (Sharma *et al.*, 2019).

Women are restricted from holding prestigious positions like CEOs and leaders. The starting point for other types of discrimination against women, like disparities in wages, decreased job stability, and fewer opportunities for advancement, is the gender-based occupational segregation of the workforce (Silva *et al.*, 2023). Even if women successfully secure a queue position, it is unlikely that they will be in a key position where they can establish themselves as leaders (Sasikala & Sankaranarayanan, 2022). This is demonstrated by the fact that there are still fewer women in senior management roles than men in the same sector. Class differences were found to perpetuate inequalities between men and women in artisanal mining due to pre-existing social relations and identity (Kwao, 2024).

Horizontal and vertical separation of duties are two types of job segmentation. Vertical distinction occurs when women are paid less and have a lower standing in workplaces (Awais, 2022). Segregation in the workplace vertically gauges the severity of disparities against women participating in small-scale mining (Block, 2023). On the other hand, the degree of difference among occupations is measured by horizontal segregation (Arthur-Holmes, Yeboah, et al., 2023). According to Schrenker (2023) women are excluded from manual jobs in small-scale mining in most advanced countries due to significant horizontal gender segregation.

Women only hold 12.5% of the posts in small-scale mining, while making up most of the population, because of serious prejudice at work against them. Women make up just one-third of the entire workforce in Zimbabwe. Women are expected to work in professional trades or regions that are less physically demanding than those on mining sites (Sasikala & Sankaranarayanan, 2022). Due to the unfavourable assumptions that employers uphold, the roles of gender are segregated, which leads to the sexist assignment of jobs. In the broader context of operations in small-scale mining in Zimbabwe, ethnic and historical factors, particularly in the mining and mining industries, exacerbate occupational segregation.

A practical application of gender-based occupational segregation in small-scale mining was exposed in a study by Arthur-Holmes, Busia, and Katz-Lavigne (2023), in which we investigated mechanisms that women can utilise in their collective bargaining process. They emphasise that women can explore a multi-layered negotiation process to leverage economic interest in small-scale mining. The research was motivated by the realisation that, on average, men are more dominant than women participating in small-scale mining operations, reinforcing their predominance and economic power in the sector. Developing mechanisms to enhance women's economic power in these operations in small-scale mining was imperative.

It might be challenging to advocate for a development in small-scale mining when gender inequalities and the exploitation of women are prevalent in the sector (Kwao, 2024). However, the works of Arthur-Holmes and Mengba (2024) stipulated that collective action from women through the creation of an association can be effective in challenging existing gender inequalities and advocating for improved inclusion and representation of women's voices in mining activities through seeking economic security and social recognition.

Women in licensed and unlicensed ASM zones form groups or associations to promote their welfare, challenge gendered norms, advocate for representation and inclusion of voices in mining activities, resist male diggers involved in surface mining, and seek social recognition and economic security.

As part of the research approach, Arthur-Holmes, Busia and Katz-Lavigne (2023) Forty-nine women and eleven men who worked directly in small-scale gold mining were used. Purposive, snowball, and convenience sampling were used to select participants using non-probability sampling techniques. Women directly active in ancillary activities in the small-scale mining activities were interviewed as the primary source of qualitative data for this study.

Participant observations were conducted to study the kinds of activities that women participating in small-scale gold mining activities.

The study's conclusions underlined the existence of a gendered division of labour, which supported and legitimised the distinction between men and women who work in small-scale gold mining. Women's bargaining power in negotiations for pay raises is diminished by their supporting roles in small-scale mining. Arthur-Holmes *et al.* (2023) found that men typically earned weekly wages of USD\$9.12 on the job, compared to women's USD\$4.56. The salary cap is justified, according to mining owners interviewed, because women do ancillary tasks in the small-scale gold mining activities. Additionally, it was noted that most women lack experience in the manual labour required for gold mining, which diminishes their bargaining power regarding compensation.

According to Arthur-Holmes *et al.* (2023) women can improve the state of their finances in the small-scale gold mining activities by utilising their circle of connections and prior work experience. There is some anticipation that women's advantages in the sector will be acknowledged, as it has been reported that the median earnings for women have been gradually rising over the last several decades due to their more active participation in small-scale gold mining. The analogies to the circumstances in Zimbabwe, where women are increasingly involved in small-scale gold mining as proprietors or employees, would improve the country's financial condition and the sector's overall success, making those outcomes relevant to the current study.

2.3.2 Sexual Discrimination against women in small-scale mining

Sexual discrimination is premised on the biological variations between men and women (Block, 2023). Discrimination based on sexuality occurs at different stages across a woman's career journey (Furniss, 2022). Nascimento, Douglas, Silva, and Elisa (2023) emphasise that men are treated differently from women in the workplace, demonstrating the existence of sticky floors. According to findings from (Sharma *et al.*, 2019), the prejudice that women experience based on their sexuality is more severe at the lower levels of the organisational hierarchy than it is in executive positions. Paschal and Kauangal (2023) confirmed that the positions that are occupied by women in the small-scale mining sector make them vulnerable to sexual violence, social discrimination, and health problems. Insights from the works of Hutchings, Moyle, Chai, Garofano, and Moore (2020) emphasise that, compared to women in executive positions, women who work at lower levels in the organisation are victims of sexual discrimination.

Women are victims of verbal abuse, sexual assault, and other forms of gender-based violence that limit their chances of progressing in their preferred occupation, particularly in small-scale mining (Bashwira & van der Haar, 2020). This scenario fosters a pleasant workplace environment that discourages women from entering the industry. Insights from the works of Hutchings *et al.* (2020) specify that the gender policy framework was created to eradicate different types of sexual and emotional harassment against women, particularly in predominantly male industries, such as mining and construction. (Hutchings *et al.*, 2020) specify that women are likely to demonstrate high levels of devotion to employment in an industry where they are treated fairly and on an equal footing with men, provided they have the required experience and expertise to execute the assigned duties. Lingard and Lin (2003) highlighted that white males engaged in sexually discriminatory behaviours increase the active participation of women in the Australian operations in small-scale mining.

Available literature appears to suggest that the perpetuation of sexual discrimination against women participating in small-scale mining can be attributed to their underrepresentation (Cheek *et al.*, 2023). Sexual discrimination comes up as a stumbling block towards the career progression and advancement of women in the industry (Hutchings *et al.*, 2020). Due to the perpetuation of sexual discrimination, women fail to operate on an equal footing with men in the industry, and they occupy a second-class citizen status that does not promote the long-term sustainability of women's efforts in the small-scale mining activities. An alternative view focuses on the practice of rituals in small-scale mining setups, where women are found to play a central role in these rituals (Shaba & Swart, 2024). This occulting perspective has led to the incorporation of women into small-scale mining in the Mazowe area in Zimbabwe.

Koomson-Yalley and Kyei (2022) conducted a study in Ghana's artisanal and small mining industries. The study's primary goals were to quantify the extent of women's underrepresentation in small-scale mining and the recurring challenges that women experience in artisanal mining. The study used qualitative research techniques to choose participants, primarily women actively participating in artisanal mining activities. The participants in this study who participated in key informant and in-depth interviews about the opportunities and challenges women experience in small-scale mining were selected using a purposive sampling approach. Thematic analysis was employed to examine a broad range of circumstances.

Koomson-Yalley and Kyei (2022) stressed that apart from making up about 50% of operations in small-scale mining in Ghana, the results of the study showed that women are at the bottom of the hierarchy. Cultural norms that dictate that women should perform light labour and refrain from taking on any primary responsibilities related to menial mining tasks are to blame for the marginal position that women play in small-scale mining. Reviewing the results

of the study reveals that operations in small-scale mining are primarily predominantly male, with a division of labour that places women in the lowest ranks of the small-scale mining supply chain to inhabit and supervise spaces (Koomson-yalley & Kyei, 2022).

The gendered division of labour contributes to women's subordination to men, which leads to low remuneration as women find themselves occupying the lower tier in the remuneration hierarchy. According to research by Koomson-Yalley and Kyei (2022), many women who work in artisanal mining in Ghana do not engage in mining themselves; instead, they support the direct mining activities carried out by men by selling clothing, food, and other supplies. The survey confirmed the taboo cultural expectation that it is unlucky for women to go underground or directly participate in small-scale mining while they are menstruating. Social value systems have complicated the exclusion of women from Ghanaian operations in small-scale mining.

For the current research, which focuses on the systemic challenges women come across in small-scale mining in the Zimbabwean context, the study by Koomson-Yalley and Kyei (2022) has significant implications. Due to lower echelons of education and the presence of cultural value systems that support the subordination of women to men, particularly in physical activities associated with mining, it appears that there are similarities in the socioeconomic context of women who are reclaiming their power.

2.3.3 Sexual Harassment against women participating in small-scale mining

Women in managerial positions are the basis of the agenda. One of the most prominent events of such a nature takes place in the small-scale mining activities, which is predominantly male and has a high proclivity towards the creation of sexual and emotional harassment against women (Koomson-Yalley *et al.*, 2022). Hutchings *et al.* (2020) reiterated that initiatives have

been implemented in Australian operations in small-scale mining to ensure equal employment opportunities for both men and women, through the introduction of legal measures to prevent sexual and emotional harassment in the workplace. Sexual and emotional harassment is viewed as any factor inhibiting the advancement of women in the workplace (Sasikala & Sankaranarayanan, 2022).

Different categories of women, particularly in small-scale mining, have fallen victim to sexual and emotional harassment. Women suffer from sexual expectations that include sexual manipulation at mining sites, sexist comments, and body touching, and the provision of sex in exchange for mining jobs and protection of trading space (Arthur-Holmes et al., 2025). Women experience at the workplace are systemic and may not necessarily be categorised based on the position that one occupies in an industry (Sasikala & Sankaranarayanan, 2022). The works of Hutchings *et al.* (2020) highlight that sexual and emotional harassment takes various forms, such as making inappropriate remarks, whistling, and swearing, using unpleasant language that makes the other party feel uncomfortable. The adverse effect associated with sexual and emotional harassment is that it affects the active participation of women in critical decision-making work, where they can make a significant contribution towards corporate success. As a last resort, women might quit their professional lives (Sasikala & Sankaranarayanan, 2022).

Women's participation in corporate decision-making is demoralised by sexual misconduct since it fosters a culture of retribution and career restitution, leading to women being hesitant to discuss sexual and emotional harassment in leadership in an open manner (Cheek *et al.*, 2023). Both in emerging and established economies, sexual and emotional harassment has a substantial impact on women participating in small-scale mining (Grech *et al.*, 2023). It raises several obstacles and barriers, preventing and restricting women's participation in this industry. Women may be discouraged from looking for a job in small-scale

mining because sexual and emotional harassment sustains a hostile and unequal workplace (Mugo *et al.*, 2020). There are few chances for women to participate in and make contributions to the sector's growth because they decide to enter small-scale mining, being influenced by their fear of and vulnerability to harassment.

Inequalities in power are maintained in the workplace because of sexual and emotional harassment. Men, who frequently rule operations in small-scale mining, may abuse their dominance to harass and abuse women (Grech *et al.*, 2023). This leads to an unbalanced environment that hinders women's autonomy and full participation in the industry. Women who are harassed at work suffer mental and physical injury, which can hurt their health and cause mental discomfort (Dzvimbo *et al.*, 2019). Women may have psychological effects such as anxiety, depression, and other issues that have an impact on their general well-being. Such injury puts their participation in small-scale mining even more in jeopardy.

Workplace efficiency and production are influenced by sexual and emotional harassment. Women who come across harassment could lose motivation and focus, which would make it harder for them to perform at their best (Cheek *et al.*, 2023). Overall profitability and the productivity of operations in small-scale mining are ultimately impacted by this. There are few prospects for women to succeed in their careers due to the overall incidence of sexual and emotional harassment in the field. For women, harassment creates a barrier to obtaining management and making career choices (Bashwira & van der Haar, 2020). This discrimination maintains the cycle of underrepresented female representation due to gender, which hinders the advancement and professional growth of women in small-scale mining.

Operations in small-scale mining may lose skilled and capable women as a result of sexual and emotional harassment (Bashwira & van der Haar, 2020). A loss of significant talent,

knowledge, and skill will follow if enough women leave the sector because they feel dissuaded by the hostile workplace (Hutchings *et al.*, 2020). It is critical to address the consequences of sexual misconduct in small-scale mining if women are to be actively included and empowered in both developed and developing countries (Valadares *et al.*, 2024). To address and lessen the effects of sexual and emotional harassment, it is crucial to implement effective rules, offer gender-sensitive training programmes, set up reporting procedures, and encourage a culture of tolerance and non-discrimination (Arthur-Holmes & Abrefa Busia, 2021). By taking these steps, small-scale mining can foster a more diverse and inclusive workplace where women can actively engage, make valuable contributions, and thrive in small-scale mining businesses.

2.3.4 Wage differentials between men and women in small-scale mining

Existing literature shows that women in the tourism industry hold less than 40% of all managerial positions. Studies have proven that women are paid less than men (Valadares & Diniz, 2021). The existence of the wage gap for a similar position cannot be attributed to the biological makeup of women, who are responsible for childbearing activities, which makes it necessary for them to leave employment to bring up the child. Block (2023) highlighted that in some organisations, women at the same level may receive different salary packages, with women often being on the receiving end. Salary differences based on gender indicate male dominance over women at the workplace and demonstrate the persistence of the gender gap (Sasikala & Sankaranarayanan, 2022).

The gender pay gap in small-scale mining is a complicated problem with many contributing elements (Schrenker, 2023). A rigorous analysis of social, cultural, and institutional factors is necessary to comprehend how this disparity is maintained (Valadares *et al.*, 2024). Small-scale mining frequently restricts women to lower-skilled and less lucrative

jobs like cleaning, processing, or sorting duties (Buhai & van der Leij, 2023). These jobs typically pay less than the higher-paying technical or management occupations that males primarily hold (Sasikala & Sankaranarayanan, 2022). Gender-based wage discrepancies are reinforced by gender-based occupational segregation. On the other hand, women have different levels of involvement in the small-scale mining sector, which can be indirect, temporary, or permanent. Indirect livelihoods built on the small-scale mining sector might incorporate involvement in penetrating, home-based trading, commuting trading, and the sponsorship of underground pits (Arthur-Holmes, Yeboah, et al., 2023).

In many jurisdictions, women's limited educational options result in unequal access to training and skill development (Arthur-Holmes & Mengba, 2024). Since technical professions sometimes require specialist expertise, it may be more challenging for them to secure higher-paying positions (Valadares *et al.*, 2024). Women are consequently pressured into lower-paying employment, which widens the wage gap. Gender preconceptions and biases with a long history continue to harm women in the workplace. The manifestations of this discrimination include disparate treatment, a lack of advancement, and biased hiring procedures (Arthur-Holmes *et al.*, 2023). Due to discriminatory attitudes and behaviours, women have been struggling to succeed in their careers and obtain equitable pay (Awais, 2022).

The unstructured working conditions and lax protection of worker rights are frequent features of operations in small-scale mining (Schrenker, 2023). By undermining accountability and equitable wage practices, spontaneity makes it simpler for companies to exploit employees, especially women (Jiang, 2021; Nkomo, 2024). The salary discrepancy is made worse by the dearth of legally binding agreements and union safeguards (Valadares *et al.*, 2024). Numerous safety and wellness dangers, such as being exposed to poisonous compounds or collisions, are connected to small-scale mining (Nkomo & Nkomo, 2023). Due to the insufficient defence

gear or culturally enforced safety constraints, women may experience significant challenges. Women might be overrepresented in less dangerous but lower-paying positions (Sasikala & Sankaranarayanan, 2022).

The gender wage disparity in small-scale mining is kept alive by predominantly male networks of power and systems (Silva *et al.*, 2023). Men frequently control decision-making processes, wage negotiations, and resource accessibility, which restricts women's capacity to oppose discriminatory practices and demand equal compensation (Schrenker, 2023). Even if there are rules to guarantee gender equality at work, their application and enforcement may be lax in small-scale mining. Gender-based pay discrepancies persist largely because workers and their employers are often unaware of the legal protections against wage discrimination (Arora *et al.*, 2023). A diverse approach is needed to close the gender pay gap in small-scale mining. To achieve equitable salaries, it is crucial to support equal access to education, advance women's learning skills and competencies, combat sexism, formalise job opportunities, and enhance legal frameworks (Furniss, 2022). In addition, promoting gender diversity and enabling women to fully participate in decision-making processes can help eliminate the power disparities that contribute to the salary gap.

2.3.5 Work and life Balance

The concept of work and life balance has a gender-neutral definition that recognises that all categories of employees have other commitments outside the workplace (Madikizela, 2018). Work and life balance examines the integration of professional life with an employee's personal life and how career women manage the tension between their professional and social responsibilities, particularly given their biological makeup and the demands they must meet to support their families (Hutchings *et al.*, 2020). The challenges women experience in their

career development can be attributed to gender roles and a culture of values that do not recognise women's ability to make significant contributions in the workplace.

These cultural legacies have limited the opportunities available to women, who are expected to occupy low-paid jobs and endure long breaks for child care (Sasikala & Sankaranarayanan, 2022). Such breaks in women's professional development can negatively impact their work and life balance, particularly in terms of career advancement, as they hinder their upward mobility. Women are initially psychologically inclined to take on domestic roles in relationships that include child care. Such culturally assigned roles do not support women's professional development and have adverse effects on work and life balance.

Arora *et al.* (2023) reiterate that women experience multiple role conflicts that force them to take breaks, negatively affecting their work and life balance and professional development. Some organisations have a double standard when it comes to marriage. Married men are viewed as having a support system at home that allows them to provide for and divide attention towards their professional development (Awais, 2022). However, married female managers face a significant liability, as they are often inclined to prioritise their family responsibilities over their professional careers whenever possible. From this perspective, a role conflict is an obstacle to women's career advancement and their ability to cope with the demands and responsibilities associated with high levels of responsibility in an organisation.

In many societies, traditional gender roles assign women as caretakers, responsible for household chores and childcare (Awais, 2022). These norms can create additional burdens for women working in small-scale mining, making it challenging for them to balance their work and personal lives. Women participating in small-scale mining operations usually take breaks to look after their children and families, whereas men in the industry are not burdened with a

similar obligation (Jiang, 2021). Women working in small-scale mining often have limited access to support systems, such as affordable childcare facilities and elderly care services. This lack of infrastructure can force women to choose between their work and personal commitments (Yakovleva *et al.*, 2022). This concept is linked to the minimal bargaining position that women participating in small-scale mining operations face, where, due to the high wages, they may not be able to afford to place their young children in their care, which implies that they have to break from their work to look after children (Perks & McQuilken, 2020). As such, breaking from work life affects women's career development prospects.

Additionally, operations in small-scale mining often do not adhere to regular working hours, and women may be required to work long hours or at irregular times, making it challenging to balance work and personal life (Yakovleva *et al.*, 2022). Moreover, small-scale mining is often associated with dangerous working conditions and exposure to hazardous substances. Women working in mining may prioritise their safety, health, and well-being, leading to trade-offs in their personal lives or work commitments (Tobalagba & Vijayarasa, 2020). In some economies, women might have limited job opportunities outside of operations in small-scale mining, leaving them with fewer choices to pursue a better work and life balance. Economic limitations or a lack of education skills, and competencies can restrict their ability to transition to less demanding occupations (Buss *et al.*, 2021).

Many operations in small-scale mining lack policies or support mechanisms to help employees, especially women, maintain a work and life balance (Silva *et al.*, 2023). Employers may not provide flexible working arrangements, maternity leave, or family-friendly policies, further exacerbating the challenge for women (Tobalagba & Vijayarasa, 2020). Women participating in small-scale mining often face gender discrimination, unequal pay, and fewer promotional opportunities than their male counterparts (Arthur-Holmes & Abrefa Busia, 2021).

These factors can contribute to greater work pressures and a lack of control over their work schedules, making achieving work and life balance more challenging. (Buss *et al.*, 2021). Operations in small-scale mining can be economically unstable and susceptible to fluctuating market conditions. In such situations, women may feel compelled to work longer hours or multiple jobs to support their financial needs, compromising their work and life balance.

2.4 Coping mechanisms against gender imbalances

Coping mechanisms are systems that women can explore to minimise the adverse effects associated with gender imbalances. Women's empowerment and gender equality must be prioritised comprehensively to address gender disparities (Silva *et al.*, 2023). It is essential to note that mechanisms employed to address gender imbalances may include mentoring, providing training opportunities to empower women, utilising strategic networking, and referencing role models of other women who have successfully broken through glass ceilings (Sharma *et al.*, 2019). It is a strategy to encourage women to pursue technical studies; financial assistance has been developed in the corporate sector to promote women's economic emancipation and empowerment.

For women enthusiastic about developing technical skills and competencies, development that includes technical training sessions and the provision of internet-based courses for convenience and affordability has been implemented in different sectors of the economy as a way of ensuring that women are empowered and are given the opportunities to lead in respective organisations (Silva *et al.*, 2023). As a result, women-led organisations and neighbourhood associations are viewed as a secure environment where they can gain information, share knowledge, and connect with others to create strong connections that can perpetuate women's empowerment and economic emancipation and share their experiences

regarding opportunities available in the executive leadership of different organisations (Jiang, 2021).

It is imperative to ensure that existing legal systems support the ability of women to acquire immovable property rights, promote gender equality, and protect humans against violence and discrimination (Danielsen & Hinton, 2020). To enhance the active participation of women and their productivity, it is essential to implement income-generating potential that should increase their access to education, technical skills and competencies, and entrepreneurial support (Awais, 2022) Implementing professional safety and wellness interventions that consider women's requirements and vulnerabilities is beneficial. Raising awareness and providing safeguards in reporting systems have been found to influence women's contributions to the professional world positively.

Encouraging women to create gender-sensitive research is essential to developing an appreciation of the specific challenges women come across when they engage in business, such as small-scale mining. The provision of information regarding the creation of collaborations, partnerships, and strategic alliances between women enables the synchronisation and sustainability of women's business activities. Through the implementation of gender-sensitive strategies and programmes, the contribution of women in their professional areas can be enhanced (Arthur-Holmes, Abrefa Busia, *et al.*, 2023). Empowerment can be enhanced by ensuring that immovable property rights are respected and that women have access to lines of credit using their properties as collateral.

2.4.1 Strategic Networking

Strategic networking is examined as a mechanism to improve women's visibility by creating a series of collaborations and synergies with other women to improve their chances of occupying positions of influence in the industry. Strategy networking has exploded following the realisation that the lack of business and networking possibilities has a high chance of lowering the chances of women's career advancements (Buss *et al.*, 2019). The failure to create strategic networks for women inhibits their career progression, denies them the attention and acknowledgement they require, and restricts their access to information and opportunities (Danielsen & Hinton, 2020).

To fully achieve gender equality and encourage the active participation of women in the workplace, it is essential to create strategic networks that have been proven to minimise obstacles associated with gender profiling. The provision of specialised assistance through foster and gender-appropriate regulatory structures, and the creation of an atmosphere that recognises the achievements of women participating in small-scale mining operations, are essential components of a multifaceted strategy for overcoming obstacles associated with women's progression in their career paths (Nascimento *et al.*, 2023).

Women create strategic networks to combat the social isolation and exclusion they experience at work. Such mechanisms are being brought about because of the underrepresentation of women who suffer from low-quality relationships with men in the workplace. In response, women are increasingly building strong support networks and coalitions, increasing their chances of acceptance in senior management roles (Hutchings *et al.*, 2020). By creating connections with other women in the industry or joining professional organisations, these networks provide support opportunities for collaboration and guidance for

women who might need to pursue executive leadership positions. They can impact knowledge for women or the systemic challenges they are likely to face in their corporate journey.

Sharing information with like-minded individuals provides both emotional and practical support, contributing to initiatives that promote gender equality for women (Sasikala & Sankaranarayanan, 2022). Strategic networking can involve participating in mentorship programmes, joining diversity and inclusion communities, or advocating for policy changes that support gender equality in the workplace. Through engagement with local communities outside of operations in small-scale mining, strategic networks create a sense of belonging and support. The active participation of women in volunteer programmes such as community development, volunteer work, and advocacy groups fosters resilience and allows for personal development outside the workplace (Zolnikov, 2020). Such mechanisms provide an avenue through which women can report incidents of sexual and emotional harassment, prejudice, and violations of their rights and receive secret legal advice and professional counsel.

2.4.2 Mentorship

A more knowledgeable and experienced person, typically in a position of power, mentors a less experienced person (Sharma *et al.*, 2019). Mentoring plays a crucial role in helping local line managers develop an understanding of complex political dynamics and effectively communicate their thoughts and achievements to those not directly involved. The development of talent includes demonstration, coaching, simulation, and advice (Ragins & Scandura, 2018). People with mentors have access to more opportunities and avenues than those without mentors. The lack of a mentor is an external impediment to job progress. Continuously seeking opportunities to enhance knowledge, skills, and competencies through

training programs, workshops, and further education. Upskilling can help you gain confidence, expand career opportunities, and overcome specific challenges.

Mentoring allows experienced women to share their knowledge, skills and competencies, and experiences with mentees (Hilson *et al.*, 2018). In small-scale mining, where women often have limited access to training and resources, mentoring enables them to develop their technical and management skills and competencies, thereby enhancing their job performance. Research has proven that mentorship is an effective coping mechanism since a mentor acts as a reference point to inspire women participating in small-scale mining operations to aspire to achieve positions of influence in the industry, and is a role model for other women in the industry (Rutherford & Chemane-Chilemba, 2020). Other scholars think that mentoring relationships can boost women's confidence and self-esteem, empowering them to overcome gender-based stereotypes and biases (Sasikala & Sankaranarayanan, 2022). Mentors serve as role models, offering guidance and support to mentees, helping them gain the confidence necessary to overcome obstacles and assert themselves in their chosen field.

Mentorship provides extensive opportunities for women participating in small-scale mining operations to expand their networks and connections in the industry, which enhances their career advancement and personal development (Silva *et al.*, 2023). Mentors often have extensive networks and connections in small-scale mining. With a mentor, women can access valuable resources, including job opportunities, industry events, and professional networks (Mugo *et al.*, 2020). This access can help overcome social and institutional barriers, opening doors for career advancement. The efficacy of mentorship in the context of coping mechanisms for women participating in small-scale mining operations has been raised regarding the emotional support they provide to women participating in small-scale mining operations, which can be isolating and challenging (Sharma *et al.*, 2019). Mentors can serve as a source of

encouragement, a listening ear, and an advice giver, helping mentees manage work-related stress and maintain a better work and life balance. In addition, mentoring relationships can help address and challenge the gender bias and discrimination prevalent in small-scale mining. The existing literature suggests that mentors can advocate for equal opportunities, offer guidance on navigating workplace challenges, and empower mentees to assert their rights and demand fair treatment.

The significance of mentorship in the context of coping mechanisms has been emphasised regarding the contribution that mentors make towards offering valuable career guidance to women participating in small-scale mining operations, supporting them in setting career goals, identifying developmental opportunities, and exploring avenues for advancement (Hilson *et al.*, 2018). Mentoring relationships can provide women with insights into organisational dynamics, best practices, and strategies for professional growth. Research has proven that active participation in mentoring programmes can contribute to larger-scale industry transformation by encouraging more women to participate in the small-scale mining activities and develop leadership roles (Rutherford & Chemane-Chilemba, 2020). As mentees progress and achieve success, they become potential mentors themselves, creating a cycle of support, empowerment, and representation for women participating in small-scale mining operations (Hutchings *et al.*, 2020).

Apart from the conceptual appeal of mentorship as a copying strategy for women participating in small-scale mining, there are several shortcomings associated with this approach (Sharma *et al.*, 2019). To start with, finding suitable mentors who are experienced in small-scale mining and willing to support women can be challenging (Mugo *et al.*, 2020). The lack of mentors may restrict the number of women who can benefit from such programmes, leading to unequal opportunities. Challenges in finding suitably qualified mentors in small-

scale mining we are getting inspired by are prevalent, particularly in the suburban situation where the number of women who are actively taking part in positions of influence in small-scale mining is very limited.

Moreover, prevalent mentorship programmes often revolve around one-on-one relationships where a mentor guides and supports a mentee. While this can be beneficial, it means that the success of the coping strategy relies heavily on the compatibility, commitment, and availability of mentors (Awais, 2022). If mentors become unavailable for any reason, women may lose the support they rely on. Additionally, in small-scale mining, mentors may lack access to the necessary resources or possess insufficient expertise to address the specific challenges faced by women participants. This limitation can hinder the effectiveness of mentorship programmes and prevent women from receiving the knowledge and skills and competencies they need to succeed (Arthur-Holmes, Abrefa Busia, *et al.*, 2023).

Mentorship projects often operate on an informal basis, relying on relationships and personal connections. These programs may lack the accountability, coordination, and sustainability necessary for long-term success in the absence of sufficient institutional support or formal frameworks (Block, 2023). Mentorship schemes may struggle to promote systemic change and address the broader issues affecting women's engagement in business without organisational buy-in. Mentorship schemes could unintentionally maintain existing power disparities in small-scale mining. For instance, if mentors are overwhelmingly male, they could unintentionally perpetuate gender preconceptions, further marginalising women (Cheek *et al.*, 2023). This may reduce the coping strategy's effectiveness and obstruct efforts to promote gender equality in the workplace (Silva *et al.*, 2023).

Mentorship programmes primarily concentrate on providing help at the individual level, providing direction and counsel to overcome personal obstacles (Silva *et al.*, 2023). The structural obstacles that women come across in small-scale mining, such as uneven access to resources, insufficient legal protection, or sexual and emotional harassment, may be overlooked even though this can be useful (Sharma *et al.*, 2019). Mentorship may not be sufficient to empower women or bring about lasting change. Apart from these drawbacks, existing literature tends to be in favour of mentorship, which, by filling in skill gaps, offering assistance, and promoting empowerment, significantly supports women's engagement in small-scale mining (Ofosu *et al.*, 2022). Implementing structured mentorship programmes can result in enhanced retention of women in the workforce, improved gender equality, and a more diverse workforce.

2.4.3 Role Models for Aspiring Professional Women

Focusing on role models has been proven to be an effective coping mechanism for women who aspire to achieve strategic and executive positions in organisations (Arora *et al.*, 2023). A role model is an individual who serves as a reference point, providing examples that others emulate and may stimulate and inspire them to make informed decisions to achieve their career goals (Bashwira & van der Haar, 2020). The contribution of role models to aspiring professional women is evident in feminist literature, which is rich with accounts of the role models' contributions to the upliftment of women's aspirations to achieve and break through glass ceilings (Hutchings *et al.*, 2020). The growth of professional women is likely inspired by the contributions of role models who have similar career journeys, serving as a tool to break glass ceilings (Jiang, 2021).

The domination of men in the South African operations in small-scale mining has any effect on the intention of women to leave the industry (Hutchings *et al.*, 2020). This negatively affects the gender balance in an industry with the number of female role models that can inspire other women to pursue such a professional career (Sasikala & Sankaranarayanan, 2022). As a result, black female managers have managed to break the glass ceilings, ideally by serving as role models for young aspiring women who are stilling through sharing their experiences and encounters they *meet along* their professional journey and how they manage to break the glass ceilings and achieve leadership and executive positions in organisations (Silva *et al.*, 2023).

Role models play a crucial role in inspiring women to pursue careers in predominantly male industries such as small-scale mining. Arora *et al.* (2023) stress that by showcasing successful women who have excelled in this field, aspiring professional women can gain confidence, motivation, and a sense of possibility for their careers. Hutchings *et al.* (2020) emphasise that one of the most significant barriers for women entering operations in small-scale mining is the pervasive rigid gendered cultural norms that associate mining with masculinity. Nascimento *et al.* (2023) concur that role models can challenge these stereotypes by demonstrating that women can not only participate in these industries but succeed and thrive in them. By showcasing women who have excelled in the field, role models can dismantle societal preconceptions and inspire women to break free from traditional gender roles.

Role models provide real-life success stories that aspiring women can relate to and learn from. These stories can serve as a source of inspiration, giving aspiring women the confidence that they, too, can achieve their goals in small-scale mining (Hutchings *et al.*, 2020). Knowing that other women have overcome similar challenges and achieved success can be a powerful motivator for women to pursue a career in this field. Role models can act as mentors and guide aspiring professional women participating in small-scale mining operations (Nascimento *et al.*,

2023). Through mentorship programmes, role models can share their experiences, provide advice, and offer support to budding professionals. This guidance can be invaluable in helping women navigate the specific challenges they may face in this industry, such as discrimination, limited opportunities, or restricted access to resources.

Role models can showcase the diverse pathways that lead to success in small-scale mining. By highlighting diverse backgrounds, experiences, and skill sets, they can inspire women from various backgrounds to participate in this industry. This can be particularly important in attracting women who may not initially see themselves as fitting into the traditional mould of a miner. Role models can foster a sense of community among aspiring women participating in small-scale mining operations. By connecting women, role models can create a supportive network where women can share experiences, seek advice, and collaborate. This community-building aspect can be crucial in overcoming the isolation that women may experience in predominantly male industries and in helping to build a stronger, more inclusive mining community.

Role models for aspiring professional women participating in small-scale mining operations can inspire women's participation by breaking down rigid gendered cultural norms, sharing relatable success stories, offering mentorship and guidance, demonstrating diverse pathways to success, and fostering a sense of community. By highlighting successful women in this field, role models can empower aspiring women to pursue their goals and contribute to more gender-inclusive operations in small-scale mining.

Emphasising role models as a coping mechanism for women participating in small-scale mining may have several shortcomings. There may be a scarcity of female role models in small-scale mining. This shortage can make it challenging for women to find and connect

with someone who can inspire and guide them. Even if there are some female role models in the industry, they may not represent the diverse experiences and perspectives of all women. This lack of diversity can limit the range of inspiration and guidance available to women and may not address the specific challenges they face in their unique contexts.

Role models are often seen as successful and accomplished individuals. Placing too much emphasis on role models can create unrealistic expectations for women, particularly those just beginning their careers in small-scale mining. It may make them feel inadequate or discouraged if they are unable to immediately achieve the same level of success as their role models. While role models can inspire, they may not always be available for ongoing support and mentorship. Building sustainable support networks, including peer groups and mentorship programmes, is essential for comprehensive coping mechanisms for women participating in small-scale mining operations, rather than solely relying on individual role models. Simply having role models may not be sufficient to address the underlying structural barriers and gender inequalities that exist in small-scale mining. Women experience various systemic challenges, such as limited access to resources, unequal opportunities, and discriminatory practices. Focusing solely on role models may not be an effective way to tackle these broader issues.

Emphasising role models as coping mechanisms can inadvertently place pressure on women to meet specific standards set by their role models. This pressure to emulate successful women can lead to feelings of self-doubt and anxiety if they are unable to measure up. It is essential to encourage individual empowerment and allow women to define their paths rather than replicating someone else's. While role models can provide inspiration and guidance, relying solely on them as a coping mechanism for women participating in small-scale mining

neglects the need for broader systemic changes, support networks, and a focus on addressing structural inequalities.

2.4.4 Adopting Management and Leadership Styles

Research indicates that men and women exhibit distinct management and leadership philosophies. One way to reduce the obstacles women come across in the mining business is through leadership styles. A transformative leadership approach prioritises encouraging and motivating staff members to reach their maximum potential (Mwandiringana & Ye, 2023).

Organisations can empower women participating in small-scale mining operations by employing transformational leadership, which encourages them to grow professionally, take on leadership roles, and support the sector's expansion. The intricacies associated with the coexistence of women in the small-scale remaining sector are a clarion call for the adoption of transformational leadership dimensions, which are instrumental in turning around the fortunes of women participating in small-scale mining operations. The main principle behind the operationalisation of transformational leadership is that their instrumental in motivating their followers to perform and achieve exceptionally well (Bosselut, Guilbert & Chareyre, 2020). Transformational leadership is a relatively new style of leadership which emphasises the need to motivate subordinates to navigate through complex operating environments by leveraging their competencies and capabilities (Müller *et al.*, 2024). The popularity of transformational leadership is based on its ability to identify the unique needs of followers and devise ways to satisfy these needs (Maquieira *et al.*, 2020).

Literature indicates that transformational leadership has been effectively implemented in different industrial and economic contexts (Bader, Gielnik & Bledow, 2023). The scope of this study is to incorporate transformational leadership as an ideal style of leadership that

women can utilise to enhance their life chances while maintaining a foothold in predominantly male operations in small-scale mining. The relevance of transformational leadership from the perspective of this study is to analyse the relevance of intellectual stimulation, individualised consideration, and inspirational motivation as key dimensions of transformational leadership that can be used to enhance the ability of women to cope with the gender-based hurdles and challenges they come across in small-scale mining (Alsayyed *et al.*, 2020; Bader *et al.*, 2023; Khan *et al.*, 2022).

The existing literature is established in the intersection between the adoption of transformational leadership and the agility of organizational members to be adaptable to different socioeconomic and cultural trends (Kozminski *et al.*, 2022). The current research adopts the perspective that utilizing transformational leadership dimensions is essential to empower women to be flexible and adaptable to changes in their operating conditions and circumstances and achieve success apart from the gender-based challenges they come across in small-scale mining. The adoption of transformational leadership dimensions is linked with the proclivity with which people become adaptive to organizational change (Maquieira, Tarí & Molina-Azorín, 2020).

Intellectual stimulation is a dimension of transformational leadership which is responsible for inspiring subordinates or followers through assisting them in their journey towards realising their full potential and operationalising their dynamism in finding unique solutions to problems (Khan *et al.*, 2022). Metaferia, Baraki and Mebratu (2023) specified that intellectual stimulation is instrumental in assisting subordinates to come up with innovative solutions to solve the challenges they come across daily. The principle of intellectual stimulation is closely related to empowerment, as it aims to provide people, particularly

women, with the ability to make informed decisions and find solutions to the challenges they come across.

Korku and Kaya (2023) reiterate that the efficacy of intellectual stimulation is based on the ability of a leader to provide a platform where followers can showcase their creativity and innovation, which can help the organisation transform itself and navigate through complexities. Maquieira, Tarí & Molina-Azorín (2020) emphasised that transformational leadership through intellectual stimulation empowers subordinates with the necessary empowerment in decision making. The ability to provide subordinates with challenging work has been proven to be inspiring (Seitz & Owens, 2021).

From the lens of this study, intellectual stimulation is a key construct of transformational leadership, which was instrumental for providing the drive and empowerment of women to prevail in a culturally constructed industry that systemically segregates them from active engagement. From this perspective, it appears that transformational leadership plays a crucial role in igniting interest and inspiring women's participation to achieve recognition and success in the sector.

Inspirational motivation is another key dimension of transformational leadership which is premised on followers realising their strategic goals while pursuing organizational goals (Permana *et al.*, 2024). The driving force behind adopting inspirational motivation is the establishment of goals that followers can pursue (Rasheed *et al.*, 2021). Their treatment of such goals forms the basis upon which creativity and innovation can be realized (Al-Ahmad Char & Easa, 2021).

Regarding this study, the contribution of inspirational motivation is that it creates confidence on the part of followers through the sense of openness to opinions and ideas, which

demonstrates the dedication of leaders towards the achievement of team goals. Providing inspirational motivation is a step in the right direction, given the gender-based occupational segregation and discrimination that hinder women's active participation in the small-scale mining sector. From this perspective command the ability to identify a transformational leader who subscribes to the tenants of inspirational motivation provides the necessary impetus for subordinates to go beyond their interests to overcome the systemic barriers they might face and generate optimism and interest in the activities taking place in small-scale mining (van Dun & Kumar, 2023).

Komakech *et al.* (2021) specified that the contribution of inspirational motivation is to encourage followers to operate at their best regardless of the adverse operating conditions they find themselves in. Metaferia *et al.* (2023) emphasised that transformational leadership through inspirational motivation provides leaders with the ability to give clear orientation and inspire, which is about the need to operate optimally. A collaborative leadership approach prioritises open communication and teamwork. Organisations can remove obstacles in predominantly male work environments, foster an inclusive culture, and involve women in decision-making processes by adopting a collaborative approach (Ibrahim *et al.*, 2020).

The core values of the servant leadership approach are empathy, service to others, and fostering team success. Being in a position of leadership can create a supportive environment where women's opinions are heard and their needs are met, promoting their general well-being and professional development. Adaptive leadership techniques foster adaptability and the ability to change in response to the environment. Schwartz (2020) states that the obstacles to gender equality that women themselves can actively address women participating in small-scale mining operations face. It is essential to remember that adopting leadership styles may not be sufficient to eliminate the obstacles that women participating in small-scale mining

operations face. In addition to focusing on leadership styles, firms should establish and uphold gender equality policies, offer mentorship and sponsorship opportunities, provide training and skill development programs, and foster a safe work environment.

2.4.5 Statutory laws

As a coping mechanism to mitigate the obstacles women experience in small-scale mining, statutory laws in Zimbabwe can have a significant impact (Mwandiringana & Ye, 2023). The systemic prejudices, discriminatory practices, and inequities that impede women's advancement in this business can be addressed by enacting and enforcing laws that promote gender equality and safeguard women's rights (Obodai *et al.*, 2023). Statutory laws requiring equal opportunities and banning discrimination may require equal opportunities for women in the workforce (Furniss, 2022). These laws level the playing field by outlawing gender-based discrimination, guaranteeing that women have equal access to employment opportunities, promotions, and career progression. Statutory laws governing workplace safety and protection can create and enforce occupational health and safety requirements that specifically address the special needs and challenges faced by women, such as protection from sexual and emotional harassment and measures to support mothers and children (Ibrahim *et al.*, 2020).

Work and life balance and maternity leave statutory laws can establish rules for parental leave, nursing assistance, and flexible work schedules to help women participating in small-scale mining operations combine their job and personal commitments. Such actions can help women balance their professional and familial responsibilities. Buss *et al.* (2020) suggest that empowerment and representation in leadership and decision-making roles in small-scale mining can be promoted through statutory laws. Women can be given a voice in developing

industry policies, practices, and strategies by implementing quotas or targets for female involvement on boards and in managerial positions.

Yakovleva *et al.* (2022) reiterate that the adherence of pertinent parties and the execution of laws are essential for their efficacy. To ensure compliance and hold offenders accountable, adequate resources, monitoring, and reporting procedures are required. Statutory laws by itself are insufficient to remove all obstacles for women working in small-scale mining. Other efforts that support women's empowerment and equip them with the skills and competencies necessary for job growth should be incorporated, such as awareness campaigns, training programmes, mentorship programmes, and support networks. Statutory laws can be a powerful tool for reducing obstacles and promoting gender equality in Zimbabwe's mining sector. Operations in small-scale mining may become more inclusive and equitable by passing and upholding statutory laws that upholds women's rights, provides equal opportunities, and encourages their representation and empowerment (Ibrahim *et al.*, 2020).

The provision of a ubiquitous mining license was found to affect the appropriate development of environmental regulations, such as mining waste management, and the provision of proper capacity building and assistance to address adverse environmental impacts (Arthur-Holmes & Oforu, 2024). Regarding the legislative undertaking, research by Ngwerume (2023) emphasised the promotion of women's rights towards the development of small-scale mining in Africa. Ngwerume (2023) emphasised mechanisms that can be examined by women participating in small-scale mining operations to improve their life chances, given the predominant male dominance that surrounds operations in small-scale mining. Undertaking the research was inspired by the recognition that formalising small-scale mining endeavours has the potential to improve the quality of life for women involved in mining.

The methodological scope of Ngwerume's (2023) study was based on qualitative foundations, aiming to critically evaluate the experiences that women experienced in small-scale mining. The primary discovery that emerged from the study was the existing patriarchal dominance of mining activities by men who hold immovable property rights, which is a source of economic power. The research focused on the experiences of women in five jurisdictions: Kenya, Uganda, South Africa, Zimbabwe, and the Democratic Republic of the Congo. Ngwerume (2023) highlighted that limited access to lending immovable property rights by women influenced their prospects of improving their life chances using small-scale mining in African states.

The study established that, from a legislative perspective, the prospects of women achieving success in small-scale mining are tilted against them since they have limited immovable property rights, which impede their ability to obtain capital financing to expand their business operations. They begin with the highlighted issues that address inheritance laws in Tanzania, and the prevalence of traditional marriage, which places land rights under the control of the husband and negatively impacts women's ability to access finance, which can be used to improve mining operations (Ngwerume, 2023).

The study highlighted that the failure of women to inherit properties disadvantages them in claiming ownership of land, which limits their capacity to enhance their prospects in the small-scale mining activities. Emphasis was placed on the experiences of women in the Democratic Republic of the Congo, where women have been able to strengthen their economic power using community financing options. Ngwerume (2023) explains that under the community financing option, women stand for each other as a form of social collateral security, guaranteeing payments of the principal and interest to funding institutions as a strategy to improve their economic position and empower themselves in small-scale mining. Ngwerume

(2023) highlights that similar initiatives have been undertaken in the Tanzanian Women Mining Association, where members can access finance from microfinance institutions, which assists them in expanding their small mining operations by presenting mining permits as collateral security.

The main takeaway from Ngwerume's (2023) study is that it emphasises the relevance of legal instruments in promoting the contributions that women can make in mining activities. The presence of gender-blind legal provisions can empower women to venture into mining and fight against stereotypes that are shipped by theoretical frameworks like biological determinism and social conflict theory, which tend to assign specific roles, responsibilities, and activities to women in a manner that tends to limit their scope of action in the contributions they tend to make in the small-scale mining activities.

Ngwerume (2023) asserts that, apart from encouraging advancements in this sector, gendered roles, norms, and value systems continue to influence women's active participation in small-scale mining. Providing food, clothing, water, and even sex are instances of peripheral activities that women feel compelled to perform. Women are discouraged from actively engaging in small-scale mining by using traditional beliefs and customs. According to Ngwerume (2023), the systemic conceptualisation of women's engagement in small-scale mining impedes their ability to earn a living and exercise their rights in the industry. The passage of laws and other regulations aimed at promoting equity in women participating in small-scale mining does not change this. Due to the possibility that harmful compounds like mercury could harm the developing child, statutory laws prohibiting pregnant women from further mining was passed in some mining jurisdictions, including the Democratic Republic of the Congo. According to Ngwerume (2023), this restrictive statutory law reduces women's engagement in small-scale mining in the African context.

2.5 Chapter Summary

This chapter highlights the systemic challenges that women experience as they endeavour to rise the corporate ladder, in general, and in small-scale mining in particular. To articulate these challenges, the review of literature focused on dominant electrical frameworks that could help explain how these systemic challenges might affect women participating in small-scale mining. These theoretical frameworks included the biological theory, the social conflict theory, the gender schema theory and theory of symbolic interactionism.

The biological theory, commonly referred to as biological determinism, links biological processes, including hereditary factors and inheritance, to human behaviour and differences. According to this argument, the sexuality of an individual from birth impacts their chances and opportunities in life, hence maintaining gender inequity and prejudices based on gender (Nuralievich, 2022). However, given that these challenges may result from a complex interplay of cultural, economic, social, and political issues, biological explanations may not always be sufficient for comprehending the challenges confronting women participating in small-scale mining operations (Pasterski *et al.*, 2022).

However, the biological hypothesis ignores overlapping elements that affect the perspectives of women participating in small-scale mining operations, including ethnic background, socioeconomic status, and geography. It is vital to acknowledge women's agency and capacity to handle these problems, as biological theory often depicts women as apathetic beneficiaries of their physical characteristics, rather than appreciating their ability to challenge and overcome obstacles (Pasterski *et al.*, 2022). Given the multiple economic, social, ethnic, and political components that lead to the structural disparities' women participating in small-scale mining operations confront, it may not be possible to apply biological theory to all the

problems they come across. To understand and address the issues women confront in mining holistically, it is imperative to adopt a multifaceted approach that incorporates multiple theories and views.

A review of theoretical literature focused on the significance of the theory of symbolic interactionism, which emphasises the importance of symbols, language, and shared meanings in influencing social interactions and personal behaviour. Understanding how women perceive and make meaning of their experiences in their social and cultural environments is made possible by symbolic interactionism (Charmaz *et al.*, 2019). This theoretical framework highlights the impact of gender identity and societal preconceptions on the experiences and opportunities of women participating in small-scale mining operations. It helps identify social and cultural variables, such as prejudice, unfair treatment, and limited access to resources, that affect women's experiences and perspectives (Meltzer & Petras, 2023). Symbolic interactionism sheds light on the agency and tenacity of women working in small-scale mining. The social connections, cultural legacy, and personal experiences that shape people's lived realities can all be thoroughly examined using symbolic interactionism.

The social conflict theory highlights the challenges that women experience in mining activities due to patriarchal structures that limit their freedoms and life opportunities. These social structures perpetuate sexism and the inequitable distribution of influence and control, which restrict women's access to their fundamental rights (Kühne, 2020). The idea emphasises the gender-based prejudice that prevents women from working in the small-scale mining activities. Due to exclusionary recruiting practices, advancement chances, salary inequalities, and gender-based occupational segregation, the business is predominantly male. The underrepresentation of women participating in small-scale mining operations is influenced by limited access to financial resources and restricted opportunities. Aggression and sexual

misconduct are factors in the decreased participation of women in the field. Women's engagement in small-scale mining is further hindered by the lack of supportive rules and regulations that consider gender equality. Social conflict theory can be applied to address these issues and develop strategies to enhance women participating in small-scale mining.

Gender schema theory examined how gender roles are assigned, impacting women's self-esteem and personal growth. Men are often perceived as strong, independent, and aggressive, while women are frequently viewed as sentimental, submissive, and delicate. These perceptions influence women's professional growth, social duties, and the extent of their participation in the small-scale mining activities. From the perspective of the gender schema theory, men are more suited to work in small-scale mining due to their physical build-up and the demanding nature of the sector. Apart from the gender schema theory, theoretical perspectives forecast gender imbalances that result in women facing challenges in their social and economic development. The structuralists argue that the existence of gender differences in small-scale mining can be attributed to biological differences between women and men, which contribute to employment segregation in favour of males. From the perspective of Marxist feminist theory, gender inequality is supported by existing social, economic, and political systems. Intersectional theory integrates diverse perspectives and viewpoints on the factors that contribute to gender inequity in small-scale mining. This socialist security perspective posits that gender distinctions are attributed to biological differences. A review of different theoretical perspectives that explain the systemic challenges women experience in mining is beneficial for developing a holistic understanding of the foundational theories that provide a convincing explanation of the challenges women come across in business, particularly in mining. This is essential in developing effective coping mechanisms and strategies to enhance the chances and opportunities for women to participate in small-scale mining.

In addition to theoretical frameworks, the literature reviews issues related to gender imbalances, the challenges faced by women participating in small-scale mining operations, and the coping strategies employed. Grech *et al.* (2023) emphasise that gender imbalances are linked to the unequal provision of opportunities and the underrepresentation of women participating in small-scale mining operations. Insights from Arthur-Holmes, Yeboah, *et al.* (2023) specify that women participating in small-scale mining operations face numerous challenges that hinder their full participation in this sector. Bashwira and van der Haar (2020) reiterated that in small-scale mining, women are notably underrepresented due to institutional and cultural restrictions, biases, and a lack of opportunities, and the prevalence of a predominantly male culture in the industry.

One of the key issues that has been raised regarding gender imbalances in the small-scale mining activities has been the lack of immovable property rights on the part of women, which takes away the aspect of ownership and control and disempowers women. The absence of illegal recognition in terms of ownership of immovable property and length creates insecurity for women, which makes them vulnerable to land invasions, exclusion, and displacement (Ayambire *et al.*, 2024). In effect, literature shows that the absence of security of tenure regarding immovable property rights is of interest in perpetuating the financial exclusion of women from getting lines of credit from the financial system, since they do not have a basis for pledging their collateral security in terms of land ownership.

The inability to acquire lines of credit from the financial sector results in limited prospects for women to generate income and accumulate wealth. In addition, women participating in small-scale mining operations face systemic challenges related to their inability to negotiate for better remuneration and limited job opportunities, which hinder their upward progression in small-scale mining. The exclusion of women in the mainstream economy limits

their contribution towards the development of operations in small-scale mining to a minimal say in important decisions that affect their lives. When women are marginalised due to a lack of immovable property rights, it affects the social fabric of communities and hinders collective initiatives, community development, and social cohesion (Arthur-Holmes, Yeboah, *et al.*, 2023).

Another key factor relating to gender imbalance in small-scale mining is the occupational health and safety issues surrounding operations and working circumstances in the small-scale mining activities that might not be suitable for women. It is proven that occupational health and safety issues in small-scale mining do not favour the active participation of women. Health and safety issues, particularly in small-scale mining, do not appear to align with best practices that promote a healthy working environment where women can participate without endangering their health and physical well-being. Some of the key characteristics that are unfavourable for women participating in small-scale mining operations include heavy lifting and incidental exposure to severe temperature extremes for longer hours, which may not support the physiological makeup of women (Eren & Tuzkaya, 2019). The absence of protective clothing and the perpetuation of sexual discrimination against women obviously affect the active participation of women in small-scale mining operations from an occupational health and safety perspective. One of the key issues that has been attributed to the increased segregation of women from actively participating in the small-scale industry is the lack of occupational health and safety regulations to discourage the unintentional segregation of women in the industry.

Literature highlights that limited access to financial resources is emerging as a key stumbling block towards the full participation of women in small-scale mining operations. This point is linked to the inability of women to control the means of generating wealth in the form

of immovable property rights. Limited financial security hinders the scalability of entrepreneurial ventures undertaken by women in these operations in small-scale mining, perpetuating gender imbalances and limiting the scope of development for mining ventures. The existence of rigid gendered cultural norms and cultural misconceptions has perpetuated the systemic disadvantages against the active participation of women in small-scale mining operations.

Due to rigid gendered cultural norms, women are widely recognised as domestic workers and carers who should not play a dominant role in providing for the economic welfare of the family. This, therefore, limits their scope of participation in small-scale mining, which is widely recognised as predominantly male. Rigid gendered cultural norms perpetuate a climate of gender-based occupational segregation, which contributes to a variety of obstacles that women experience in the small-scale mining activities regarding remuneration and the occupation of executive positions that limit their scope of professional and financial development in the industry. The rigid gendered cultural norms of harassment promote harassment at the workplace, as men hold predominant technical, operational, and executive positions in small-scale mining.

The lack of technical skills and competencies and knowledge was highlighted as a significant barrier to the full participation of women in small-scale mining operations. Literature shows that there are limited mentoring and guidance through instructional programmes that are geared towards the unique skills and competencies and expectations of women, which restricts their participation in the small-scale mining activities. Access to professional and technical education is limited for women, which constrains their capacity to participate in successful professional development in mining activities. The limited knowledge of women regarding the intricacies and technical aspects associated with small-scale mining

can be linked to the traditional perspective, where the girl child is not given the same educational preference as the male child. These adverse cultural legacy and early development barriers hinder the professional development of women in various aspects of life, particularly in the mining industry. Minimal skills and competencies development among women participating in small-scale mining operations perpetuates the perception of women as second-class citizens, who often feel inferior to men when it comes to undertaking technical aspects in mining.

The failure to gain proper access to education, immovable property rights, and financial resources is attributed to the limited access of women to obtain the requisite mining technologies and equipment. This limits their scope of activities and reduces the possibility of growth and advancement in the mining industry. As a result, women remain subservient to men, and they fail to acquire the necessary technologies to enhance their scope of activities in small-scale mining.

A review of the literature focused on coping mechanisms at the disposal of women to improve their life chances and development in the mining industry. It was emphasised that to increase the visibility of women participating in small-scale mining operations and support their career advancement, strategic networking is crucial. It entails developing partnerships and synergies with other women that give them access to knowledge, opportunities, and influence. Women's career advancement is hindered by a lack of networking opportunities, which prevents them from receiving the support and attention they need. Strategic networks should reduce barriers related to gender profiling to achieve gender equality and promote women's participation. Participation in diversity and inclusion communities, mentorship programmes, and advocacy for statutory laws promoting gender equality are further examples of strategic

networking activities. Participating in volunteer initiatives and getting involved in local communities helps people strengthen their resilience.

A review of literature has demonstrated the importance of promoting gender-sensitive statutory laws as a means of protecting women's efforts in the small-scale mining activities from unfair treatment. The barriers that women in Zimbabwe's operations in small-scale mining confront can be considerably lessened through statutory laws. It has been found that establishing legal frameworks is beneficial in combating prejudice, bias, and injustice. This can be accomplished by passing and upholding laws that support gender equality and defend the rights of women. These regulations can ensure equal opportunity, protect against sexual and emotional harassment, and support mothers and young children. Statutory laws can promote representation and empowerment in positions of authority and decision-making. Ngwerume (2023) emphasises the significance of supporting women's rights in the growth of small-scale mining in Africa. The key contribution of statutory laws towards minimising challenges experienced by women relates to empowering women regarding legal ownership of immovable property rights, which can be used to leverage their disadvantaged position in accessing lines of credit and expanding their scope of businesses in mining activities.

A review of literature focused on using role models as a coping mechanism to improve women's life chances in the small-scale mining activities. The challenge with role models is that they inspire women to hold strategic and leadership positions in organisations. Role models are essential, as they serve as a point of reference, encouraging women to act and potentially break through glass ceilings that pose barriers to career progression. Feminist literature emphasises the efforts of role models to raise female aspirations and shatter glass ceilings.

In addition to the literature review section, the upcoming chapter highlights a detailed methodological framework that was followed in the process of designing the research in a manner that enables the collection, measurements, and analysis of data to highlight the extent of measures and challenges that are affecting the progression of women participating in small-scale mining operations in Zimbabwe. The research methodology will specify the philosophical foundations, research design, research strategy, and approach that influence the choice of data collection and analysis procedures.

CHAPTER 3: RESEARCH METHODS

3.0 Introduction

This methodology chapter is founded on the need to design the study in a manner that enables the study to unlock solutions to three study objectives, which were primarily focused on the gendered imbalances, challenges, and coping strategies that women can use to operate effectively in the operations of small-scale mining in Zimbabwe. The primary issue that motivated this study was the male dominance in small-scale mining, despite the Government of Zimbabwe's efforts to provide loans and other financial support to women miners through the Gold Development Initiative Funds, which are managed by Fidelity Printers and Refiners Private Limited (Chinembiri, 2019). The active participation of women in small-scale mining operations has declined progressively. Financially, women participating in small-scale mining operations have received only \$20 million of the \$150 million provided for mining development.

Operations in small-scale mining still hold the perception of male dominance, which requires masculinity to navigate, and the imminent risks portrayed by life-threatening activities that characterise small-scale mining (Hilton *et al.*, 2018). The active participation of women in small-scale mining operations is sceptical due to the high levels of risk associated with mining activities and the prevalence of male supremacy, which contributes to the gender-based occupational segregation of activities and duties undertaken by women in the sector. The WLSA (2019) indicated that mining policies, laws, and institutions in Zimbabwe appear to be neutral; however, the problems that women experience in small-scale mining remain unresolved.

This is in addition to the provisions of the Constitution of Zimbabwe, No. 20 of 2013, which encourage gender equality in employment and representation. The underrepresentation of women participating in small-scale mining operations contrasts with their population proportion in the country, where they may make up to 52% of the entire population. Nevertheless, they are characterised by high levels of unemployment, as are their male counterparts (UN Women, 2023). Other factors that contribute to the poor participation of women in small-scale mining operations are attributed to religious beliefs and myths, which restrict women from performing certain activities. It is believed that women might suffer misfortunes, such as the disappearance of minerals, if they actively participate in these operations in small-scale mining during their menstrual cycles. Chenjerai (2019) explains that some women are discouraged from actively participating in small-scale mining due to the perceived misfortunes they are likely to bring. The limiting factor brought about by myth is that a lack of a scientific explanation can be used as a mechanism to systemically exclude women from actively participating in small-scale mining. In addition, sectoral gender inequalities have been linked to the current mining laws and regulations, which often advocate for traditional segregation and the exclusion of women from resource extraction, leading to women undertaking peripheral activities that are typically low-paying (Buss *et al.*, 2020).

Nevertheless, the challenges that contribute to the underrepresentation of women participating in small-scale mining operations relate to their lack of collateral security, such as immovable properties in their names, which limits the scope of financial support they can obtain from the lending institutions. This is distinguished from men, who more often have this collateral security in the form of immovable assets that are registered in their names. To this extent, most women were unable to access financial support to enhance the performance of their small-scale mining businesses (Chinembiri, 2019). Although previous attempts have been

made to address these challenges, they persist in the framework of operations in small-scale mining in Zimbabwe, prompting this study to explore ways to resolve the systemic challenges faced by women in this sector.

Considering these challenges, the purpose of this study was to investigate the barriers and systemic issues that women experience in small-scale mining, particularly in the context of gender imbalances. The study aims to expose how gender has played a pivotal role in determining the life chances and economic opportunities that women benefit from through their participation in small-scale mining in Zimbabwe. The purpose of this study was to investigate the influence of cultural and religious factors on the economic opportunities and social outcomes of women participating in small-scale mining operations in Zimbabwe (Chenjerai, 2019).

From an economic perspective, the study examined the insecurities that women experience in small-scale mining, particularly concerning their limited access to collateral for securing loans from the financial sector (Machinga, 2019). This study examined the technical and physical capabilities required to undertake operations in small-scale mining, considering the lower echelons of mechanisation in the sector. These might contribute to the systemic segregation of women in this sector, which is predominantly manual-based. In some circumstances, operations in small-scale mining do not adhere to a prescribed operational schedule, which often involves working irregular hours. Sometimes this might mitigate against the biological makeup of women. It was in the scope of this study to re-examine these revelations, considering the personal accounts of women directly involved in small-scale mining, with a focus on the challenges they face, the gender segregation they come across, and the coping mechanisms they employ to navigate these challenges.

The organisation of this chapter revolves around the mixed aims and objectives of this study. These studies aim to investigate the gender-based cultural beliefs that influence women participating in small-scale mining in Zimbabwe. This chapter's design examines in detail the barriers that women come across in small-scale mining. The study needed to utilise an appropriate study approach and design that enabled the standard to explore and identify effective mechanisms that can be used to empower women to navigate the systemic challenges they experience in the sector. In this respect, the study's methodological foundation was premised on the application of a mixed study approach in the methodological structure, as it was anticipated to provide additional mechanisms through which the study could explore and probe further into the intricate issues surrounding the limited participation of women in small-scale mining operations around Zimbabwe.

Given the mixed nature of the study objectives, it was imperative to adopt a mixed study approach to satisfactorily address these objectives in a manner that culminated in a policy framework that could potentially improve the active participation of women in small-scale mining operations in Zimbabwe. The chapter is structured in such a manner that it begins with a description and an intricate explanation of the steps taken in designing the study to collect data adequate for presenting the case of women participating in small-scale mining from their perspective. The choice of a mixed approach for this study was motivated by the need to properly interpret the codes, translate, and develop meaningful insights from the perspectives, personal experiences, and opinions of women directly involved in small-scale mining.

The selection of a mixed research approach that meets these criteria means it was able to provide a detailed account translated from the participants in this study's own perspectives in the context of their natural environmental settings. The primary motivation for selecting the paradigm in this study was its propensity for utilising social experiences that can be situated in

the natural environmental settings of participants in this study (Bergh, 2021). This inspired the exploration of possible social variables, which are defined in the perspective of manageable environmental boundaries, as depicted from the subjects' perspectives (Sekaran & Buogie, 2016). Extant studies that have examined the experiences of women in the artisanal or operations in small-scale mining have more often used the mixed approach, which was a phenomenological approach to develop an in-depth interrogation and appreciation of the key determinants of the life chances of women participating in small-scale mining operations in different economic and social settings (Bashwira & van der Haar, 2020).

The selection of a mixed approach was motivated by explorations, themes, and forecasts that represent accurate interpretations of meanings through the involvement of people who are directly interacting with a specific social phenomenon (Flick, 2022). In this regard, this chapter examined the social reality of women participating in small-scale mining operations, which is said to be examined by the study. The ultimate purpose of pursuing a mixed research approach was not to generalise the study's outcomes to a larger population, but to inquire in depth and generate rich insights that apply to a specific social setting, in this case, operations in small-scale mining.

3.1 Research Approach and Design

This study was based on the application of a mixed research approach, employing a phenomenological design as the preferred research method. Before describing in detail the utilisation of these research approaches and designs, it was considered essential to articulate the ontological, epistemological, axiological, and methodological foundations that underlie the use of the preferred mixed research approach and a phenomenological design as the preferred research design.

This study was critically analysed from the ontological, axiological, epistemological, and methodological foundations, recognising that these realities are complex and multifaceted, particularly concerning the barriers faced by women participating in small-scale mining operations. In this respect, the social reality facing women was examined and developed through their lived experiences, and the personal accounts they shared from their interactions and direct experiences with various activities in the social setting of small-scale mining (Ghauri *et al.*, 2020). Using this approach in this study, the complexity of social realities that arise from the diversity of perspectives, divergent views and opinions, knowledge, and experiences, which lead to a variety of interpretations (Brandenburg & McDonough, 2019).

3.1.1 Ontological foundations

The ontological foundations of this study relate to a philosophy dealing with the nature of social reality and its existence (Sekaran & Buogie, 2016). The key issues that were dealt with from an ontological perspective relate to inquiries on the nature of existence and fundamental categories of existence, which implies that ontology is focused on exploring the reason for being (Eisend & Kuss, 2019). Concerning this study, the ontological foundations related to the analysis of gender-based challenges and segregation, along with the coping mechanisms that women can use to navigate operations in small-scale mining in Zimbabwe in their natural environmental settings.

This study aimed to understand the nature of women's segregation in small-scale mining that is underscored by male domination in the sector. This was achieved by examining the reasons behind the persistence of this practice apart from initiatives aimed at emancipating and empowering women in other sectors of the economy. This ontological foundation stemmed from the realisation that a variety of complex factors contributed to the gender-based

segregation of women from actively participating in rewarding operations in small-scale mining (Jackline, 2022). From an ontological perspective, this study aimed to develop a detailed understanding of the nature of the socio-cultural reality, with a specific emphasis on the personal experiences of women participating in small-scale mining operations in Zimbabwe. The study aimed to define and explore the existing social structures, ethical norms, cultural legacy, gender roles, institutional context, and power dynamics that shape the lived experiences of women participating in small-scale mining operations in Zimbabwe.

3.1.2 Epistemological foundations

The epistemological foundations of this study were rooted in the beliefs and knowledge that informed the study. This study adopted feminist perspectives in exploring the gender-based challenges that women experience in their quest to equally participate in small-scale mining in Zimbabwe (Koomson-Yalley & Kyei, 2022; Rutherford & Chemane-Chilemba, 2020). The study examined the cultural norms and power structures that may systemically exclude women from actively participating in this sector. In this regard, the study employed mixed research methods grounded in a phenomenological approach to capture the experiences of women in this sector, allowing their voices to be heard and shaping the study's outcomes.

These views come from the epistemological perspective, which relates to the nature of knowledge, shared beliefs, and justifications of a phenomenon (Sekaran & Buogie, 2016). Inconformity with epistemological foundations, this study examines in detail new insights. It tests the limits of knowledge regarding our appreciation of the complexity and systemic nature of the challenges that women experience in their quest to participate in the operations in small-scale mining (Eisend & Kuss, 2019). This epistemological foundation influenced the creation

of knowledge regarding the complexity of factors that contribute to the underrepresentation of women participating in small-scale mining operations.

In the context of this study, epistemological foundations enabled the study to critically examine key aspects of gender segregation in the framework of women participating in small-scale mining. In this regard, the epistemological foundations of this study specify that events are interpreted from personal experiences, while mental processes are determined by the interactions of women in the context of their natural environmental settings (Ghauri *et al.*, 2020).

It was imperative to accurately portray and interpret the systemic challenges experienced by women participating in small-scale mining operations by maintaining proximity and appreciating their personal experiences in their natural environmental settings (Kumah *et al.*, 2020). From an epistemological perspective, the researcher and the subjects are interlocked in an interactive process of knowledge creation, talking, and listening, which creates a personalised approach to the collection of data (Brandenburg & McDonough, 2019).

3.1.3 Axiological foundations

The axiological guidelines of the study pertained to the value systems and ethical foundations that underlie a study. In this study, the key physiological foundation was located in the value systems regarding gender equality, social justice, and women's empowerment and emancipation concerning operations in small-scale mining (Yakovleva *et al.*, 2022). The study was guided by a commitment to develop a detailed understanding of the complexity of challenges faced by women in this sector, with the aim of improving their working conditions and proposing coping mechanisms that can enhance their general welfare and participation in small-scale mining.

The axiological implications of this study relate to the value of the study in mitigating systemic challenges through the development of phenomenological coping mechanisms and strategies that enhance the life chances of women participating in small-scale mining (Buss *et al.*, 2019). It focused on exploring mechanisms to assess the complexity of activities and their ethical implications related to the gender-based occupational segregation of women participating in small-scale mining operations. To maintain the ethical expectation of non-interference, addressing the axiological foundations of this study enabled the researcher to remain impartial when evaluating the information shared by participants (Koomson-Yalley & Kyei, 2022). The purpose of utilising a mixed research approach was to provide participants with a wide range of options through which they could express themselves. In line with axiological foundations, this standard considers the moral value systems that guide the interaction between women and their counterparts in small-scale mining, and how these are respected and observed during the data collection process.

3.1.4 Methodological foundations

The methodological foundations of this study influenced the selection of a mixed research method that incorporates using structured interviews and key informant interviews with key personnel (Mwandiringana & Ye, 2023) who have a direct interface with women who operate in small-scale mining in Zimbabwe. The methodological foundations incorporated a participatory approach that directly involved women, given the gender-based segregation inherent in small-scale mining. This was essential to ensuring that their opinions, experiences, and perspectives are accurately portrayed and presented.

The justification for using a mixed-methods approach was that the methodological foundation of this study was to generate detailed insights into the lived experiences of women

regarding their interactions and the complexity of challenges they face when they try to operate and participate in small-scale mining (Arthur-Holmes, Abrefa Busia, et al., 2023).

In line with the mixed methodological foundation, this study adopts a phenomenological approach, which was the preferred research design and roadmap that influenced the approach taken in collecting data and analysing it to provide a convincing resolution to the study's objectives. Using a phenomenological approach provided a mechanism through which decisions related to research questions could be examined, clarifying the research population and sampling approach, and specifying the overall structure of the study (Adomako & Hausermann, 2023). Apart from using a phenomenological approach, several research designs could have been employed in this study, which include an experimental research design, a quasi-experimental research design, a correlational research design, a case study design, a survey design, and a longitudinal design (Brandenburg & McDonough, 2019).

The applicability and relevance of these distinct research designs are determined by the study's objectives and the anticipated research approach. For instance, an experimental research design was applicable in a research context where there was a need to manipulate one variable over another to observe and measure the effect of one variable on the other by using different treatments and control conditions (Saunders et al., 2023). This study design was taken to be inadequate and irrelevant to exploring the lived experiences of women in the context of operations in small-scale mining, as the complexity of factors that might contribute to the gender-based occupational segregation of women was not immediately apparent to the researchers, thereby limiting their ability to manipulate the variables.

A correlational research design involves measuring variables to control for extraneous factors and determining the relationships that exist among them to establish causation (Bougie

& Sekaran, 2019). The correlational design is more suitable for quantitative studies that aim to apply statistical inference to generalise the outcomes of a study to a larger population. This study differs from the present study, which is based on the lived experiences and encounters of women in specific socio-cultural contexts to identify the key gendered challenges they face and how best to resolve them, thereby improving their life chances in small-scale mining. From that perspective, this study ruled out the application of a correlational study design was ruled out, as the intention of this study was not to identify cause-and-effect associations, but to explore intricate and complex issues relating to the systemic segregation of women from actively participating actively and gainfully in the framework of operations in small-scale mining in Zimbabwe.

A survey design involves the collection of data through using questionnaires or interviews relating to the opinions, behaviours, and attitudes of individuals (Saunders et al., 2023). Even if a survey design was appropriate to provide answers to research questions for this study, it was not accepted since it lacked the rigour to explore the complexities surrounding the gender-based occupational segregation of women participating in small-scale mining operations. Applying a survey approach could not properly immerse and engage the researcher in the complex intricacies associated with the experiences of women operating in a predominantly male small-scale mining sector.

On the other hand, the study could have employed a case study design, which involves examining a single case or a small number of cases, to gain a detailed insight into a particular phenomenon. Applying a case study approach could render the efforts to understand the contextual circumstances surrounding the lift experiences of women in spontaneous operations in small-scale mining futile. This stems from the realisation that small-scale mining activities are not specifically confined to a particular area, as they are widely dispersed across the diverse

regions of Zimbabwe. In that regard, it was essential to use a snowball sampling approach to reach populations that may not have been easily accessible to the researcher. To that end, applying a case study approach would not be possible in this study to gather the unique lived experiences of some segments of the population that are not easily accessible to an external observer.

Alternatively, a longitudinal study designed to collect data from the same participants over an extended period could have been used to monitor developments relating to the active participation of women in small-scale mining operations. However, the limited timeframe in which the study was supposed to be completed did not permit using a longitudinal design. Having critically analysed the key contributions and limitations of the research designs; the study adopted a phenomenological approach as the most suitable research design for this mixed research.

3.1.5 Phenomenological research design

This study applied a phenomenological design, which is an interpretive mixed approach, to capture the lived experiences of people in their unique events (Sugawara & Nikaido, 2014). DeMarrais *et al.* (2024) assert that a phenomenological design is associated with the gathering of the qualitative experiences of people in their unique settings. A phenomenological design was selected because it provided the researcher with the opportunity to uncover the underlying meanings behind the participants' personal experiences from their perspective. Justification behind using a phenomenological design was to explore the lived experiences of women participating in small-scale mining operations regarding how they sense their world and to extract key insights and meanings they attach to their experiences (Mehta *et al.*, 2017).

The application of a hermeneutic phenomenological approach was crucial in exploring the lived experiences of women navigating operations in small-scale mining in a developing community context. This was essential for developing a nuanced understanding of the unique economic, socio-cultural, and gendered dynamics that shape the realities of women's experiences in small-scale mining. Greening (2019) justify the application of a phenomenological design, as it is a significant approach for identifying key factors that influence behavioural intentions and their implications in different contexts.

In that regard the focus behind using a phenomenological design in this study was to capture the lived experiences of women in the operations in small-scale mining with particular emphasis on the gendered challenges they come across in their endeavour to participate in the sector actively and to derive some of the key proposals they believed could better improve their life chances in their interface with the operations in small-scale mining. Ultimately, the essence of applying a phenomenological design in this study was to develop a comparison of in-depth insights generated from the exploration of key informant insights, along with structured interviews (Brandenburg & McDonough, 2019).

The essence of phenomenological design is to emphasise the interpretation of women's lived experiences in their unique operational contexts, which are primarily determined by lived gendered norms, cultural and economic inequalities, and legal shortcomings that may potentially affect their ability to sustain their existence in the sector. The application of a phenomenological design is not peculiar to this study alone. A similar approach was applied in prior research, such as a study by Zolnikov (2020) where a phenomenological approach was employed to understand the legal, environmental, cultural, and economic experiences of women participating in small-scale mining operations following a government ban on such activities in Ghana. A related interpretive phenomenological inquiry was applied by Asamoah

et al. (2024) as a suitable approach to capture the personal experiences of young adults who were participating in substance abuse in the operations of small-scale mining in Ghana. Applying a phenomenological design provided an opportunity to gain an in-depth understanding of the lived experiences of participants.

A phenomenological design was operationalised by collecting data through structured interviews, which allowed the researcher to probe responses further while gathering the individualised personal accounts and lived experiences of women participating in small-scale mining operations (Hutchings *et al.*, 2020). The inclusion of people who directly interface with women working in small-scale mining provided the necessary diversity of opinion and perspectives that this study requires to develop an in-depth appreciation of circumstantial evidence and lived experiences that shape relationships in small-scale mining, where the active participation of women is concerned (Ofosu *et al.*, 2022). Applying a phenomenological design enabled the study to develop an understanding of the differentiated barriers that women entrepreneurs may experience, which were distinguished from those faced by women involved in menial work in small-scale mining (Arthur-Holmes, Abrefa Busia, et al., 2023). The goal of a phenomenological design was to share a narrative about the obstacles faced by women working in small-scale mining, offering deep insights into these challenges and suggesting solutions from their perspectives in a naturally occurring setting.

Through a phenomenological design framework, participants in this study were selected using a purposive and snowball sampling approach, which incorporated a total of 60 women who are either directly or indirectly involved in small-scale mining activities. Using these approaches, the study was able to capture a diverse range of participants across the country, as small-scale mining activities are often undertaken spontaneously in various mining hotspots. A snowball sampling approach was necessary to reach out to prominent figures in the

sector who could utilise their personal connections to refer the researcher to other prospective participants contributing to this study. In operationalising phenomenological design, ethical considerations are of paramount importance given the sensitive nature of challenges that women experience in the small-scale industry, which is characterised by gender discrimination and sexual exploitation in a predominantly male environment. It was imperative to promote the anonymity of participants and to embrace trauma-sensitive protocols to ensure that Justice was served and no psychological or emotional harm was to be suffered by participants based on their decision to participate in the data collection phase.

A phenomenological design methodology was used because it was well-suited to investigate intricate social trends, such as the obstacles faced by women participating in small-scale mining operations. A phenomenological design was particularly suitable for understanding the specific challenges faced by women, as it allows for the generation of new philosophical insights from the data itself (Hutchings *et al.*, 2020). Other methods, including case studies or quantitative surveys, were judged unsuitable since they might not adequately convey the depth and breadth of the obstacles faced by women working in small-scale mining.

Applying a phenomenological design through this process elucidates the mechanisms by which gender-based barriers and other multifaceted challenges contribute to the gender-based occupational segregation of women from actively participating in small-scale mining in Zimbabwe. The approach to a phenomenological design was aimed at explaining the interrelationships between these multifaceted factors and the variables that impact women's participation, and their limited access to resources and opportunities in small-scale mining (Grech *et al.*, 2023). The development of a phenomenological design involved providing a nuanced understanding of the social, economic, and cultural complexities that contribute to

these multifaceted barriers, and proposing possible intervention measures and coping mechanisms to address them.

The relevance of a phenomenological design in this study stems from its capacity to generate rich, context-specific insights that probe complex social phenomena in detail. The notion of women's underrepresentation and constraints on participation in small-scale mining, for instance, coupled with perceived male dominance in these operations, is a complex phenomenon that has been studied across various social and economic contexts. However, it still rears its ugly head in deterring women's active participation in small-scale mining (Shagdarsuren & Purevjav, 2022). This demonstrates that systemic segregation was indeed a complex issue that requires a phenomenological approach to fully explore, enabling the development of new insights into the experiences of women in Zimbabwean operations in small-scale mining. Using this approach was anticipated to enhance the credibility, transferability, trustworthiness and relevance of the results of the study generated by this study.

The application of a phenomenological approach was aligned with an interpretivist research philosophy, which emphasises an in-depth study of the social realities and subjective interpretations and meanings assigned by individuals to their social experiences (Sekaran & Buogie, 2016). Moreover, a phenomenological approach confirmed the key assumptions of interpretivism: social settings are products of individual interpretations that cannot be fully understood from objective data, but rather through subjective insights and interpretations driven by the perspectives of the people directly involved in social phenomena. By applying a phenomenological approach from an interpretivist perspective, the researcher needed to subject themselves to the subject's social reality. Outcomes generated from an interpretivist perspective are not subject to generalisations, but they highlight and underscore specific research setting issues revolving around the particular phenomenon (Hays & McKibben, 2021).

To consolidate the efficacy of a phenomenological approach, an inductive reasoning was utilised. This involved generating and drawing conclusions from specific observations of data (Schindler, 2022). An inductive reasoning approach provided opportunities for the study to generate context-specific data on the barriers and challenges experienced by women participating in small-scale mining operations. It enabled the survey to make observations on the balance of power and dynamics related to the gender dimension in small-scale mining.

Another specific dimension in which inductive reasoning provided concerning the study relates to the possible coping mechanisms that could be employed, and these relate to specific intervention strategies that can be applied to resolve the systemic segregation and gender-based underrepresentation of women participating in small-scale mining operations (Silva et al., 2023). The essence of inductive reasoning in the framework of a phenomenological approach was to allow this study to identify patterns in data and use those patterns to develop broader theories and contextualization based on observations (Saunders et al., 2023).

To effectively operationalise a phenomenological approach, it was imperative to utilise pilot testing. It was essential to refine the key informant interview protocols to identify potential challenges during data collection and to ensure that appropriate research instruments were used. Pilot testing enhanced the study's requirements and strengthened the credibility of the results of the study. In the final analysis, the application of a phenomenological approach was appropriate in achieving the mixed research objectives of the study because it provided options for an in-depth interrogation and understanding of the complexities surrounding the gender-based occupational segregation of women participating in small-scale mining operations and in coming up with phenomenological approach to the coping mechanisms relevant to the

scenarios that are faced by women who are directly involved in small-scale mining across Zimbabwe.

3.2 Population and the sample of the study

3.2.1 Population

A research population is the absolute number of elements from which the study intends to draw an inference (Schindler, 2022). It stands to reason that a research population consists of components that are thought to share related characteristics of interest to the researcher (Saunders et al., 2023). The characteristics of the population in this study were explicitly focused on the total number of women directly and actively involved in small-scale mining across Zimbabwe. However, to draw down the population in the case of women's participation in this sector, it was necessary to identify the officially reported size of the population.

The determination of the population size of small-scale miners in Zimbabwe, based on women's participation, indicates that approximately 10% of the 535,000 small-scale miners are women. Using this approach to determine the scientific population size of women actively involved in small-scale mining yields an absolute number of 53,500 women across 10 provinces in Zimbabwe.

The existence of different permutations when it comes to the determination of the size of the population regarding the active participation of women in small-scale mining operations brings out the idea that there was inconsistency or a lack of agreement on the absolute and exact number of women who are involved in small-scale mining in Zimbabwe (Mkodzongi, 2023). Another dimension of the complexity of computing the exact population of women participating in small-scale mining is that these activities are largely informal and lack an

official register to record each participant. In essence, there is freedom of entry and exit in these operations in small-scale mining. This is different from the case of large and established mining corporations, which have a personnel or human resources department responsible for keeping records of the absolute number of people employed and categorising them by demographic characteristics, including gender.

Several factors contribute to the lack of unanimous agreement on the official position regarding the size of the population, particularly women participating in small-scale mining operations. This is because most of the mining in Zimbabwe, particularly for gold, which is the most prominent mineral, is largely illegal and not reported in official statistics. On account of this illegality, it was challenging primarily to penetrate such social settings to get an official position regarding the size of people in general and women in particular who are participating in small-scale mining activities (Ayambire *et al.*, 2024; Mwandiringana & Ye, 2023)

Another oxymoron and complexity arise from the realisation that women who operate in these operations in small-scale mining are not confined solely to the physical extraction of minerals from the earth's crust. There are several supportive roles that women can play in these illegal mining setups (Ayambire *et al.*, 2024), which might comprise illicit activities like commercial sex work (Johnston *et al.*, 2024), food vending, and other supportive roles like the sourcing of water and the provision of other services to small-scale miners. These varied activities that women often occupy on the periphery of operations in small-scale mining intensify the complexity of identifying the exact number of people who participate in such activities. Apart from this complexity, it has been realised that a significant number of women involved in various activities in small-scale mining are mainly concentrated in high-value minerals, such as gold and diamonds, apart from their high level of regulation.

Given the complexity and the recognition that this study was mixed in nature, it is acknowledged that operations in small-scale mining have been conducted across various regions in Zimbabwe. However, some areas in Zimbabwe are more popular with operations in small-scale mining because they have a higher concentration of such operations. These regions include the eight non-metropolitan Provinces across Zimbabwe, with emphasis on small-scale mining hotspots, especially in Bindura, Mazowe, Mt. Darwin, the Mukaradzi Area, and along the Mazowe River, extending north-east towards Mozambique. Small-scale mining hotspots are located along the Great Dyke, including Norton, Chegutu, Kadoma, Kwekwe, Zvishavane, Gwanda, and Shurugwi in the Midlands Province.

Isolated operations in small-scale mining have been reported in the Mashonaland West Province, particularly in Manicaland Province, with notable occurrences in Penhalonga and Nyanga. However, these activities are primarily concentrated in the regions and provinces that form the focus of this study. The geographical dispersion of operations in small-scale mining across Zimbabwe is at odds with the mixed research foundations of this study, which aimed to reveal the distinctive lived experiences of women participating in small-scale mining operations without generalising the accounts to other social settings. The realisation that operations in small-scale mining are geographically dispersed across the wide breadth of Zimbabwe justified the application of a snowball sampling approach.

It was imperative to focus the study on operations in small-scale mining undertaken in specific provinces, particularly Mashonaland West and Central provinces, to gather insights from women involved in these operations. This is done in consideration of the experiences, challenges, gender-based segregation, and coping mechanisms that women may use to navigate the complexities associated with their underrepresentation in small-scale mining.

3.2.2 Sample

Sampling is a method of finding and choosing appropriate components to ascertain the conditions of the total population (Locharoenrat, 2017). According to Bougie and Sekaran (2019), the study procedure can determine whether to approach sampling from a statistical or non-probabilistic standpoint. The method of non-probability sampling was determined to be the most suitable sampling strategy given the qualitative and quantitative underpinnings of this investigation, which required using selective methods to identify participants in this study who were set to participate in the study (Schindler, 2022). This study was highly selective since it did not provide a statistical opportunity for all individuals involved in small-scale mining. The research was biased towards the active participation of women actively involved in small-scale mining in Zimbabwe.

This stems from the realisation that this study was specifically biased towards the personal experiences of women regarding their underrepresentation and the challenges they face when trying to participate in small-scale mining. In this regard, the choice behind using a non-probability sampling approach was justified by the realisation that not all elements in the population of small-scale miners can provide the quality of information and insights that the study is looking for regarding the lived experiences of gender-based segregation, challenges, and coping mechanisms that can enhance the life chances of women participating in small-scale mining.

It was imperative to gather the insights of women about the barriers they face and the gender-based segregation they experience in small-scale mining. The biased selection of women was based on the need to interpret issues from their perspectives, which influences the selection of judgmental and snowball sampling approaches.

3.2.3 Judgemental Sampling

This study examined the opportunities afforded by judgmental sampling, a method that aligns with the purpose of sampling by selecting elements based on specific criteria (Greener, 2022). The application of the judgmental sampling approach was premised on using specific inclusion and exclusion criteria. The inclusion criterion used for selecting participants in this study was that they had to be women. Secondly, they had to be actively involved in small-scale mining in various capacities in Zimbabwe for a period exceeding 6 months prior to data collection.

The imposition of this inclusion criteria made it possible for the study to incorporate individuals who could provide key insights about the gendered challenges that women come across in the operations in small-scale mining this fell in line with a phenomenological approach to get the lived experiences of women from their social cultural perspectives which could help to enhance the credibility, trustworthiness and transferability of the results of the study. Moreover, the justification behind using this inclusion criterion was to gather personal accounts from individuals who had experienced challenges and faced gender-based segregation, and to propose possible coping mechanisms they could utilise to navigate the intricacies associated with women participating in small-scale mining. In this regard, the operationalisation of the judgmental sampling approach incorporated women who participate in small-scale mining in different capacities.

Conversely, the exclusion criteria, included individuals who were neither women nor women actively and directly involved in small-scale mining. Using this approach, women who are not directly involved in small-scale mining activities were not included in this study, as they could not give their personal experiences regarding the challenges associated with trying

to survive and earn a living in a predominantly male environment from the perspective of gender discrimination and gender-based occupational segregation. This was justified by the realisation that the study was not premised on hearsay but on individuals lived personal experiences.

Having clarified the inclusion and exclusion criteria used to select participants in this study, a judgmental approach enabled the identification and utilisation of a particular group of people who possess specific knowledge and can share detailed insights, which is essential for understanding a particular phenomenon (Zikmund *et al.*, 2013). Using judgmental sampling was justified, as women occupy a small proportion of small-scale miners in Zimbabwe and across the region. The existing literature is replete with exclusionary, dominated-by-men contexts in small-scale mining (Arthur-Holmes, Abrefa Busia, et al., 2023; Ofofu et al., 2022; Silva et al., 2023). It is imperative to leverage the lived experiences of women participating in small-scale mining operations to develop an in-depth understanding of the systemic challenges they face in the complexity of these operations, drawing on their knowledge.

Another justification behind using judgmental sampling was the realisation that women occupy slightly above 10% of the entire operations in small-scale mining in Zimbabwe. Therefore, using judgmental sampling allowed the study to access valuable insights from women who have a direct interface with operations in small-scale mining. Moreover, judgmental sampling provided an opportunity for the study to intentionally select participants who are believed to provide lived experiences perspectives on the barriers experienced by women participating in small-scale mining operations. This targeted approach to sampling provides a comprehensive and in-depth mechanism to leverage time and financial resources by selecting individuals who are believed to possess specific knowledge of interest to the

researcher. This was believed to contribute to the overall effectiveness of the results of the study emanating from the study.

3.2.4 Snowball Sampling

A snowball sampling technique was used in conjunction with judgmental sampling. This technique is used to reach out to members of a population who are difficult to identify using personal references (Zikmund *et al.*, 2013). The justification for using snowball sampling was that, given the marginal proportion of women participating in small-scale mining, which is slightly above 10%, a significant number of women in this sector might be outside the researcher's sphere of influence. Therefore, it was imperative to leverage using personal referrals and contacts who proposed other women who could potentially contribute significantly to the resolution of the study's objectives.

A snowball sampling approach was instrumental in reaching out to women participating in small-scale mining operations, including women who own small-scale mining claims, as they were not immediately in the researcher's reach. Another justification for using the snowball technique was that a significant portion of operations in small-scale mining are typically underground and often involve illegal economic activities. To build a rapport with participants in this study, the researcher had to demonstrate that they have no ulterior motives beyond pursuing academic study. This assurance was only leveraged after obtaining a reference from someone in a position of authority or influence who can guarantee that the researcher's intentions are not malicious. Otherwise, aside from using these personal contacts, it was challenging to reach out to some key participants in this study who could provide valuable insights into the challenges, gender-based segregation, and coping mechanisms that women participating in small-scale mining operations can leverage.

Another reason for using a snowball sampling approach was that a sizable number of operations in small-scale mining do not maintain physical addresses or digital presence through websites, blogs, or email addresses, which can be easily located through digital applications like Google Maps or Google Earth. Reaching out to such populations requires personal references from individuals who have had direct experience with these communities. In addition, using snowball sampling acknowledges that most operations in small-scale mining occur in remote communities, which may not be easily accessible to researchers. This necessitates exploring personal connections and networks to reach female participants in this study in these hard-to-reach communities, where operations in small-scale mining are conducted.

Moreover, the systemic challenges that women experience in small-scale mining are a relatively sensitive topic. Potential female participants who were interested in contributing openly about their personal experiences in the set. Therefore, leveraging snowball sampling, which emphasised personal networks and referrals from other women in the sector, helped build trust and rapport, making it relatively easier for the women to share their stories and experiences, based on the assurance provided by their peers. Overall, using snowball sampling enables the researcher to navigate through networks and reach a closed population of participants who would otherwise be difficult to access using alternative sampling methods.

3.2.5 Sample Size Determination

A saturation point was used as an appropriate empirical determination of the sample size, for the qualitative face-to-face interview. The existing literature indicates that the saturation point is reached when no new information is obtained from the discussions or

interviews. Theoretically, the saturation point is determined when a total of 12 interviews have been conducted. However, given the depth of this study in terms of the qualitative insights it generates regarding the experiences of women participating in small-scale mining operations, the sample size of 12 is provisionally taken to be smaller, considering scope of this study.

Although these studies are guided by the saturation point in determining the sample size for the mixed study, the researcher believes that more than 12 interviews, possibly closer to 60 participants in this study, are needed across the eight non-metropolitan Provinces in Zimbabwe. Increasing the sample size to 60 enhances the scope of the study by generating detailed accounts relating to the experiences that women have in small-scale mining. Moreover, expanding the scope of the study in terms of sample size supported a phenomenological approach, which aims to confirm and reconfirm insights as they emerge from the perspective of women directly involved in small-scale mining.

The justification behind selecting a mixed sample size that was slightly above the empirical saturation point comes from the realisation that the experiences of women participating in small-scale mining operations in Zimbabwe are a largely under-researched area that requires in-depth exploration to develop a detailed appreciation of the challenges they experience and the coping mechanisms they can employ to enhance their life chances in the sector. Moreover, using a saturation point in determining the appropriate sample size emphasises the richness of data collection given the complexity and multifaceted nature of operations in small-scale mining. It was imperative to develop a comprehensive appreciation of the phenomenon under study. Additionally, the application of the saturation point provides flexibility in determining the sample size iteratively during the data collection process. In this respect, the saturation point was beneficial for studying a niche group composed of women small-scale miners.

The iterative nature of saturation ensures that data collection proceeds until no additional insights are gained from the discussions. In addition, the application of the situation points approach to determining the sample size involved a feminist bias to amplify the voices of women in terms of their experiences in small-scale mining. To complement the sample size determined through the saturation point, this study utilised key informant interviews from a diverse framework of people who directly work with women involved in small-scale mining. These key informant interview participants comprise representatives of organisations such as Fidelity Printers and Refineries Private Limited, that has initiatives in place to support the active participation of women in gold mineral ore extraction. In addition, key informant interviews were conducted with representatives from the financial sector, supply chain partners who provide various mining equipment and materials, and representatives from the Ministry of Women's Affairs who are interested in promoting the active participation of women in small-scale mining operations.

3.3 Material and instrumentation of the research tools

This mixed study was primarily focused on the application of a structured interview, which was used for data collection. These instruments support the social interactive paradigm and a phenomenological design that conforms with the dictates of a mixed research approach. The selection of appropriate instruments for gathering data and mixed insights from women involved in small-scale mining required the contextualisation of issues, with a particular emphasis on the three objectives that guide this study.

A recap of the study's objectives indicates that it is primarily focused on describing the barriers and challenges that women experienced in their quest to participate in small-scale mining. Secondly, the study was interested in explaining gender-based segregation against

women's active participation in small-scale mining, and finally, it was interested in proposing coping mechanisms that can be applied by women to improve their life chances and participation in these operations in small-scale mining. By their nature, these objectives were not generic; they are more specific to the context of women participating in small-scale mining.

That being the case, the researcher was motivated to explore a phenomenological approach to get a detailed appreciation of the unique circumstances and experiences of women participating in small-scale mining operations in the framework of this Zimbabwean economy. Even though previous studies have been done in a related area focusing on the active participation of women in artisanal and operations in small-scale mining (ASM), these studies were done in different geographical regions, which might probably influence the outcomes of the research in terms of differences in cultures, value systems, religious legacy, and the general social definition of the roles between men and women.

A review of empirical literature shows that other studies have used a slightly different approach when it comes to the research instruments and data collection methods in a related study. For instance, research by Maclin *et al.* (2017) used a quantitative survey involving 998 men and women involved in small-scale mining in the eastern Democratic Republic of the Congo. This study is distinguished from the current research given the variations in sample sizes and the scope of data analysis, where the priority was focused on a quantitative analysis and the current research gives emphasis on qualitative insights from the perspective of women.

3.3.1 Questionnaire with open-ended questions

Using a questionnaire with open-ended questions to collect data was employed in a study by Zolnikov (2020), which involved women in artisanal and small-scale gold mining in Ghana. The mixed research instrument was justified on the basis that it provided adequate flexibility for the researcher to ask rearranged questions and allowed for prompts to facilitate further discussions, thereby enhancing understanding of the participants' experiences and using a questionnaire with open-ended questions provided valuable insights into women's work experiences and inequalities in their participation in small-scale mining, specifically regarding financial capabilities and family social relations. The research instrument's structure incorporated the collection of conventional constructs and demographic variables, including marital status, age, length of time in small-scale mining, level of education, and the number of children. The interviews were audio-recorded, and the recordings were translated and transcribed. The questions that were included in the research instrument were derived from the following sources

Table 1

Questionnaire constructs and their sources

Construct	Question	Sources
Demographics	Q1 to Q4	(Jovine et al., 2023)
The process of obtaining immovable property rights for operations in small-scale mining in your community is difficult for women	Q5	(Valadares et al., 2024)
Limited access to finance has a negative impact on the participation of women in the small-scale mining sector	Q6	(Adranyi et al., 2023)

Rigid gendered cultural norms affect the participation of women in the small-scale mining sector	Q7	(Arthur-Holmes, Abrefa Busia, et al., 2023)
Limited technical skills and competencies affect the participation of women in the small-scale mining sector	Q8	(Musonda, 2020)
Access to mining equipment and tools influences the participation of women in the small-scale mining sector	Q9	(Northover & De Villiers, 2019)
A lack of legal recognition impedes women's active participation in the small-scale mining sector.	Q10	(Mugo et al., 2021)
The prevalence of sexual and emotional harassment in the small-scale mining sector discourages women's participation.	Q11	(Sudaryat et al., 2024)
The male-dominated environment that surrounds small-scale mining is not ideal for active participation by women	Q12	(Dzvimbo et al., 2019)
Occupational segregation discourages the active participation of women in the small-scale mining sector.	Q13	(Arthur-Holmes, Abrefa Busia, et al., 2023)
Wage gaps differences between man and women working in the small-scale mining sector potentially affect the active participation of women.	Q14	(Yakovleva et al., 2022)
Maintaining a stable work and life balance determines the active participation of women in the small-scale mining sector.	Q15	(Hutchings et al., 2020)
Cultural beliefs deter the active participation of women in the small-scale mining sector	Q16	(Huggins et al., 2024; Jovine et al., 2023)

The operationalisation of a questionnaire with open-ended questions in this study was inspired by Zolnikov's (2020) work, which examined the effects of government bans on women's participation in small-scale gold mining in Ghana. A related approach was employed in a study examining gender-based occupational segregation in artisanal mining in Ghana (Arthur-Holmes, Yeboah, *et al.*, 2023). Interviews were conducted with women operating in unlicensed operations in small-scale mining. These interviews were recorded with the participants' permission. Women were approached after they had finished their work for the day and were interviewed in an open area where they could speak and express themselves freely. These interviews were conducted in the vernacular language to enhance the interpretation and understanding of the discussions. However, all responses were written in English to ensure content validity and ease of understanding. The interviews included women between the ages of 18 and 45.

Related insights derived from the works of Koomson-Yalley (2022) were utilised in a mixed ethnographic study focusing on four main small-scale mining communities in Ghana. The data collection approaches included participant observations, voice-recorded semi-structured interviews, and extensive field notes to ensure triangulation of the data. The scope of participants in this study included 40 women and eight men who lived in mining communities and worked in small-scale mining. The interviews were conducted with a voice recorder. To promote transferability, the researcher relied on detailed descriptions of contextual information related to the day-to-day participation of men in small-scale mining.

A study by Mkongodzi (2023) utilised qualitative data collection using a questionnaire with open-ended questions, informal conversations, key informant interviews, and participant observations involving over 200 people engaged in mine-related businesses across state gold mining rush sites over a 400-kilometre spread along the Great Dyke in Zimbabwe. A related

study by Stewart *et al.* (2020) employed participant observations, key informant interviews, and document reviews. Data was collected in the field. These reviewed empirical studies provide an indication and justification for the selection of structured interviews and key informant interviews, as they focused on the data collection instruments employed in this study. They highlight the mixed nature and complexities of issues surrounding operations in small-scale mining, particularly in the African region.

In this context, this study employed a questionnaire with open-ended questions, the primary approach used to collect data on the personal insights of women regarding their experiences in small-scale mining. Apart from the motivations derived from prior studies, which used a questionnaire with open-ended questions to collect data, this study is unique in that its scope, in terms of objectives, is peculiar to the Zimbabwean scenario. As such, there was no need to adopt a specific research instrument, such as an interview guide or a key informant interview discussion guide, from a particular research paper.

The intention was to go with the flow in the collection of qualitative data while being guided by using a questionnaire with open-ended questions, which were designed in line with the objectives of the study. This approach was taken to be central because it provided a broad scope for the researcher to delve into detail through the phenomenological approach, confirming and reconfirming participants in this study' insights, experiences, and opinions regarding their reception in small-scale mining.

In unravelling the barriers faced by women in small-scale mineral ore extraction in Zimbabwe through structured interviews, the study conducted a careful consideration of reliability and validity in the research instruments, which is crucial to ensuring the quality and credibility of the study findings (Schindler, 2022). The development of a questionnaire with

open-ended questions involved carefully designing a set of standardised questions that are consistently used with each participant. This ensured reliability in the data collection process, as all participants were asked the same questions, allowing for consistency in responses across interviews. However, variations were made regarding how participants in this study responded to the questions they were supposed to answer. This provided researchers with options for further probing to develop a detailed understanding of the experiences in the operations in small-scale mining.

In designing the questionnaire with open-ended questions, the researcher taken to be the cultural context and sensitivities surrounding gender roles in small-scale mining in Zimbabwe to ensure that the research instruments were culturally appropriate and sensitive to the participants' backgrounds (Mkodzongi, 2023). Particularly for a questionnaire with open-ended questions, the research instruments are designed in such a manner that they are interpreted in a language that participants in this study can understand and express themselves more effectively. This approach is similar to that used by Arthur-Holmes, Yeboah, *et al.* (2023) in their related study in Ghana. Given the possibility of lower echelons of education amongst participants in this study, it is taken to be appropriate to conduct the interview using the vernacular Shona language, which is spoken by most people in the Eight non-metropolitan Province, which is the focus of this study. The results were converted into English for consistency of responses. The choice to use a vernacular language in the collection of data from women involved in small-scale mining is related to an approach used in a study by Arthur-Holmes, Yeboah, *et al.* (2023) in Ghana where the local language was used to solicit responses from women and the response is given where then converted into English.

The actual questions included in the questionnaire, which featured open-ended questions, were derived from the identified knowledge gap in the literature review. Using this

approach to generating questions was taken to be more appropriate than the adoption of a research instrument from other studies, given the contextual nature of this study's ability to delve deep inside the complexities surrounding women participating in small-scale mining (Mkodzongi, 2023). Another justification for the inclusion of self-determination in the interview guide was the need to generate relevant insights by providing interviews that allowed participants to express themselves and explore their personal experiences in small-scale mining. The intention of this qualitative study is not to generalise the results of the study to appeal to a broader population of women participating in small-scale mining operations (Grech *et al.*, 2023). Therefore, it was not necessary to adopt a research instrument that had been used in other studies.

3.4 Study procedures and ethical assurance

The initial phase of undertaking the study involved applying for ethical clearance from the UNICAF Research and Ethics Committee (UR). Ethical approval was granted by UREC on 31 May 2024, paving the way for the operationalisation of the data collection process, which involves using interviews and key informant interviews with women and individuals who work with women participating in small-scale mining operations in Zimbabwe. The process of obtaining ethical clearance involved crafting research instruments, primarily including the interview guides and the key informant interviews discussion guide, and completing some forms and checking boxes regarding the ethical nature of the undertaking. Appropriate corrections and amendments to the research instruments paved the way for the collection of data.

3.4.1 Interviewing procedures

The study involved the collection of qualitative data, involved interviews with women who own small-scale mining as well as their employees. The interviews were recorded for playback and better analysis of the data. The starting point for collecting data using interviews was the selection of participants to include in the interviews. The selection was enabled by applying the inclusion and exclusion criteria. The inclusion criteria specify that participants in the interviews must be women who are directly exposed to operations in small-scale mining. These include women who participate in the actual mining process in various capacities or provide support services to those actively engaged in small-scale mining. In this respect, the study incorporated women who were involved in the actual extraction of minerals, particularly through alluvial or underground mining activities.

Upon identifying these individuals, informed consent was obtained verbally by explaining the study's intentions. Upon agreeing to participate in data collection, an informed consent form is read to them, ensuring they understand their rights and obligations, and the role they are expected to play throughout the data collection process. Upon understanding these conditions regarding the data collection, they were expected to append their signature or thumbprint to the informed consent form, signifying their voluntary agreement to take part in the data collection process. The researcher emphasised that participation in the study was purely voluntary, and participants in this study were free to withdraw from the indicator collection process at any stage without explanation. In addition, the researcher emphasised that she would not offer incentives or coerce participants to participate in the study.

The actual collection of data incorporates requesting participants in this study to specify times in their schedules when they are free and can spare some 20 to 30 minutes to discuss key

issues surrounding the challenges they experience in small-scale mining, the gender-based segregation they have faced, and their views regarding coping mechanisms that they can use to empower themselves in small-scale mining. It was of paramount importance to ensure that participants were not inconvenienced in any way due to their participation in the data collection process. This involves visiting locations or sites that participants consider convenient, ensuring they do not become victims or suffer any emotional or psychological harm due to their decision to participate in the data collection process. These measures were taken in recognition of the sensitivity of issues revolving around the underrepresentation of women participating in small-scale mining operations, which are predominantly male.

Questions that formed the basis for discussions were addressed to encourage participants to engage in a language they could understand. This was done to build confidence and to allow participants to express themselves clearly and without any hindrance. In recognition of the varying levels of education, participants were given time to think through questions before responding so that they could express themselves in a manner that closely resembles their own personal opinions and experiences from their own perspective regarding the issues at hand. The researcher did not interject or interfere with the responses given by participants. The researcher did not have the duty to judge or analyse the responses given. The study aimed to gain an understanding from the perspective of the participants in this study, rather than imposing personal feelings and opinions from the researcher's point of view.

Participants in this study were encouraged to seek clarity on issues they found unclear. This was done to ensure that the responses to the questions accurately reflect their personal experiences in small-scale mining. The researcher used an interview guide only as a guide. The actual questions and flow of questioning depended on the level of interaction between the interviewer and the interviewee. To direct the flow of the discussion in the interview, it was

essential for the researcher to endeavour to create rapport and personal connections with the participants in this study. This approach provided assurance and built confidence, allowing the participants in this study to express themselves freely regarding the issues at hand without fear of reprisals. The interviews were recorded for playback and better analysis of the data.

After completing the interview regarding the equations depicted in the interview guide, participants in this study were encouraged to express their personal feelings or opinions on issues related to the topic that the research might not have captured. This was essential in the framework of a phenomenological approach to unlock those feelings and perceptions that might inform the study and generate deep insights into mechanisms that can be put in place to improve the life chances of women regarding their participation in small-scale mining.

3.5 Ethical Assurances

This study involved human beings in the collection of data. Therefore, acceptable research ethics must be applied to actively engage participants in the research process while they remain aware of their written obligations regarding participating in the study (Brandenburg & McDonough, 2019). Ethics are essential for undertaking a social study of this nature based on the voluntary participation of participants, which implies that seeking informed consent is of paramount importance and is an ethical measure to ensure that participants voluntarily take part in the study without any fear or incentive they look forward to receiving on account of their participation (Schindler, 2022). Key ethical assurances that are undertaken in this study include seeking informed consent, observing the right of participants in this study to privacy and their right to confidentiality, protecting participants from physical and emotional harm, observing beneficence and non-maleficence, and maintaining justice (Sekaran & Buogie, 2016). These ethical assurances are described and discussed in detail below.

3.5.1 Informed consent

The basis for obtaining informed consent was to ensure that the participants in this study had voluntarily agreed to take part in the data collection process of the research (Schindler, 2022). This was achieved by explaining the reasons and justifications behind undertaking the study. The researcher had the duty to explain the rights and obligations of participants in this study regarding their participation in the study. Informed consent was sought from the actual participants who were to participate in the research (Pruzan, 2016). The scope of informed consent is such that it specifies the nature of the study, clarifies the method of data collection, and outlines possible outcomes associated with the research. Through the process of informed consent, the researcher deliberated on the roles that participants were expected to play to achieve the ultimate objectives of the study.

Informed consent emphasised that participation in the study is purely voluntary (Kara, 2018). There were no incentives awarded to participants in this study in return for their participation. On the other hand, the participants were not expected to incur any costs on account of their decision to participate in the data collection process. To signify their agreement to participate in the study voluntarily, participants were expected to append their signature to an ethical consent form, which was read to them in a language they understood. In addition, a copy of the ethical consent form *was* given to participants for their own records.

3.5.2 Upholding the principles of beneficence

Beneficence is an ethical principle where the researcher has the responsibility to ensure that participants in this study are able to identify and appreciate the benefits associated with the study (Kara, 2018). The essence of demonstrating the beneficence of the standing comes from the realisation that it is starting to be too intense to include women in explaining the

challenges associated with gender-based segregation in their quest to participate in small-scale mining. Ultimately, the studies are expected to propose some resolutions and coping mechanisms that women participating in small-scale mining operations can explore and utilise to economically empower themselves and actively participate in and benefit from operations in small-scale mining. The research has the duty to demonstrate to participants in this study that taking part in the study is to their benefit since it might possibly result in some policy shifts that might go as far as resolving some of the gender-based segregation and challenges they experience in small-scale mining.

3.5.3 Upholding the principles of non-maleficence

Non-maleficence is an ethical principle where the researcher has the responsibility to do good and minimise inflicting either physical or psychological harm on participants in this study (Kara, 2018). This ethical principle was observed by ensuring that research instruments do not unnecessarily prejudice or inconvenience participants in this study in any way in terms of their race, colour, creed, or gender. This ethical principle was of paramount importance given the sensitivity of the research topic and the discussion (Quraishi, 2018). In this regard, the researcher did not adopt a judgmental approach when dealing with the challenges that women experience in the small mining activities. This was done to ensure that responders are given an opportunity to express themselves without any judgment or any interventions that might possibly affect the men in whom they are able to express themselves.

Upholding the principles of non-maleficence demands that the researcher exercise high levels of emotional intelligence, which enabled her to probe into issues related to the challenges and gender-based segregation suffered by women participating in small-scale mining operations without inflicting additional psychological harm on the participants in this study

themselves (Sharma *et al.*, 2019). In this respect, the researcher had a moral duty to protect participants from psychological harm because of their decision to participate in the study. In the process of collecting data from participants in this study, the research is moral due to the fact that it does not expose participants to dangerous conditions (Dzvimbo *et al.*, 2019). This implies that data was collected as and when participants are free to do so outside of their working hours or schedules, which might negatively compromise their earnings or safety at work.

Another measure to protect participants from psychological harm *was* to design questions sensitively so that they do not negatively portray an image that injures their feelings and perceptions of responding. In addition, protecting participants from psychological and physical harm culminates in the protection of their identities, given the sensitivity of the challenges they experience in small-scale mining.

3.5.4 Observing the right to justice

It stands to reason that recognising the vulnerability of participants in this study regarding their contributions to the study is a key factor in achieving justice in social studies. In pursuit of achieving justice, community researchers refrained from overburdening participants in this study with requests for additional information. This is accomplished using pre-tested, standardised instruments in the form of a structured interview schedule. Moreover, when addressing participants in this study, the researcher minimised the use of patronising language, which can create some stereotypes against participants in this study. The researcher tried to immerse themselves in the circumstances and conditions of the participants themselves so that they could be comfortable opening issues related to the challenges and gender-based segregation they suffer in the context of operations in small-scale mining.

The researcher was committed to using nonverbal communication cues. This complements spoken words, especially when undertaking interviews. The ethical principle of justice specifies the need to protect the privacy of participants. This was achieved by ensuring that only pertinent questions, essential to achieving the study's objectives, were asked. The participants in this study were not asked questions relating to their lifestyles or anything that is divorced from the ultimate objectives of the study. Moreover, participants were not subjected to or exposed to any financial or social disadvantage because they decided to participate in the study (Kara, 2018). In this respect, participants in the data collection phase are free to attend the interviews without incurring any financial disadvantage for leaving their work.

3.5.5 Observing the Right to Privacy

The privacy and confidentiality of participants in this study are of paramount importance in social research. The researcher ensured that the participants' identities were kept anonymous. This was an assurance of ethical conduct to elicit truthful responses from participants, who were assured that their identities would not be divulged. Moreover, *pseudonyms* were used instead of the actual names and identities of participants in the data analysis process, which served to protect the participants' identities. Respect for people encompasses protecting the confidentiality of information shared by participants in this study during the data collection process.

Assurance was given that personal information shared by participants during data collection was not shared by the researcher with third parties without the participants' express consent. Therefore, any information shared by participants that was of a personal and sensitive nature was not disclosed beyond the scope of the research objectives, which are to pursue an

academic study (Gutierrez *et al.*, 2020). Participants were not expected to review their actual names and contact details since this type of information is irrelevant.

The role of the researcher in the data collection process was that of a passive participant, primarily there to pose questions and probe without being judgmental or expressing their own personal opinions. This was essential, as the study must be interpreted from the perspective of the participants in this study themselves, regarding their experiences in small-scale mining. It was of paramount importance for the researcher to exercise a high degree of emotional intelligence to steer the discussions and interviews in a manner that respects the emotional and psychological states of participants in this study and to avoid any harm that might affect the way they express themselves during the data collection process.

In the final analysis, the essence of observing acceptable research ethics when conducting a sensitive study focusing on the challenges and gender-based issues that are experienced by women in the small-scale sector is of paramount importance to promote the validity of the study findings. Observing social ethics in this regard will ensure that other researchers might pursue a related approach to replicate the study and compare their findings to the outcomes that have emerged from this study.

3.6 Data collection and analysis

This study resulted in the collection of qualitative data from participants in this study, which included women who are actively participating in small-scale mining in different capacities, and other supportive representatives from different organisations.

3.6.1 Data collection

The actual collection of data from these participants in this study included using interviews. Interviews are targeted at women who have a direct interface with various operations in small-scale mining. The justification behind using interviews was that it was an appropriate data collection approach to gather personal insights, views, and opinions regarding the challenges they have experienced in small-scale mining, the gender-based segregation they have suffered, and any other suggestions or coping mechanisms that they might propose need to be implemented to influence their improved performance in small-scale mining across Zimbabwe.

The first stage in collecting these mixed data is scheduling interviews, as the data collection was conducted in eight non-metropolitan provinces, which have a high concentration of operations in small-scale mining. The researcher selected operations in small-scale mining in the province. This entailed that the researcher had to travel to areas where operations in small-scale mining are undertaken across the eight non-metropolitan provinces. The research focuses on Bindura district, particularly Kitsi Yatota, Mazowe Masasa, Shamva, Mt. Darwin Mukaradzi, and areas along the Mazowe River.

The wide geographical dispersion of operations in small-scale mining necessitated a considerable amount of travel on the part of the researcher. In this respect, the researcher sought the services of local people who are aware of the area and can guide the procedure for reaching sites where operations in small-scale mining are undertaken. The whole process of visiting these areas and conducting interviews in eight non-metropolitan areas was provisionally anticipated to span over 120 days.

Upon reaching the selected sites where operations in small-scale mining are conducted, the researcher obtained informed consent from the identified women who participate in these operations. Ideally, the first meeting was meant to schedule the actual interview. However, if participants in this study are flexible enough to undertake the interview in the same day, then interviews were conducted on the same day to rationalise travel on the part of the researcher. As part of empowering participants in this study, the researcher allowed them to select a time and location that was convenient for them, where they could be interviewed and share their insights regarding the issues under consideration.

If there are no women participating in small-scale mining activities in the aforementioned areas, the researcher will move on to the next small-scale mining site. This is motivated by the need to extract meaning and interpretation from the perspective of the insights and personal experiences of women participating in small-scale mining operations. The actual collection of data through interviews is preceded by informed consent, followed by the participants in this study' interpretation of the questions in a language they understand, which helps improve the validity of the results of the study. The interviews were scheduled not to last more than 30 minutes to preserve the time that participants in this study might need to engage in various income-generating activities in these operations in small-scale mining. However, sufficient detail *was* provided to support the collection of valid data, as interpreted from the participants in this study's own perspectives.

Data collection continued until theoretical saturation was reached, meaning that no new concepts or insights were emerging from the data. This ensures that the theoretical framework adequately captures the complexity of the phenomenon under study. Follow-up interviews were conducted to confirm insights that were shared by women who are directly participating in small-scale mining. These follow-up interviews covered different perspectives relating to

issues associated with the challenges faced by women participating in small-scale mining operations. At the policy level, insights that emanate from follow-up interviews had a bearing on the coping mechanisms and recommendations that can be put forward for possible adoption as a mechanism to improve the active participation of women in these operations in small-scale mining. The process of undertaking follow-up interviews was quite distinct from interviews that are undertaken in the natural environmental settings of women in their respective small-scale mining areas. This was because follow-up interviews were undertaken online to provide convenience to different people who participated in them. It was challenging to convince officials from different organisations in the same geographical area to meet to discuss issues pertaining to women participating in small-scale mining.

Therefore, digital communication mechanisms were employed to ensure that follow-up interviews proceed outside the physical meeting protocols. The actual conduct of the follow-up interviews culminated in the researcher facilitating the discussions by introducing herself and outlining the meeting's agenda, which focused on key points related to women participating in small-scale mining in Zimbabwe. Consent was obtained from the participants to record the deliberations that took place during the follow-up interviews, which would assist in the transcription of the discussions and subsequent coding and analysis. The interviewer encouraged open discussions to ensure that everyone had a chance to express themselves regarding the issues under consideration. It was essential to promote diversity of opinions and perspectives to develop a holistic understanding of mechanisms that can be implemented to encourage women participating in small-scale mining.

The collected data was analysed qualitatively using a phenomenological thematic analysis approach. The process of data collection, employing a phenomenological approach, involved distributing a questionnaire with open-ended questions to a cross-section of

participants selected through a combination of judgemental and snowball sampling methods. The distribution of the research instruments was conducted through two approaches. The first approach involved the physical distribution of the questionnaire, allowing the researcher to have a direct interface with the participants. This approach provided the researcher with an opportunity to capture the written and visible cues that could help understand the contextual circumstances surrounding the woman's lived experiences in the small-scale mining sector.

The second approach involved the distribution of an electronic version of the questionnaire. This was necessitated by the diversification of operations in small-scale mining, which required reaching out to isolated participants in this study across Zimbabwe who were believed to possess information that could help shape the context of women's participation in these operations.

The data collection process involved translating the questionnaire into a vernacular language that participants could understand. Using this approach, each interview lasted between 60 and 90 minutes, and they were transcribed for analysis. The questions were designed to elicit rich narratives revolving around three themes: the generic challenges that women come across in small-scale mining, the gender-specific constraints affecting the progression of women participating in small-scale mining operations, and the proposed mechanisms that can be applied to help women cope with the challenges they face. The physical presence of the researcher in the natural research settings of the participants in this study helped the researcher supplement the visible and spoken words of the participants in this study with observations of activities taking place in the mining environment. This approach helps the start to document personal assumptions and preconceptions regarding systemic gender barriers affecting the airport progression of women participating in small-scale mining operations.

3.6.2 Data analysis

The data analysis approach involved a logical mechanism of transforming the insights derived from participants into meaningful information that could be used for policy formulation regarding the coping mechanisms to improve the life chances of women in the informal mining sector. The Atlas.TI 25 software was used for analysing qualitative insights expressed by participants.

A bracketing process was employed to facilitate continuous self-reflection, acknowledging initial expectations of pervasive gender-based discrimination in the small-scale mining informal sector, while consciously setting aside during the interviews to allow participants to express their views. Applying this reflexive approach provided the study with opportunities to appreciate the assumption of the evolution of challenges that women experience in the small-scale mining sector. This was necessary to provide a shift from entirely focusing on the victimhood of women in the industry to recognising their resiliency and agency that they can make towards improving their life chances in the small-scale mining sector that men largely dominate.

In line with the phenomenological approach, a horizontalisation mechanism was undertaken, which involved treating the insights and views of participants equally. The destination process of horizontalisation is a phenomenological reduction, where the focus is entirely on the experiences of participants, and each experience is treated equally. In the context of this study, the horizontalisation approach was instrumental in promoting transparency in data analysis, aligning with the epoche principle, which sets aside the researcher's assumptions. Horizontalisation was crucial in treating each data point equally throughout the entire process and promoting the integrity of participant experiences by ensuring that the analysis of data was

based on the data itself, rather than on the researcher's preconceptions. This implied that the data analysis process involved assigning value to the statements without any hierarchy first, and the researcher was engaged in an imaginative variation by considering various possible interpretations and structures.

The process of horizontalisation was followed by a thematic development involving the distinction between texture descriptions of personal experiences of women and the structural descriptions of contextual encounters. Using textural analysis of data was instrumental in identifying the gender-based challenges that affect the success of women in the small-scale mining sector, particularly in terms of the wage disparity arising from the different activities undertaken in these operations. This analysis approach helped uncover the limited resources and financing challenges that women experience in this industry, which have both legal and cultural implications. In addition, the application of a structured analysis of the data reviewed the extent to which these challenges have been exacerbated by existing social norms and cultural legacy, including the lack of ownership of land and other immovable property, which has significantly impacted access to finance for women. Structural analysis was the focus of the occupational health and safety issues surrounding small-scale mining sectors that might potentially impair the health of women, given their unique work and life balance demands.

The main themes that emerged from a thematic analysis of the data were validated through a member-checking process in which participants confirmed the accuracy of their preliminary findings. A detailed description of the social, cultural and economic contexts under which the study was undertaken promoted the rigorousness of the study and enhanced the transferability of the results of the study even though the study was not meant to generalise outcomes to the greater population. Applying a phenomenological approach to analysing the data provided key insights into the complex interrelationships of resilience in the survival

instincts of women in the confines of the small-scale mining sector. It provided the mechanism of capturing the lived realities and experiences of women, articulating the need for the development of relevant policies addressing the existence of structural inequalities in the small-scale mining sector, which are rooted in the socio-cultural, legal and economic context in which operations in small-scale mining are undertaken.

3.7 Chapter Summary

This chapter presents the detailed methodological roadmap that was followed in designing the research to generate credible, transferable, and trustworthy results of the study. Given the mixed foundations of this study, the study adhered to the principles of social constructivist research philosophy, which necessitated conducting the study in the natural environmental settings of the women participating in small-scale mining operations in Zimbabwe. The chapter began by recapping and articulating the key research objectives of the study, which informed the selection of an appropriate research design and philosophical approach. Key aspects of the chapter included a description of the research design, which was primarily focused on a phenomenological approach. Articulation of the research population, which clarifies the complexities associated with specifying the exact size of the research population, given the informal nature of most small-scale gold mining activities.

The chapter justified combining a judgmental and snowball approaches as the most convenient and appropriate sampling techniques to select representative elements from the population. Other key aspects that were highlighted in this chapter included the approaches taken in data collection and analysis and the observance of research ethics, given that their study is social research involving human beings and their active participation in the data collection process. In addition, the chapter specified the mechanisms that were engaged in the

process of analysing mixed data to generate valid insights that can be replicated by other researchers who might be interested in undertaking a similar study. This study focused on gender imbalances, challenges, and coping strategies for women participating in small-scale mining operations in Zimbabwe. The main problem that motivated the study was the prevalence of male dominance in the sector, which undervalues the contributions that women make in small-scale mining. This is notwithstanding the government efforts to provide loans and financial support to women participating in small-scale mining operations through various initiatives that include the Gold Development Initiative Funds. The active participation of women in small-scale mining operations has declined progressively, with only 20 million of the \$150 million total loans allocated to women.

The perception of male dominance and the high levels of risk associated with mining activities contribute to the gender-based occupational segregation of activities and duties undertaken by women in small-scale mining operations. Apart from the Constitution of Zimbabwe, Number 20 of 2013, which promotes gender equality, women are underrepresented in small-scale mining. contrasts with their population proportion in the country. Religious beliefs and myths contribute to the poor participation of women in small-scale mining operations. Women are discouraged from actively participating in small-scale mining due to the perceived misfortunes they bring to various operations in small-scale mining. However, there is no scientific explanation behind this gender-based occupational segregation against women participating in small-scale mining.

Women lack collateral security, such as immovable properties in their names, which limits the scope of financial support they can get from the lending institutions. The study examined the barriers and systemic challenges that women face in small-scale mining in the face of gender imbalances. The study examined the influence of cultural and religious factors

on the economic opportunities and social performance of women participating in small-scale mining operations in Zimbabwe. A mixed approach was essential to address the complexity of intertwined issues surrounding the limited participation of women in small-scale mining operations in Zimbabwe. By adopting a phenomenological mixed research approach, the study aimed to provide additional insights into mechanisms that address the challenges faced by women participating in small-scale mining operations.

This study employed a mixed approach, specifically a phenomenological approach, as the preferred study design to analyse the complex realities faced by women participating in small-scale mining operations in Zimbabwe. The ontological foundations of this study focused on the nature of social reality and its existence, analysing gender-based challenges and segregation, and the coping mechanisms women use to navigate the sector. The study aimed to understand the reasons behind the perpetuation of women's segregation in small-scale mining, recognising the complexity of social realities due to diverse perspectives, opinions, and experiences. The study aimed to define and explore existing social structures, gender roles, institutional context, and power dynamics that shape the lived experiences of women participating in small-scale mining operations. The study examined the gender-based challenges faced by women participating in small-scale mining operations in Zimbabwe, focusing on norms and power structures that systemically segregate women from participation.

The study adopted a feminist perspective and applied mixed research methods to capture the experiences of women participating in small-scale mining operations. This allowed their voices to be heard and shape the outcomes. The epistemological foundations of the study involved understanding the complexity of gender segregation in the context of women participating in small-scale mining. The axiological foundations of the study related to the value systems and ethical principles underlying the study, with a focus on gender equality,

social justice, and women's empowerment and emancipation in relation to operations in small-scale mining. The study aimed to develop a detailed appreciation and understanding of the complexity of challenges faced by women in this sector, with the aim of improving their working conditions and proposing coping mechanisms to enhance their general welfare and participation in small-scale mining. The mixed research approach provided participants with a wide base through which they can express themselves, respecting the moral value systems guiding the interaction between women and their counterparts in small-scale mining.

The study used a phenomenological approach to analyse women participating in small-scale mining. It uses key informant interviews and structured interviews to gain in-depth insights. The research aimed to understand gender-based challenges and segregation faced by women participating in small-scale mining operations and their coping mechanisms. The methodology was well-suited for investigating complex social trends and forming philosophical discoveries. The study was organised into three themes: complex challenges faced by women, gender-based segregation, and coping mechanisms. This phenomenological approach was aligned with an interpretivist research philosophy, focusing on an in-depth study of social realities and subjective interpretations.

The study investigated the experiences of women participating in small-scale mining operations through interviews and key informant interviews. Participants were directly exposed to mining activities and given informed consent. The researcher ensured participants were not inconvenienced and did not judge or analyse their responses. Key informant interviews are conducted on online platforms like Zoom and Microsoft Teams, involving representatives from various sectors. The discussions typically lasted between 60 and 90 minutes and were recorded for data analysis and coding. The researcher's duty was to facilitate these discussions and ensure that all participants could express themselves.

This study involved human participants in the collection of data, and ethical considerations must be applied to ensure their voluntary participation. Informed consent is crucial to ensure participants are aware of their obligations and that there are no incentives or costs associated with their participation. Key ethical assurances included seeking informed consent, observing the right of participants in this study to privacy and confidentiality, protecting participants from physical and emotional harm, observing beneficence and non-maleficence, and maintaining justice. Informed consent is sought from participants who have voluntarily agreed to participate in the study, explaining the reasons and justifications behind the study. The scope of informed consent specifies the nature of the study, the method of data collection, and possible outcomes associated with the research. Participants were not expected to incur any costs for their participation. A copy of the ethical consent form was provided to participants for their records.

Beneficence was applied as an ethical principle where researchers must ensure that participants can identify and appreciate the benefits associated with the study. The study proposes solutions and mechanisms that women participating in small-scale mining operations could use to economically empower and emancipate themselves. Non-maleficence required the researcher to exercise high levels of emotional intelligence to probe into sensitive issues related to gender-based segregation in small-scale mining without inflicting additional psychological and emotional harm on participants. Observing the right to justice is essential in social studies. The researcher refrained from overburdening participants with requests for additional information and minimised patronising language when addressing participants. Nonverbal communication cues were used to complement spoken words, and participants were not subjected to financial or social disadvantages because of their participation.

The privacy and confidentiality of participants in this study were crucial in social research. The researcher-maintained anonymity to ensure truthful responses and respect for their identities. Personal information shared during data collection was shared with third parties without consent. Participants are not expected to review their actual names or contact details. The researcher was a passive participant, asking questions without judgment or personal opinions. Emotional intelligence is essential for steering discussions and avoiding harm. Observing acceptable research ethics, particularly when focusing on gender-based issues, is crucial for promoting the validity of study findings and enabling other researchers to replicate them.

CHAPTER 4: FINDINGS

4.0 Introduction

The purpose of this study was to explore the barriers faced by women participating in small-scale mining operations in Zimbabwe. The focus of the research was on the gender imbalances in small-scale mining that remain unresolved, which culminate in women not being fully represented in leadership roles because of male dominance. The underrepresentation of women in decision-making and policy formulation positions in small-scale mining has resulted in systemic discrimination against and exclusion of women from actively participating in decisions that affect their livelihoods and economic fortunes.

The study was inspired by a plethora of factors that have socio-cultural, economic, and legal implications that systemically limit the contribution that women are likely to make in small-scale mining. Empirical literature shows that even if financial assistance is provided to enhance the performance of women participating in small-scale mining operations, its uptake is relatively poor compared to that of men. It stands to reason that women continue to experience financial challenges, especially regarding acquiring small-scale mining claims legally and procuring mining equipment. The perpetuation of challenges that women experience in small-scale mining heightens scepticism about the adequacy of mechanisms that have been put in place to improve the life chances of women in the mineral ore extraction sector of the economy. From this perspective, this analysis looks forward to proposing mechanisms that can be leveraged by women to emancipate them in breaking through the barriers and making a difference in the Zimbabwean economy.

Given the subjective nature of lived experiences and personal accounts, which vary from one person to another, this study adopted a mixed approach, inquiring into the challenges faced by women participating in small-scale mining operations. The ultimate motive behind employing a mixed approach in this study was to capture the real-life experiences of people with lived experiences regarding the complexity associated with operating in small-scale mining, especially for women. The intention of this study was not to generalise the results of the study to the wider population of small-scale miners. Rather, the research aimed to elicit profound insights, perceptions, feelings, and experiences of women directly involved in small-scale mining. It was believed that the ability to unlock these personal experiences as they pertain to operations in small-scale mining can create a basis upon which future research can be operationalised.

The adoption of a mixed approach aimed to explore the lived experiences of women participating in small-scale mining operations, based on personal interactions and observations. The emphasis of the study was placed on a participation-oriented approach, which was more interested in generating human encounters reporting personal experiences to highlight deep insights as they relate to a specific category of people who are endeavouring to achieve success in a potentially lucrative sector of the economy. This approach examined the meanings that people assign to their experiences. It laid the groundwork for the development of deep understanding and symbolism.

This study was premised on the operationalisation of an interpretivist paradigm. The selection of this approach was taken to be essential as it provided credible, transferable, and valid and subjective interpretations. This was achieved through the adoption of a reflexive approach that extracted meanings from the lived experiences of women in these operations in small-scale mining. This study aimed to identify gender imbalances in small-scale mining in

Zimbabwe, to determine the types of challenges faced by women in these operations, and to propose effective coping mechanisms that women can utilise to mitigate the gender imbalances and challenges they come across in small-scale mining.

In selecting operations in small-scale mining in Zimbabwe, this study was aware of the differences between formal and organised mining activities, which are beneficial structures that can be utilised to enhance the life chances of women regarding their participation in mining. The focus of this study was on operations in small-scale mining, especially the extraction of gold, which is highly lucrative in Zimbabwe. The key characteristics of this sector include the relatively liberal entry and exit barriers that have attracted a huge number of participants interested in improving their life chances by engaging in mining activities. In most instances, it becomes challenging to draw the line between small-scale mining centres, artisanal mining activities, and informal mining activities. The apparent lack of clarity in terms of distinction between these operations in small-scale mining is a result of the lack of proper structure from a human capital management perspective that can be leveraged as a reference point to address the challenges and systemic segregation that women come across in the sector.

The organisation of this chapter is such that it begins with the profiling of participants in this study who took part in the study. This is essential to developing an appreciation of the type of people who contributed to this study by articulating the time at which the interviews were done, the age categories of the participants in this study, and the designations of the participants in this study, and the role that the participants played in small-scale mining in Zimbabwe. It was imperative at this stage to ensure that the privacy and confidentiality of personal information shared by the participants in this study were respected by removing any personal information that could otherwise be used to attribute a particular response to a specific respondent. In consideration of this ethical principle, participants in this study were assigned

pseudonyms, numbered from Interviewee 1 to Interviewee 60. Thereafter, the chapter explains the data quality issues regarding trust, which were categorised into credibility, dependability of data, transferability, and conformability of the data generated. These issues were of paramount importance in explaining the extent to which the outcomes of this study can be replicated in a different sociocultural setting, provided a similar approach is adopted.

The demographic profile of participants is analysed to understand in detail the type of participants who contributed to this study. Prior research has demonstrated that demographic factors play a significant role in the active participation of women and the level of activity they participate in in small-scale mining. In this regard, the study taken to be key demographic characteristics that incorporate the age group category, the period of experience and exposure in small-scale mining, and the designation of participants in terms of the role they play either directly or indirectly in small-scale mining. Finally, they started to cognise the level of education, which can be used as a good indicator of the literacy levels of participants in this study. These demographics are the anchor of this study, as they are relevant in promoting the credibility of the results of the study and in validating the outcomes of this study. This emanates from the realisation that the collection of data was able to reach out to the relevant categories of female participants in this study. These provided their personal encounters and valid insights regarding the gender imbalances and challenges that women come across in this operations in small-scale mining in Zimbabwe as a typical developing economic context.

This study was anchored on resolving three main objectives. The attempt to resolve the first two objectives incorporated using structured research instruments, which were distributed to participants in this study for their attention. These questions were closed-ended in nature, which meant that the participants in this study were expected to respond or select responses from the predetermined answers that were given. The measurement of the research instrument

followed the typical 5-point Likert scale. The justification behind the selection of this choice was based on the ease it provided for participants in this study in responding to the questions, and the relative flexibility in analysing structured data using statistical analysis software.

The third research objective incorporated the proposed coping strategies that women participating in small-scale mining operations could implement to improve their life chances, addressing the identified gender imbalances and barriers to income when they attempt to actively participate in these operations. To enable the study to capture the personal accounts of participants in this study, it was considered essential to make use of open-ended questions, which provide greater latitude for participants to openly express their views and opinions. This enabled the generation of rich insights, particularly regarding measures that could be adopted at the policy, institutional, and individual levels, as a mechanism to improve the life chances of women participating in small-scale mining operations.

Ultimately, the intention of this section is to provide a detailed presentation and interpretation of the results of the study that were derived from undertaking interviews with different stakeholders in small-scale mining, hereinafter referred to as small-scale mining in Zimbabwe. The contribution of this chapter to the study is to bring out fresh insights into an already existing area regarding the challenges faced by women as they endeavour to participate in small-scale mining. These insights emanate from a developing societal perspective, which is highly dependent on the returns produced by a driving small-scale mining activity, especially of high-value minerals like gold.

4.1.1 Trustworthiness of data

The trustworthiness of data was of paramount importance in this study, as it reflects the quality of insights that were generated from conducting key informant interviews with individuals who either directly or indirectly interface with women operating in small-scale mining. The trustworthiness of the data reflected the extent of confidence the researcher had in the data regarding its interpretation, and the methods used to ensure quality (Aguas, 2022). The essence of the trustworthiness of data was that it permitted the results of the study to be accepted as a true reflection of the situation regarding the gender-based segregation and challenges that women experience in small-scale mining.

Moreover, ensuring the trustworthiness of data provides a platform through which the results of the study can contribute to the body of literature in a particular field of knowledge and understanding. The observance of trust from the lenses of this chapter was operationalised through a mixed data analysis approach, which placed emphasis on the authentication of the results of the study. This was achieved through a request process of selecting participants in this study who were thought to provide the required insights that could shape our understanding regarding the lived experiences of women participating in small-scale mining operations. The meticulous research process of ensuring trustworthiness in mixed research involved going through extensive data collection, which guaranteed that data represented a true reflection of issues investigated in a particular social context and in the process promoting data saturation. Using the data saturation point approach in the adjudication of the appropriate sample size played a key role in promoting the validity of data, which was incorporated in the evaluation criteria. Moreover, the trustworthiness of data was analysed regarding its credibility, transferability, dependability and conformability.

4.1.2 Credibility

The credibility of data is a measure to enhance trustworthiness through mixed data collection and analysis. The focus on credibility is on the extent to which the outcomes of the mixed study accurately represent the experiences of participants and can be believed from the participants' perspectives. Regarding this study, the credibility of the findings was enhanced through verification with participants in this study, aiming to minimise bias by ensuring that the outcomes are grounded in the personal realities of the participants themselves.

Credibility was enhanced through the incorporation of closed-ended questions, particularly for the first and second objectives, where participants in this study were expected to select predetermined answers based on the 5-point Likert scale of measurement. This is a measurement tool that is prominently used in research. Its incorporation in this study enhanced the credibility of the results of the study. The presentation of participants in this study' demographic data incorporated using frequencies and quantitative data, which contributed towards measures to improve the credibility of study results. The study was able to quantify the number of people who participated in this study and categorise them by age group, level of education, level of participation, and sector experience. Using these descriptive statistical variables, in addition to qualitative and thematic accounts, was measured to promote triangulation and enhance the credibility of the results of the study.

This study culminated in the collection of personal insights of individuals who have direct encounters with women participating in small-scale mining operations or were directly involved in small-scale and artisanal mining activities. It was taken to be essential to ensure that data collected through interviews was credible regarding its accuracy and believability. The credibility of the data used in this study was enhanced by undertaking a pilot study prior

to conducting full-scale interviews with different stakeholders with an interface with small-scale mining. Using a pilot study managed to identify key individuals and participants who contribute to the study in terms of bringing in new insights into issues that are potentially affecting the engagement of females in small-scale mining. The operationalisation of a pilot study provided an option to identify individuals who were thought to provide the required insights with respect to the gender-based challenges that women come across in the confines of operations in small-scale mining in Zimbabwe.

Moreover, the structural make-up of mixed studies relies on the research process and the contributions made by participants. In that regard, the researcher guaranteed the confidentiality of participants in this study and the degree of anonymity. It was believed that participants were willing to share information provided that their anonymity was guaranteed. The ability of this study to maintain the confidentiality of participants played a cardinal role in enhancing the credibility of the results of the study, given that the participants were prepared to freely express their views and opinions without any fear of reprisals.

Leveraging using informed consent served as a strategy to assure the credibility of the results of the study. During the informed consent process, participants were assured that the research's purpose and the data collection process were purely academic in nature, and that no information they shared with the researcher would be disseminated to other organisations or individuals without their express consent.

The inclusion of diverse participants in this study, including government representatives from the Ministry of Mines and Women's Affairs, and mining equipment supply chain partners and women who own small-scale mines, was essential to bringing the required diversity of opinions to the matter under discussion. The study incorporated views

from women directly participating in small-scale mining as a measure to enhance the credibility of the results generated from interviews. The inclusion of diverse participants from various areas of specialisation, who shared an interest in promoting the active engagement of women participating in small-scale mining operations, enabled this study to generate credible results that are not biased towards any one category of participants in this study.

4.1.3 Transferability

Transferability reflects the ability to apply study outcomes to other comparable research and social settings. The essence of transferability is compared to generalisation or external validity as it relates to quantitative studies. From the lens of this study, the ease of generating demographic profiles of participants provided the ability to ensure that the results of the study can be transferred to other research contexts, which enhances the transferability of study outcomes. The provision of quality descriptive insights into the demographic profiles of participants allowed readers to assess the study context, participant profiles, and the environment in which the research was conducted. The significance of presenting demographic information was to explain the specific cultural context and settings in which the study was undertaken. This was instrumental in generating dependability and reliability of results.

The main goal of pursuing this approach towards the gathering data from female participants actively participating in small-scale mining. The study selected eight non-metropolitan provinces in Zimbabwe due to the high intensity of small-scale mining, particularly the extraction of gold ore. The design of this study permitted consideration of the opinions of value chain participants in small-scale mining, who have a national impact on operations in small-scale mining throughout the country. The transferability of current results of the study was reliant on the realisation that the extraction of gold through operations in

small-scale mining is not only confined to eight non-metropolitan Province in Zimbabwe, but is dispersed across the diversity of Zimbabwe. Therefore, the ability of this study to identify and include key operations in small-scale mining value chain partners with a holistic view of the challenges that are faced by women, not only in the selected study area but across the country, helps outcomes of this study to be transferred to other research settings of a similar nature.

Moreover, the active involvement of representatives from government departments and representatives from Zimbabwe's Environmental Law Association improved the transferability of the results of the study from this study. This is because these representatives have a comprehensive appreciation of the obstacles faced by females in small-scale mining, not just in Eight non-metropolitan Province, but throughout Zimbabwe's ten provinces where small-scale mining takes place. This provides the possibility that the results of the study generated from this study may be subject to transferability across other provinces where, on a small scale, mining activities are undertaken, even though there are no direct representatives elected from such areas.

4.1.4 Dependability

The study's original design called for the collection of mixed data through interviews. The researcher eventually resorted to collecting exclusively mixed data through in-depth interviews. This decision stemmed from the realisation that it was nearly impossible to hold online key informant discussions with key participants in the operations in small-scale mining value chain who had a direct interest in the operations of females participating in small-scale mining. This arises from the intensity of pressure of work commitments and, in some cases, network challenges. In addition, the researcher was unable to schedule online key informant

discussions at a convenient time when all participants could actively participate and share their views and opinions on gender issues in small-scale mining.

To enhance the reliability of the results of the study, the study employed semi-structured interviews. These were instrumental in generating personal insights from participants in this study. Using this approach was more convenient, as it provided an opportunity to create a rapport with participants in this study, allowing for the collection of both visible and spoken words that were instrumental in understanding the true intentions of the participants in this study regarding the systemic challenges women experience in small-scale mining. The first two objectives of this study involved the collection of data in a structured manner through the incorporation of closed-ended questions. These types of questions allowed participants in this study to express their level of agreement or disagreement with specific individuals regarding the barriers faced by women participating in small-scale mining operations, and the challenges that they face because of their gender. The choice behind using questionnaire with open-ended questions was arrived at from recognising that some of the participants in small-scale mining might lack enough experience or level of education to clearly articulate issues in a manner that could significantly contribute to this study. In that respect, it was taken to be essential to use closed-ended questions.

The third objective of the study was composed of open-ended questions that provided options for participants in this study to showcase their lived experiences regarding the coping mechanisms that could be employed to mitigate the involvement of females in small-scale mining. Ultimately, the ability of this study to incorporate closed and structured interview questions was believed to enhance the dependability of the data that was collected using the interview. It stands to reason that similar research instruments can be applied in different research settings and come up with comparable search results.

4.1.5 Confirmability

The researcher maintained an objective stance in the entire data collection process. This was meant to enhance the confirmability of data by promoting the neutrality of data collected using in-depth interviews. Neutrality in the data collection process was maintained by the dissemination of the interviews through electronic means. This implied that there was no direct interviewer intervention or bias, which could possibly sway the participants in this study to answer in a certain manner. The distribution of the interviews using electronic means implied that participants in this study could answer the questions at their own convenience, which enhanced the confirmability of the results of the study emanating from the interviews.

Moreover, using a questionnaire with open-ended questions promoted the confirmability of data since a similar research approach could be used in different research settings to confirm and verify the results of the study. In addition, the collection of data using an electronic questionnaire with open-ended questions generated an authentic audit trail on the interview transcripts, views and opinions that were expressed by participants in this study. This contributed towards enhancing the confirmability of data collected using interviews.

4.1.6 Audit trail

The conformability of the results of the study was premised on the creation of an audit trail. This was essential by ensuring that research documents, along with supporting files like raw data and research instruments and notes, and other ethical recordings, were kept securely. This was applied as a mechanism to facilitate the cross-checking and validation of the collected data. The application of annotated notes, which were used in the research process, provided an audit trail for the researcher to verify the information and the development of quotes. Using research notes provided credibility in the audit trail through a demonstration of how decisions

we arrived at. In that respect, independent researchers can use an audit trail to understand the research of choices regarding theoretical and methodological decisions. In addition, the audit trail stipulated the stages that were followed from the onset of the research progress throughout the entire journey up to the establishment of new insights. The entire research process that was used in this study is transparent given that it clearly stimulated the steps that were taken, the methodology that was adopted along with the supporting reporting processes that are open to independent verification.

4.2 Reliability and validity of data

Validity is described as the efficiency, integrity, and accuracy of the research methods employed and the precision in presenting data. Reliability reflects the internal consistency of the analysis taken. The credibility of research was premised on the views presented expressed by participants that were presented in an accurate manner. The measures that were taken to be promote the validity and reliability and credibility of the results of the study incorporated using a transparent and consistent interpretation of data through accurate record keeping. The researcher was engaged in the intense comparison of perspectives of participants in this study with the view of ensuring that different viewpoints were taken to be. The study supported findings with rich and detailed verbatim accounts from participants in this study. Moreover, any chance analysis and interpretation of data was undertaken.

To promote the validity and reliability of the results of the study, the study utilised annotated notes of information with specific dates and times when research activities were undertaken. To reinforce the validity of the results of the study, information collected from interviews and observations was compared to ensure that the results of the study were accurately portrayed and understood from the perspective of the participants in this study.

4.2.1 Potential weakness to the validity of data collection approaches

The detachment of the researcher from the data collection process, achieved through the dissemination of a digital questionnaire with open-ended questions, reduced interviewer bias. However, the interpretation of the results of the study by the researcher is often viewed as a key limitation of qualitative research since it does not support the generalisation of the results of the study and casts doubts regarding validity, reliability and the credibility of outcomes. The researcher lacked control over who completed the interviews, which could pose an interviewee bias. It was possible that some people who fell outside the scope of the unit of analysis in this study would eventually answer the questionnaire with open-ended questions, painting an inaccurate picture of their interactions with women participating in small-scale mining operations. This possible shortcoming was overcome by verifying the responses received through phone calls as a feedback mechanism to ensure that participants understood the questions, and they managed to complete the data collection process without encountering any challenges.

Notwithstanding this, some of the prominent challenges experienced could potentially undermine the validity of the results of the study related to the actual data collection process. This arose through the realisation that some of the targeted participants in this study were later found out not to have an acceptable level of education, so they could not access online resources such as Google Forms to complete the interviews. It was established that some participants in this study were not at ease, with some being sceptical about the possibility of completing the online interviews. To some participants in this study, it was their first time to complete the online survey, and naturally, they were afraid that the information they shared with the researcher could be used to either ostracise or victimise them.

When faced with such circumstances, the researcher had to conduct telephone interviews with such participants in this study in the vernacular Shona language to bring confidence that the purpose of undertaking the research was purely academic. No part of their views and opinions that they expressed in the data collection phase of the research was to be conveyed to any third parties or government departments for commercial gain without their express consent. Even after giving this guarantee to some participants in this study, they expressed their willingness to participate in the study. Some of the prospective participants in this study agreed to participate in the study, but later changed their position or were unable to cooperate with the researcher, which demonstrated a lack of willingness on the part of some participants in this study to participate in the data collection stage of the research.

In response, the researcher was obligated to conduct on-site visits and undertake face-to-face interviews to enhance the response rates for this study. This measure was pursued to mitigate the potential threat to the validity of the results of the study arising from a low response rate. It was realised that, regarding some women participating in small-scale mining operations, the onus was on the researcher to read through the interview questions and interpret them so that the participants in this study could understand the scope of the questions prior to responding to them. This approach to the in-depth interviews required a significant amount of time from the researcher. However, it was imperative to go through this painstaking process, as these participants in this study have a direct interface with the activities that take place in small-scale mining.

4.3 Demographic data of participants in this study

It was critical to include demographic profiles of participants in this study to develop an overview of the type of people who participated in the study. The main demographic

characteristics taken to be in this study included the age groups of the participants in this study, their highest level of education, the organisations they represented, and their experience working with women participating in small-scale mining operations.

4.3.1 An overview of interviewees who participated in this study

This study engaged participants in this study with different levels of experience in small-scale mining. These participants in this study were drawn from various age groups, educational achievement levels, and designations. The data collection took place over three months, from July 3, 2024, to September 22, 2024. A total of 60 valid completed questionnaires with open-ended questions were received through the combined use of electronic and physical data collection mechanisms, utilizing an interview schedule. The contact methods that were used to reach out to participants included the distribution of an electronic version of the questionnaire with open-ended questions that was accessible from the survey heart link <https://surveyheart.com/form/668507ba9836f17672e591d1>. Using a survey heart link provided convenience to reach out to participants in this study in different areas almost simultaneously without disrupting the workflows. Using an electronic version of the questionnaire with open-ended questions aligned with the ethical principle of justice, ensuring that the participants had time to go through the questions prior to the interview. This approach to data collection process did not compromise the life chances of women participating in small-scale mining operations when they participated in a survey. In essence, the sending the questions via electronic channel was convenient to respondents. This provided them with the freedom to express their views and opinions in complete confidence. However, some participants in this study expected to respond in person rather through the use of electronic channels. These participants in this study were provided with the same to suit their preferences.

The results presented in this section of thesis were collected from a total of 60 questionnaires with open-ended questions, which were completed by participants who participated in the study. The number of participants in this study who participated in the study, regarding the date the questionnaire with open-ended questions was completed, the age group of the interviewee, their designation and assigned participant number are presented in Table 2.

Table 2

List of interviewees

Date of interview	Age	Designation	Participant number
03 July 2024	36 to 40	Small-scale mining owner	Interviewee 1
	31 to 35	Small-scale mining owner	Interviewee 2
	46 to 50	Small-scale miner	Interviewee 3
	More than 55	Small-scale mining owner	Interviewee 4
	Less than 25	Small-scale miner	Interviewee 5
04 July 2024	31 to 35	Small-scale mine employee	Interviewee 6
	51 to 55	Small-scale mining owner	Interviewee 7
	41 to 45	Small-scale mine employee	Interviewee 8
	41 to 45	Small-scale mine employee	Interviewee 9
	46 to 50	Small-scale mining owner	Interviewee 10
06 July 2024	46 to 50	Small-scale mining owner	Interviewee 11
10 July 2024	31 to 35	Small-scale mine employee	Interviewee 12
	41 to 45	Small-scale miner	Interviewee 13
14 July 2024	More than 55	Small-scale mining owner	Interviewee 14
16 July 2024	26 to 30	Small-scale mine employee	Interviewee 15
	41 to 45	Small-scale mine employee	Interviewee 16

18 July 2024	More than 55	Small-scale miner	Interviewee 17
24 July 2024	41 to 45	Small-scale mine employee	Interviewee 18
	36 to 40	Small-scale mine employee	Interviewee 19
	Less than 25	Small-scale mine employee	Interviewee 20
25 July 2024	41 to 45	Small-scale miner	Interviewee 21
	46 to 50	Small-scale miner	Interviewee 22
28 July 2024	More than 55	Small-scale miner	Interviewee 23
	31 to 35	Small-scale miner	Interviewee 24
30 July 2024	36 to 40	Small-scale miner	Interviewee 25
02 August 2024	36 to 40	Small-scale mining owner	Interviewee 26
	31 to 35	Small-scale miner	Interviewee 27
	41 to 45	Small-scale miner	Interviewee 28
	36 to 40	Small-scale miner	Interviewee 29
	36 to 40	Small-scale miner	Interviewee 30
03 August 2024	26 to 30	Small-scale miner	Interviewee 31
	36 to 40	Small-scale mining owner	Interviewee 32
	51 to 55	Small-scale mining owner	Interviewee 33
	41 to 45	Small-scale mining owner	Interviewee 34
05 August 2024	41 to 45	Small-scale mining owner	Interviewee 35
07 August 2024	41 to 45	Small-scale mining owner	Interviewee 36
	46 to 50	Small-scale mining owner	Interviewee 37
	46 to 50	Small-scale mining owner	Interviewee 38
	36 to 40	Small-scale mining owner	Interviewee 39
	More than 55	Small-scale mining owner	Interviewee 40

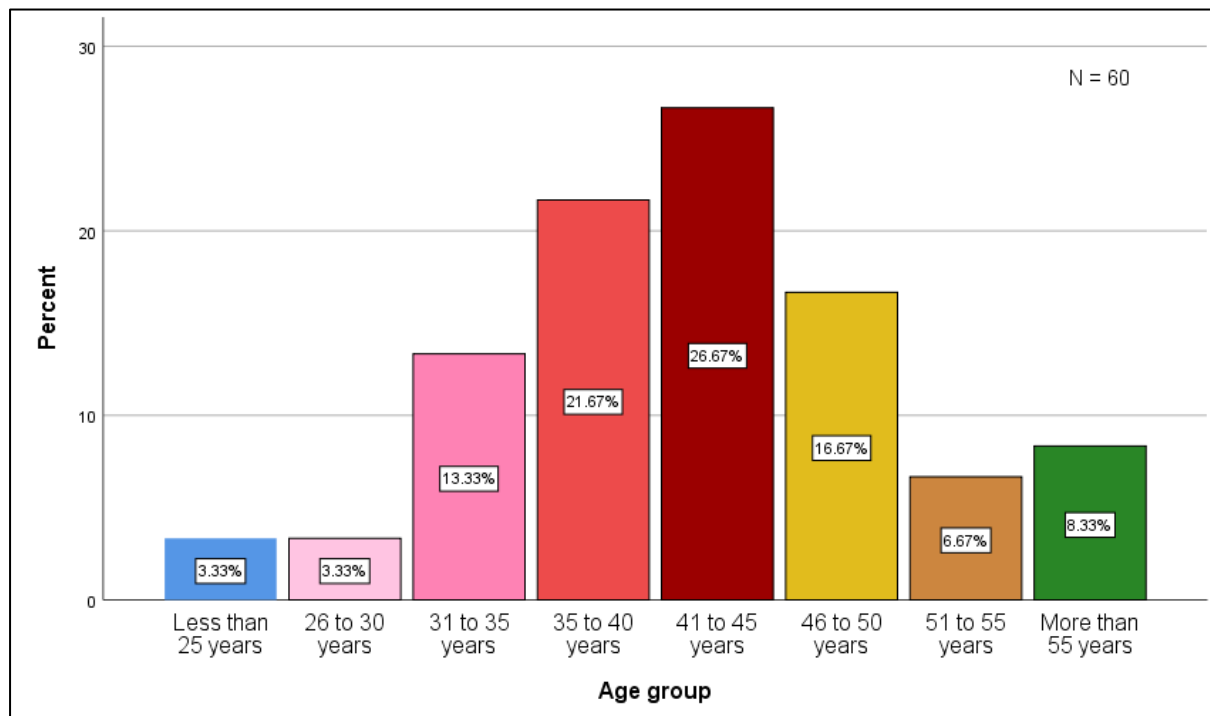
13 August 2024	46 to 50	Small-scale mining owner	Interviewee 41
	46 to 50	Small-scale mining owner	Interviewee 42
	31 to 35	Small-scale miner	Interviewee 43
	36 to 40	Small-scale miner	Interviewee 44
	36 to 40	Small-scale miner	Interviewee 45
	36 to 40	Small-scale mining owner	Interviewee 46
15 August 2024	31 to 35	Small-scale mining owner	Interviewee 47
18 August 2024	31 to 35	Small-scale mining owner	Interviewee 48
21 August 2024	51 to 55	Small-scale miner	Interviewee 49
2 September 2024	41 to 45	Small-scale miner	Interviewee 50
9 September 2024	41 to 45	Small-scale miner	Interviewee 51
10 September 2024	41 to 45	Small-scale miner	Interviewee 52
12 September 2024	46 to 50	Small-scale mining owner	Interviewee 53
16 September 2024	36 to 40	Small-scale mining owner	Interviewee 54
	41 to 45	Small-scale mining owner	Interviewee 55
	51 to 55	Small-scale mining owner	Interviewee 56
18 September 2024	46 to 50	Small-scale mining owner	Interviewee 57
22 September 2024	36 to 40	Small-scale mining owner	Interviewee 58
	41 to 45	Small-scale mining owner	Interviewee 59
	41 to 45	Small-scale mining owner	Interviewee 60

As shown in Table 1, the results of the study represent interview transcripts generated from a cross-section of participants in this study with a special interest in the welfare of women directly involved in small-scale mining in Zimbabwe. The emphasis in distributing the

questionnaire with open-ended questions was on the extraction of gold ore, given its high market value and ready markets, making it an ideal mineral that attracts a significant number of small-scale miners. The insights related to the three anchor objectives of the study, which revolved around the generic barriers which showcase the personal encounters of women met participating in small-scale mining, the challenges that women have met in small-scale mining because of their gender along with the possible coping measures women might employ to circumvent these barriers and challenges and improve their chances of success in their endeavours to operate in the small-scale gold mining activities.

4.3.2 Age group

The age group was taken to be a key demographic characteristic in this study because it reflected the level of maturity of participants in understanding the complexities and intricacies surrounding small-scale gold mining operations. This study included individuals who were above the legal age of consent, implying that participants were 18 years of age or older. First, there was no need to include children under the age of 18, as the focus of this study was on economically active women above the legal age of 18 to showcase their views and opinions regarding the obstacles they faced in small-scale mining in Zimbabwe. Figure 1 illustrates the key results of the study regarding the age group of the participants in this study.

Figure 1*Age group*

As shown in Figure 4.1, the eight categories of age groups taken to be in this study were well-represented among the participants. The age categories of participants included those who were less than 25 years old but greater than 18 years old, and those who were more than 55 years old. The most prominent age group, comprising 26.67% of the participants in this study, was the 41- to 45-year age group. These are mature participants in this study who have economic and family responsibilities that necessitate their inclusion in economic activities associated with small-scale gold mining.

The least prominent age groups were participants below the age of 25 years but above 18 years and those between 26 and 30 years, which were represented by 3.33% of participants in this study. The results of the study regarding the age group of participants demonstrate the diversity of views and opinions related to age and maturity. This showcases the likely period

of exposure regarding activities that take place, and familiarity with some of the most prominent challenges that females face in small-scale mining. The insights regarding the age group of participants clearly outline that involvement in small-scale mining may not be inclined towards a certain age group, since people in different categories of age were found to either directly participate in small-scale mining or have an indirect influence or interest in the processes in small-scale mining.

The incorporation of age as a key demographic determinant of the life chances of women participating in small-scale mining operations is not only peculiar to this study, since age was taken to be in previous studies. Participants in this study were in the economically active working groups, a phenomenon that is similar to a study by Buor *et al.* (2019) which incorporated women in the working class, but they are facing formal employment challenges, which led them into artisanal mining. In terms of the scope of participants in this study, this study is distinguished from the works of Gonzalez *et al.* (2019) Those who focused on the risk of mercury exposure in the artisanal mining activities in Peru were women between the ages of 18 and 49. Other studies, like the works of Mwandiringana and Ye (2023) focused on males between 16 and 40 as the key participants, as they are more virile and physically fit to perform in small-scale mining in Gwanda in the Matabeleland North Province in Zimbabwe.

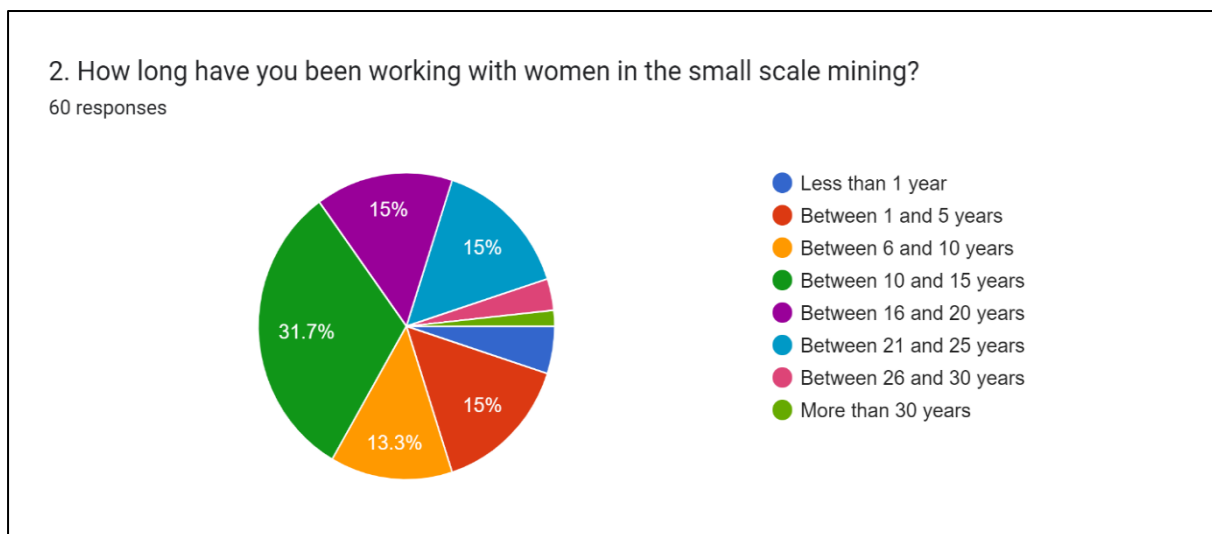
4.3.3 Period of working in small-scale mining

The span of working experience in small-scale mining was used to assess participants in this study's familiarity with the sector's intricate processes. An understanding of this process is instrumental in improving the life chances of women as they navigate the complexities to enhance their social and economic conditions through the earnings generated from small-scale gold mining activities. The periods taken to determine participants in this study's familiarity

with the operations of small-scale gold mining activities ranged from less than one year of exposure in the sector to more than 25 years of working with women or actively involved in small-scale gold mining. Figure 3 illustrates the results of the study regarding working experience in small-scale mining.

Figure 2

Period of working females participating in small-scale mining



The results of the study as presented in Figure 3 showcase a scenario where the most prominent periods where women have been exposed to small-scale gold mining range between 10 and 15 years, as showcased by 31.7% of participants in this study. Possible explanations for this prominence in this time might be related to the change in the governance structure in Zimbabwe and its emphasis on women empowerment and emancipation under the economic and resource beneficiation mantra that emphasised in on increased inclusion and participation of women in mainstream economic activities. This explains why most women have in the between 10 and 15 years been actively involved in small-scale mining as opposed to previous years. These participants in this study shared their lived experiences on the systemic hindrances that women participating in small-scale mining operations face over the past decade and a half.

The results of the study reflected in Figure 2 indicate that 15% of participants have been involved in small-scale mining either directly or indirectly between the past 16 to 20 years. Insights from these participants in this study are of significance to this study since they can articulate varying economic policies that were implemented in the previous administration led by former President Mugabe and the second republic led by President Mnangagwa regarding mechanisms that were enforced to promote active involvement females participating in small-scale mining. The existing literature shows that women experience systemic challenges in their quest to partake in small-scale mining which is related to constrained access to resources (Buhai & van der Leij, 2023).

This study included a fair share of participants in this study who had between 16 and more than 30 years of exposure in small-scale mining. Their insights are instrumental in this study, as they tend to demonstrate the tenacity of women operating in small-scale mining and critical success factors that support their sustainability in the perceived predominantly male industry.

The realisation that the study was able to attract participants in this study with diverse experiences in small-scale mining enhances the value that is generated by the study regarding the lived experiences of women participating in small-scale mining operations. A similar approach was used by Kan and Klasen (2021) on the lived experiences of women in Africa and South East Asia. Furniss (2022) utilised a related approach to understand the lived experiences of women in artisanal mining in the Democratic Republic of the Congo. Insights from a study by Stewart *et al.* (2020) highlight that compared to women, men have prolonged experience, which has improved their competencies in artisanal mining and enhanced their earning capacity to the disadvantage of women. Arthur-Holmes *et al.* (2023) proposed that women in artisanal

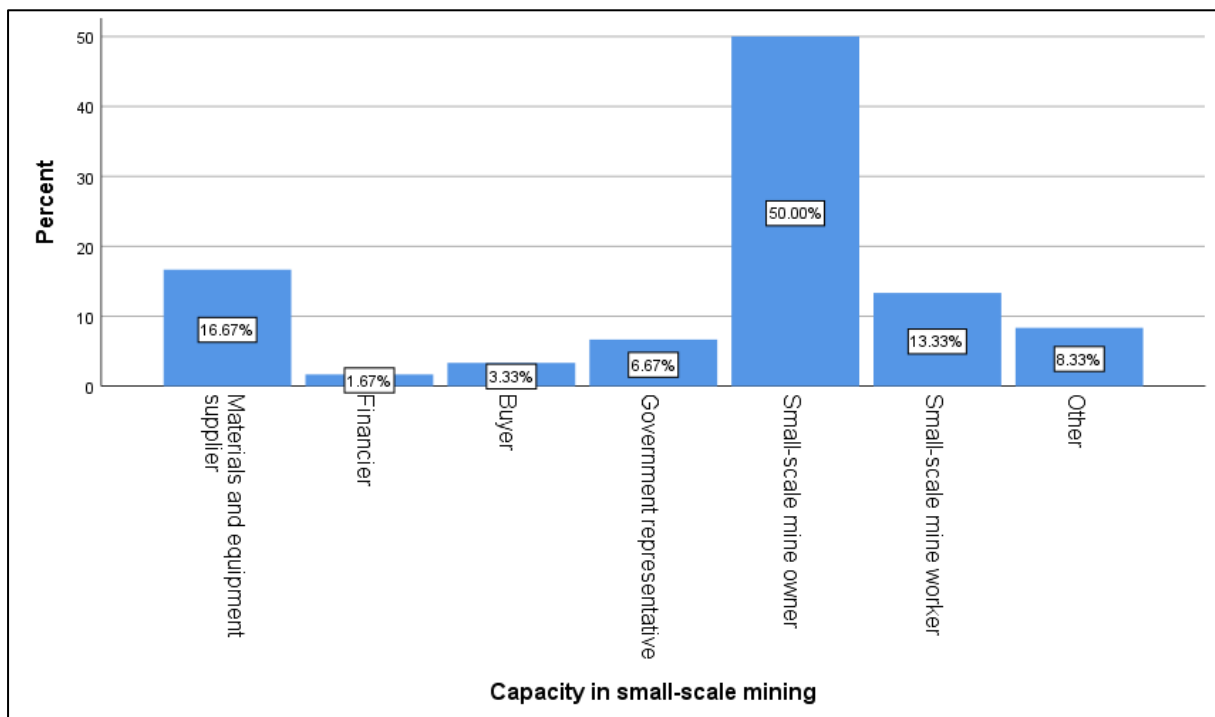
mining in Ghana have an influential position to negotiate better remuneration due to their diverse experience.

4.3.4 Designation of participants in small-scale mining

It was taken to be essential to reflect on the designations of participants in this study regarding their interests in small-scale mining. The results of the study are reflected in Figure 3.

Figure 3

Designation of participants in small-scale mining



Most participants in this study, who comprised 50%, indicated that they were small-scale mining owners. These were women who owned mining claims. Their dominant representation in this study is pertinent in validating the study's outcomes, as they are central to the development of mechanisms to assist other women in actively participating in mining activities with minimal hindrances. The predominance of women who owned operations in

small-scale mining in the study is crucial in understanding the gender discourse and for advocating for a government that might restructure the state of the Zimbabwean operations in small-scale mining regarding policy prescriptions.

Current results of the study corroborate with previous literature where participation in artisanal mining has prominently featured women as active participants, as in the research by Adomako and Hausermann (2023), while Shagdarsuren and Purevjav (2022) recognised that even if women are underrepresented in artisanal mining, they can improve their life chances through participation in the sector.

This study found that 16.67% of participants indicated they are materials and equipment suppliers who play a pivotal role in the small-scale mining value chain, providing various forms of support to the sector. The literature has isolated constrained access to resources as a key stumbling block to the active inclusion of women in artisanal mining. The inclusion of material suppliers in the study was justified by the existing literature, which stated that women frequently faced barriers in accessing the requisite mining equipment (Sasikala & Sankaranarayanan, 2022; Valadares et al., 2024). Hence, materials and equipment suppliers gave critical insights into whether the barriers that women experience in artisanal mining are related to their access to key mineral ore extraction resources.

Government representatives comprised 6.67% of the participants in this study in the study. Their inclusion was justified, as they are the custodians of the legal environment and the first port of call for women participating in small-scale mining operations to reach out to when advocating for favourable policy shifts that support their active participation in this sector. Literature suggests that advocating for the legal recognition of women's participation in artisanal mining has been effective in reducing gender-based discrimination (Furniss, 2022).

Related insights were shared by the works of Ibrahim *et al.* (2020) who specified that advocating for the government was essential in improving workplace safety and reducing occupational hazards that are stacked against women's involvement in small-scale mining. In this respect, government representatives provided a policy perspective on mining activities from the perspective of existing and prospective mechanisms to address the hindrances faced by women participating in small-scale mining operations.

The study included 13.33% who were small-scale mining workers. These participants in this study were directly involved in the various activities in small-scale mining. Their predominant activities include peripheral roles such as fetching water, preparing food, providing clothing, and allied services, and a variety of other commercial activities arising from the hive of economic activity brought about by proximity to small-scale mining claims. These women are not allowed to be participating in the actual mineral ore extraction activities due to the existence of a complex web of socio-cultural and economic considerations. These views resonate with related insights that were shared by the works of Adomako and Hausermann (2023) where it was highlighted that women are not permitted to mine as they lack the strength of men. This gives credence to the efficacy of the biological theory in small-scale mining which state that the life chances of women participating in small-scale mining operations are determined by their sexual orientation as opposed to their capacity to contribute to the sector (Nuralievich, 2022).

Overall, the inclusion of different categories of participants in this study in the interviews brings out the required diversity necessary to have a holistic appreciation of the obstacles that females met in small-scale mining through looking at them from different perspectives. A similar approach was used in a study by Shagdarsuren and Purevjav (2022),

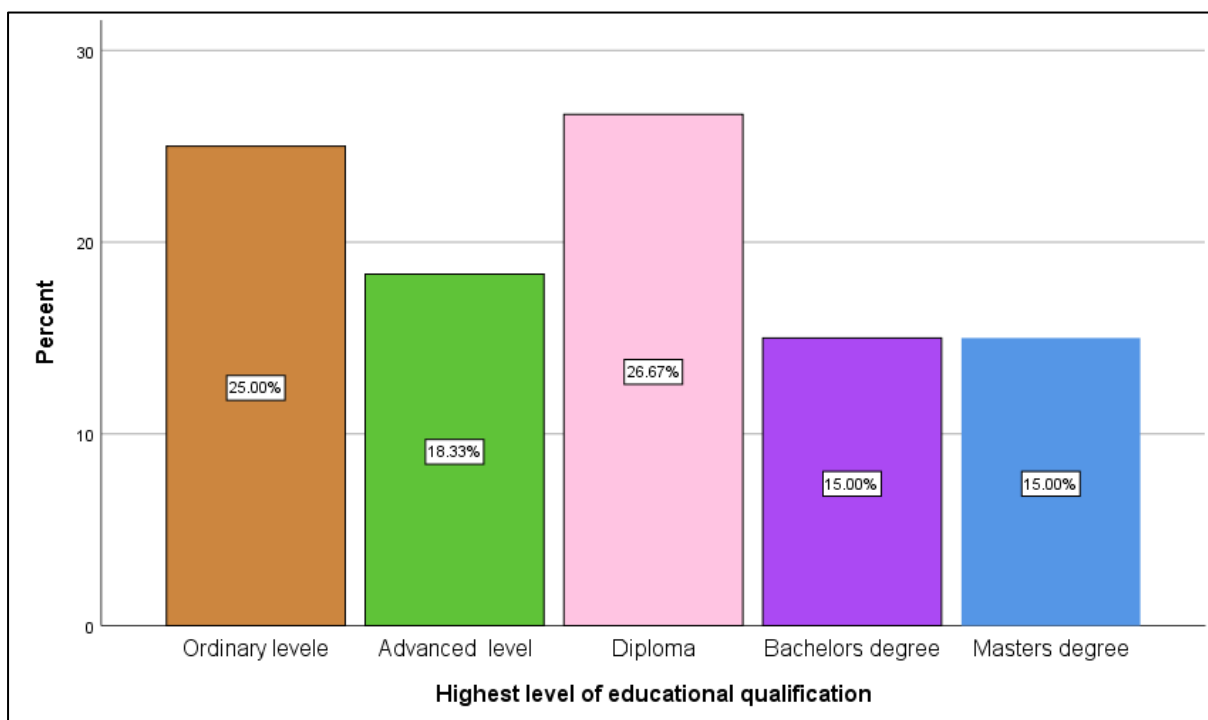
where both men and women were included in a study focused on the opportunities framework for women in artisanal mining in Ethiopia.

4.3.5 Highest educational achievement

This study placed a high value on the participants' educational background. Education primarily determines an individual's literacy in terms of their level of appreciation for what happens in their immediate environment, and the likelihood of such events affecting the sustainability of activities that occur. Figure 4 depicts the results of the study in terms of the highest level of educational attainment of the study's participants.

Figure 4

The highest level of educational qualification



Preliminary results of the study, as reflected in Figure 4, indicate that many women who actively participate in small-scale mining have relatively lower levels of education, with 28.6% indicating that they hold a diploma as their highest level of educational qualification.

Operating in small-scale mining is not associated with exceptional skills, competencies, or educational attainment, which explains why many participants in this study had lower levels of education. The works of Adomako & Hausermann (2023) show that the prevailing patriarchal societal value, which gives preferences to the child, has limited access to education for most women, affecting their chances of achieving success in small-scale mining

Nevertheless, as shown in Figure 4, 16.1% of participants in this study reported holding a Master's degree as their highest educational achievement. These participants in this study were mainly representatives from government departments such as the Ministry of Mines, the Ministry of Women Affairs and small-scale mining value chain partners who provide a variety of financial and material assistance to females participating in small-scale mining. Insights from these knowledgeable individuals were of paramount importance to the trajectory of this study, as they proposed key coping strategies that could potentially enhance the competitiveness and positioning of females in small-scale mining in eight non-metropolitan provinces. The active participation of knowledgeable participants in this study in the study is instrumental in dealing with the lack of opportunities for women on account of their lack of exposure in the academic field, which limits their technical and operational viability in small-scale mining (Buss *et al.*, 2019).

Other participants in this study reported varying levels of educational attainment, ranging from advanced degrees to diplomas and bachelor's degrees. In the final analysis, it can be stipulated that the greater proportion of participants in this study demonstrated higher levels of education, which enhanced the validity of the results of the study regarding the literacy and comprehension they showed in understanding the key aspects of this study regarding the obstacles that females met in small-scale mining in eight non-metropolitan provinces.

4.4 Results

This section provides an overview of the results obtained through interviews with a diverse range of participants in this study who have an interest in women's engagement in small-scale gold mining. The structure of the presentation of results follows the order of the research objectives and the way each objective was addressed during the data collection process. Therefore, results are presented and then analysed under each of the three objectives of the study. This section aims to derive key insights and highlight new perspectives on the systemic challenges faced by women interested in actively participating in the small-scale extraction of gold ore.

4.5 Objective 1: Barriers to women's progress in small-scale mining

The emphasis of the first objective was on the barriers that may constrain and hinder the active participation of women in gold extraction or operations in small-scale mining in Zimbabwe. The key barriers that fell under the purview of this objective included the lack of immovable property rights for women, challenges in accessing finance, the presence of rigid gendered cultural norms, limited technical skills and competencies relevant to operations in small-scale mining, access to requisite mining equipment, and legislative hurdles.

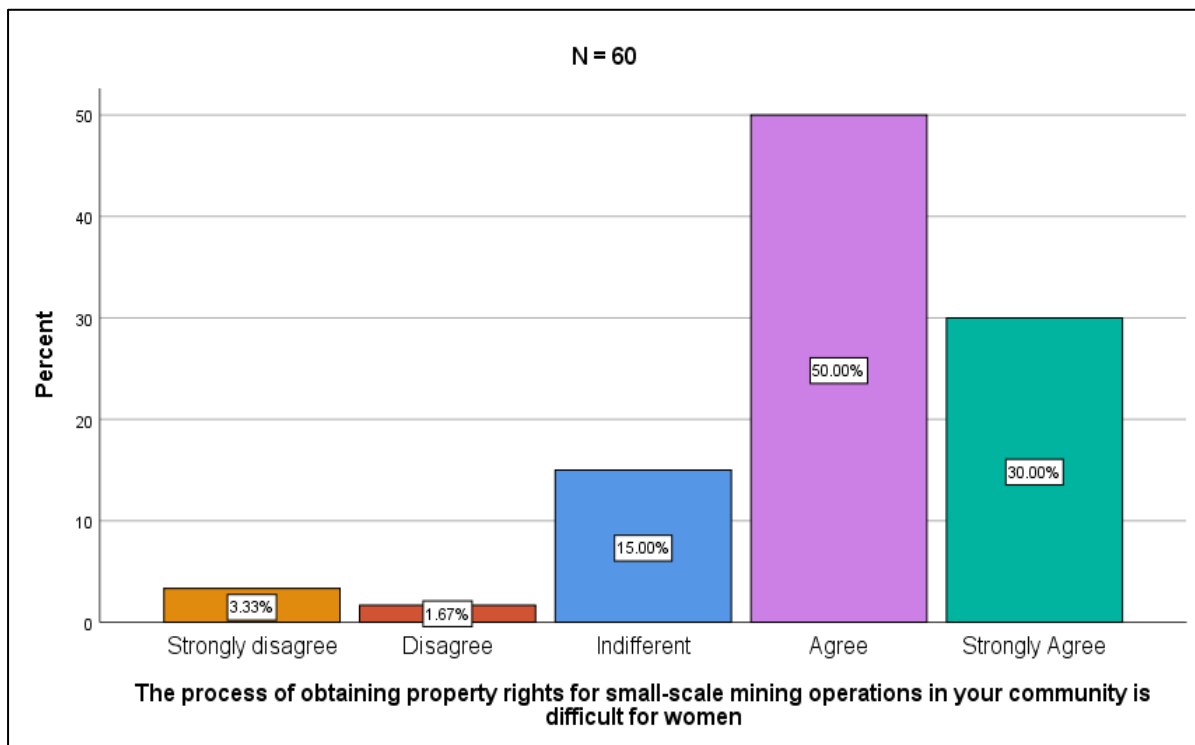
4.5.1 Immovable property rights for women

Regarding challenges in obtaining immovable property rights for women, this study established that one of the prominent barriers females faced in their active involvement and participation in small-scale mining was related to challenges in owning and controlling property rights. These results of the study are aligned with the social conflict theory, which speculates the imbalance of power between men and women. The results of the study

concerning the intricate processes involved in owning immovable property rights in small-scale mining are reflected in Figure 5.

Figure 5

Immovable property rights



Most participants in the interview (50%) agreed that the processes of obtaining immovable property rights for women who want to be financially participating in small-scale mining were cumbersome. The results of the study indicate that most participants in this study believed the complex and legally intricate process of obtaining immovable property rights for operations in small-scale mining in their communities was particularly challenging for women. The complex cultural and legal processes related to the assigning of immovable property rights to women act as a deterrent to the active involvement and participation of women in small-scale mining operations. The lack of immovable property rights, especially for women, has a significant cultural legacy in a Zimbabwean patriarchal society where male heirs are accorded

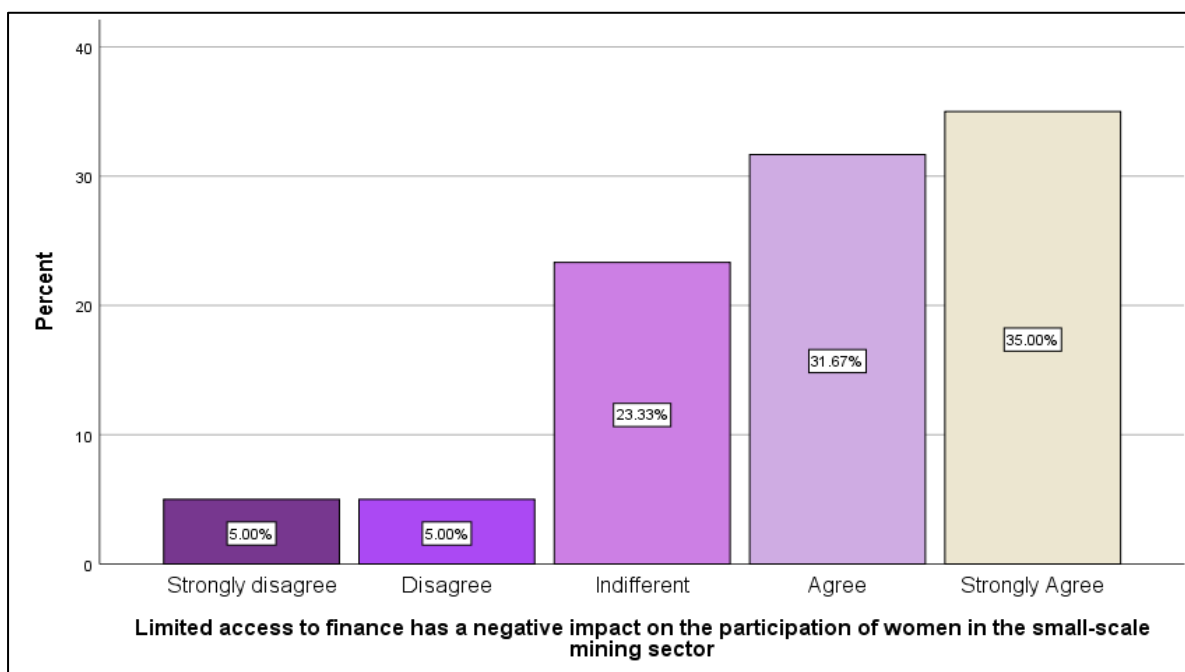
the privilege to inherit wealth in the family. This aligns with the social conflict theory of the lack of balance of power based on gender. Such a scenario affects the active participation of women in economic activities that incorporate small-scale mining and agro-based activities tied to financial returns.

4.5.2 Access to finance

The study was interested in ascertaining the relative influence that access to finance has on the proclivity with which women can succeed in small-scale mining. Outcomes of the research appear to suggest that the failure to have control of property and land rights creates additional challenges for women in terms of access to finance. The results of the study regarding barriers that females met in accessing finance are showcased in Figure 6.

Figure 6

Access to finance



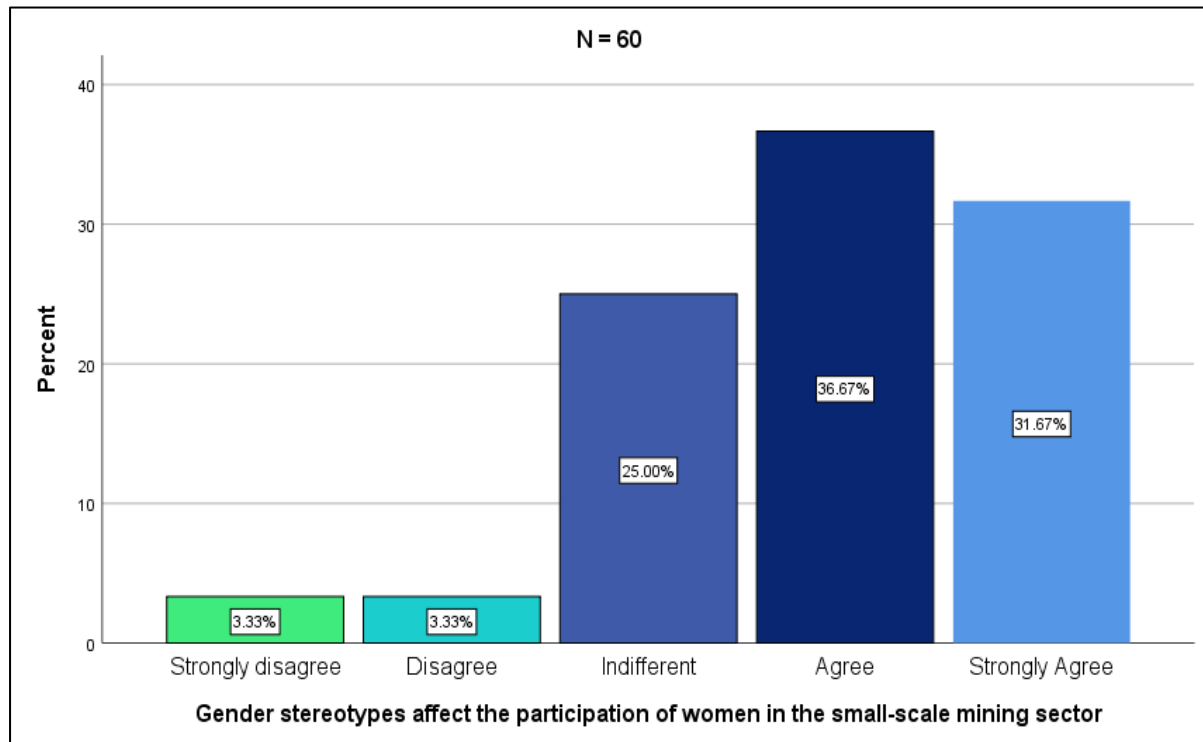
Most participants in this study, who made up 35%, agreed with the opinion that having limited access to finance negatively affects women's active participation in small-scale mining.

Being in an underprivileged position regarding access to immovable property rights cripples the ability of women to access finance, particularly where collateral security is demanded is a precondition for the financial sector to provide lines of credit for funding operations in small-scale mining. Zimbabwe has a multi-tier financial system composed of commercial banks, microfinance institutions, and moneylenders. Each of these participants in the financial system requires some level of collateral security or a guarantee prior to disbursing funds, especially to women, to ensure that they will be able to recoup their initial principal amount lent, along with additional interest, from women borrowers.

The results of the study from some participants in this study indicated that access to finance was not a challenge for them. Those who raised such opinions made up 10% of participants in this study who either strongly disagreed (5%) or disagreed (5%) with the idea that limited access to finance has a negative impact on the active participation of women in small-scale mining operations. These views are attributed to experienced women small-scale miners who have managed to create lines of credit and have adequate internally generated funds to bankroll their revenue and capital operations without having to resort to the financial sector for additional assistance. The results of the study related to the access to finance are linked with the main insights from the gender schema theory which focuses on men as strong, independent, and aggressive, whereas women are seen as sentimental, submissive, and delicate.

4.5.3 Gender stereotypes

Gender stereotypes are considered rigid gendered cultural norms that assign specific roles and responsibilities to women regarding their involvement in small-scale mining. Research insights regarding rigid gendered cultural norms are shown in Figure 7.

Figure 7*Rigid gendered cultural norms*

Most participants in this study, comprising 36.67%, believed that prevailing rigid gendered cultural norms negatively influenced females' active involvement in small-scale mining. These stereotypes are related to the biological make-up of women, who are perceived as the weaker sex, making them inadequate to participate in small-scale mining actively. This perspective is aligned with the biological theory that view women as a weaker sex. A key observation from the small-scale mines visited by the researcher during data collection revealed that they are scantily mechanised, leading to most activities being menial. These observations appear to confirm the key insights raised in the gender biological theory of development, which specifies that roles are assigned based on one's gender.

A minute segment of participants in this study either disagreed or strongly disagreed with the view that rigid gendered cultural norms hindered women's participation in small-scale

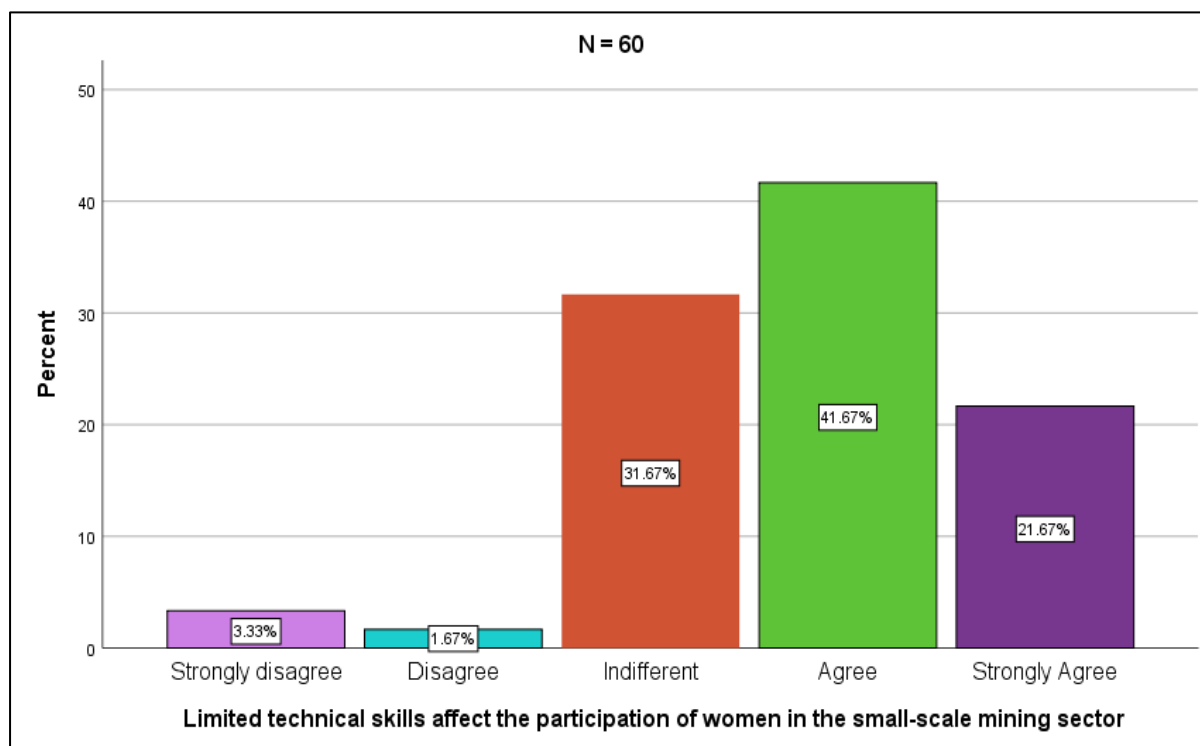
gold mining activities. These perspectives are attributed to women who have managed to break through the glass ceilings and glass cliffs that potentially deter the upward progression of women in typically predominantly male sectors of the economy, such as mining. Overall, the results of the study reflect that rigid gendered cultural norms have a negative effect on the active participation of women in small-scale mining operations, given that most participants in this study either agreed or strongly agreed with this construct.

4.5.4 Limited technical skills and competencies

Effective participation of women in small-scale mining operations demands that they possess a unique set of physical and technical skills and competencies. Figure 8 shows the results of the study regarding the opinions of participants regarding the technical skills and competencies of women and their involvement in small-scale mining.

Figure 8

Limited Technical Skills and competencies



The results of the study presented in Figure 9 depict a scenario in which a substantial number of women were found to lack the technical skills and competencies necessary to operate and participate effectively in small-scale mining. These views were expressed by 41.67% of participants in this study, who agreed that women come across challenges in participating in small-scale mining due to their lack of technical skills and competencies. Operations in small-scale mining are currently scantily mechanised, which demands the possession of certain physically demanding skills and competencies to engage actively in rewarding activities in the sector.

The realisation that women have limited technical skills and competencies does not literally imply that they are incapable of contributing to the small-scale gold extraction sector. It means that the skills and competencies demanded by small-scale enterprises concerning their structural makeup might be inadequate or incompatible with those that women possess. This has more often confined women to occupying peripheral roles that are not strategic to the sustainability of operations in small-scale mining.

Some of the operational and strategic skills and competencies required in small-scale mining include the ability to hoist down narrow mining shafts, often using rudimentary instruments. The ability to demonstrate tenacity and resilience in working in confined workspaces for prolonged periods. Some of these technical skills and competencies were found to be incompatible with those possessed by women, resulting in their relegation to activities that may not generate adequate income, which can be taken to be a form of wage differential between women and those participating in various operations in small-scale mining.

Overall, the results of the study indicate that most participants in this study either agreed or strongly agreed that limited technical knowledge among women participating in small-scale

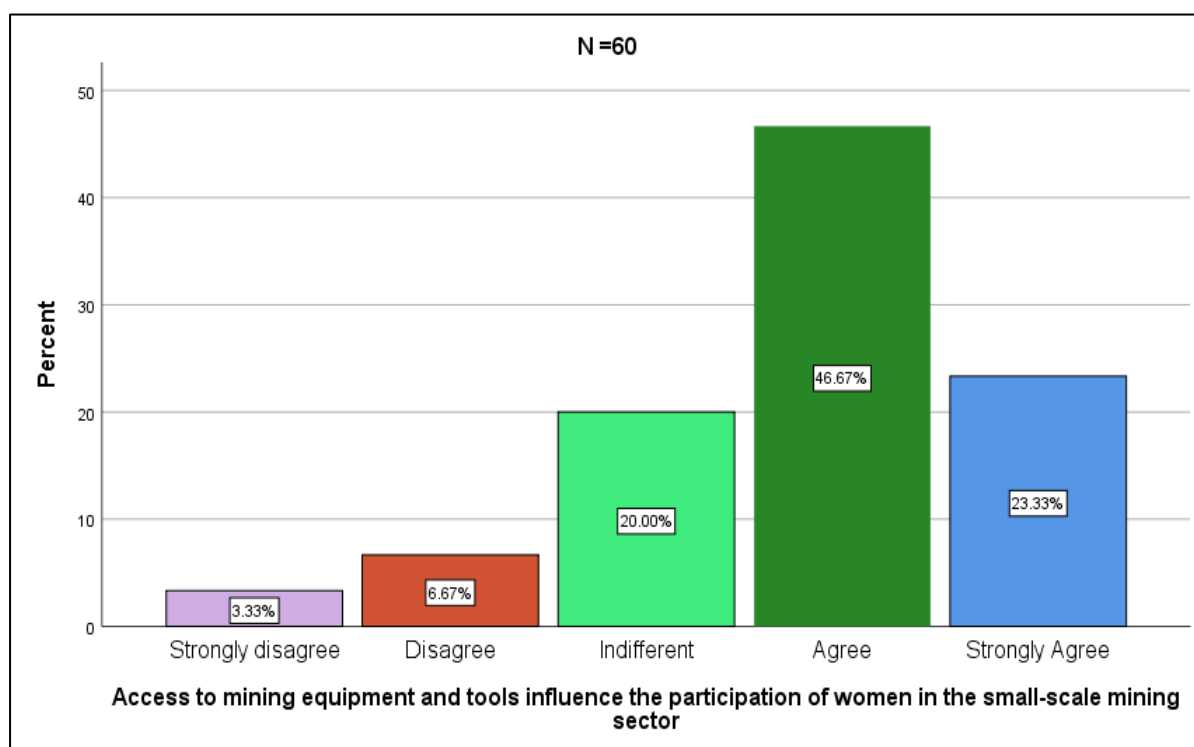
mining operations affects their participation in the small-scale mining activities. It appears that limited technical skills and competencies are a key barrier to women's active involvement in small-scale mining operations.

4.5.5 Access to mining tools and equipment

The notion of access to mining tools and equipment follows a long transmission mechanism, which is tied to the socio-cultural and economic historical legacy of prejudice against women concerning ownership of immovable property rights. The results of the study regarding access to mining equipment and tools are presented in Figure 9.

Figure 9

Access to mining equipment and tools



Most participants in this study (46.67%) agreed with the position that access to mining equipment and tools influences the active participation of women in small-scale mining operations. The challenges that women experienced in accessing specific mining equipment

can be related to their lack of collateral security due to cultural constraints in controlling the means of production, such as having control over immovable property. As such, most women find themselves on the receiving end when it comes to properly capacitating their operations through the acquisition of relevant mining equipment essential to improving the scalability of their operations in Zimbabwe.

These outcomes are notwithstanding the 3.33% of participants in this study whose opinions suggest that access to mining tools and equipment does not affect women's proclivity for active engagement in small-scale mining. These views are attributed to women who are well-established in small-scale mining and do not come across challenges in accessing the requisite equipment to scale up their mining activities. Overall, the results of the study suggest that access to mining equipment has a negative influence on the active participation of women in mining activities in Zimbabwe. However, a small segment believes that access to mining equipment may not affect the active involvement of women in small-scale mining operations in Zimbabwe.

4.5.6 Legal frameworks of ownership of immovable property by women

The current legal framework regarding ownership of land and other immovable property by women was recognised as a key barrier that potentially constrained the involvement of women in small-scale mining operations. The results of the study regarding the influence of legal frameworks of ownership of immovable property by women and their involvement in small-scale mining are shown in Figure 10.

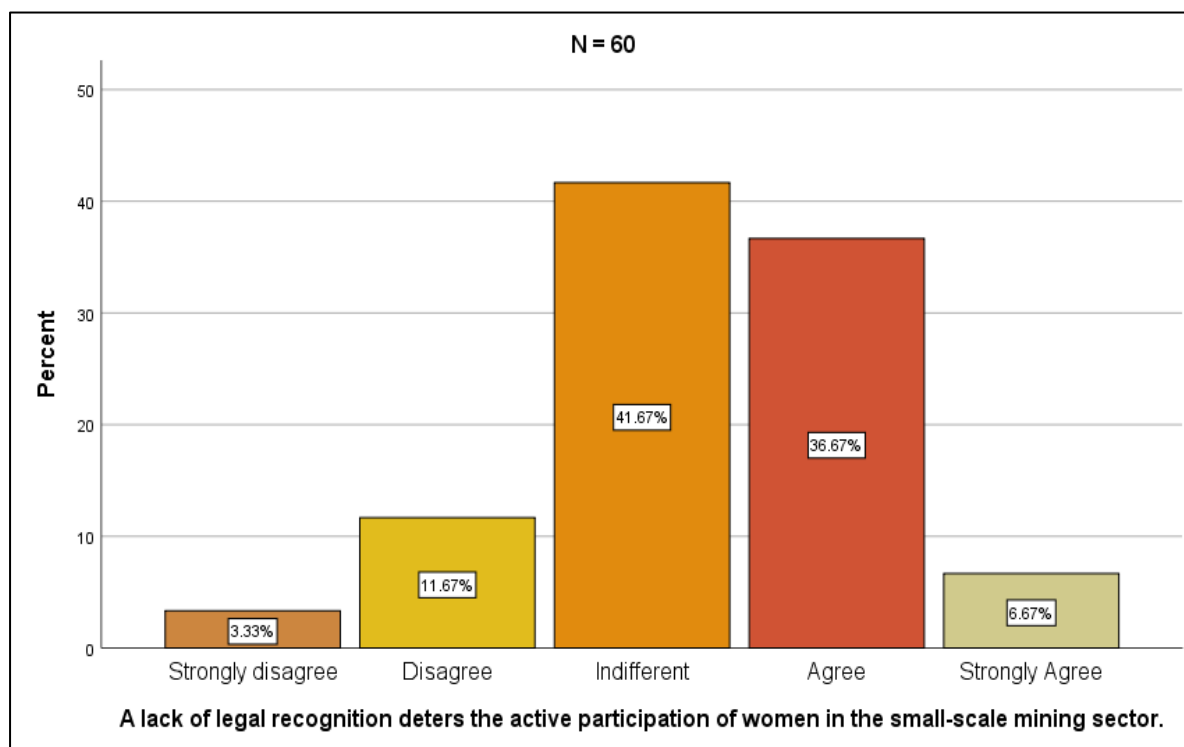
Figure 10*Legal recognition of women*

Figure 11 indicates that around 36.67% of participants in this study appear to agree with the position that scant legal recognition deters the active involvement of females in small-scale mining. On the other hand, a relatively higher proportion of participants in this study (41.67%) were undecided about whether the lack of legal recognition has an impact on women participating in small-scale mining. These participants in this study are likely unaware of the available legal provisions which can be utilised by women participating in small-scale mining operations to improve their economic and financial chances in participating in small-scale mining. Ultimately, most participants in this study believed weak legal recognition provisions influence the legal status of women regarding their participation in the sector.

The key barriers that fall under the purview of this objective include the lack of immovable property rights for women, challenges in accessing finance, the presence of rigid

gendered cultural norms, limited technical skills and competencies relevant to operations in small-scale mining, access to requisite mining equipment, and legislative hurdles.

The central thesis arising from the first objective suggests that women with a cultural background of prejudice face systemic challenges. This stems from the realisation that the inability of most women to control immovable property rights is the root cause of a multitude of challenges they face in small-scale mining. A sizable number of women are unable to access lines of credit from the financial sector due to their inability to provide acceptable collateral security. Additionally, the unique operations of the small-scale sector, which require skills and competencies that a sizable number of women lacks, limit their chances of success in small-scale mining. This is in addition to legislative challenges in awarding mining claims to women, and the inaccessibility of the requisite mining tools and equipment, which further constrain the chances of women making a significant contribution to the sustainability of their small-scale mining ventures.

4.6 Objective 2: Gender-based challenges experienced by females in mining

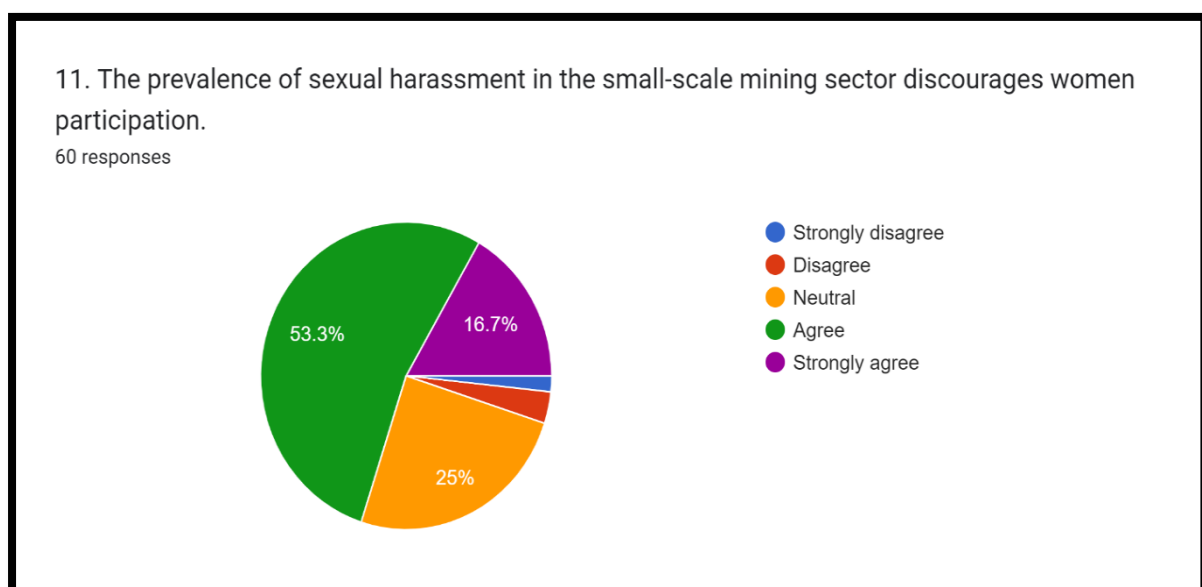
This objective focused on analysing the gender-based challenges faced by women in their efforts to participate actively in small-scale mining. Some of the prominent difficulties documented in the literature that this study sought to explore further included sexual and emotional harassment, operating in a predominantly male environment, occupational segregation, the existence of gender-based wage disparities, cultural beliefs against female participation in small-scale mining, and challenges in maintaining a stable work and life balance.

4.6.1 The prevalence of sexual and emotional harassment

The results of the study appear to suggest that, apart from efforts aimed at women's empowerment and emancipation in the economy at large and in small-scale mining, there exist some vestiges of sexual and emotional harassment, as presented in Figure 11.

Figure 11

The prevalence of sexual and emotional harassment



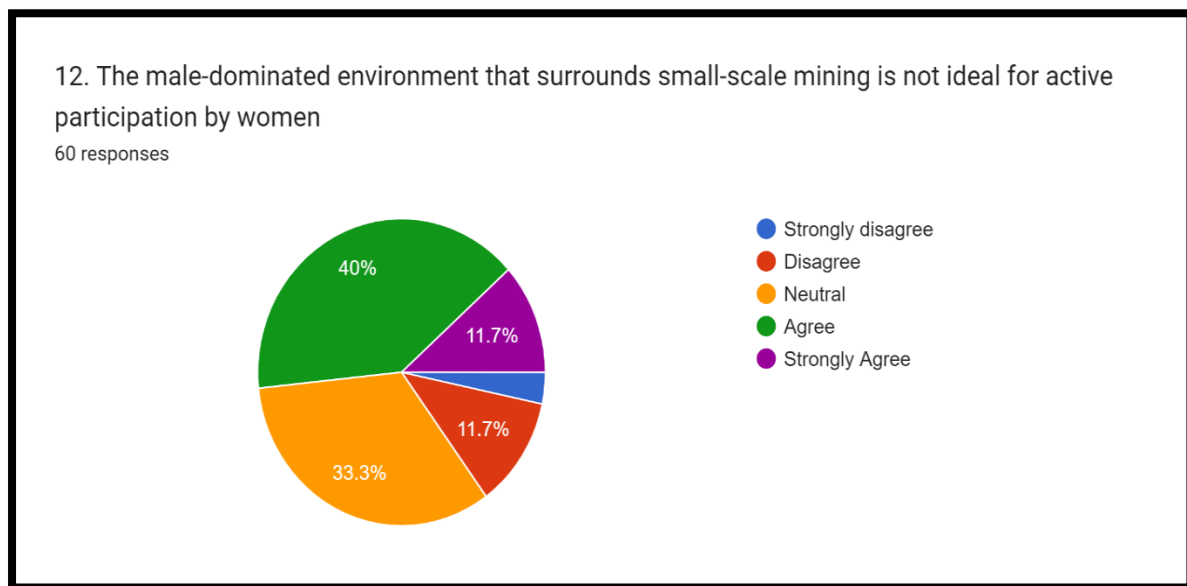
Most participants in this study, who made up 53.3%, agreed with the opinion that sexual and emotional harassment is prevalent in small-scale mining. The prevalence of sexual and emotional harassment affects the active participation of women, given that most women who participate in this sector may have limited alternative choices for survival, given the prevailing drought conditions, which reduce the conceptual appeal of agriculture as a source of sustenance. The structural makeup of operations in small-scale mining provides a fatal breeding ground for the perpetuation of sexual and emotional harassment against women due to a lack of a formal and recognised operational structure.

4.6.2 A male-dominated environment

The dominance of men in small-scale mining was found to influence women's active involvement, as shown in Figure 12.

Figure 12

A male dominated environment



The general position of participants in this study was that operating within an environment predominantly male, as characterised by operations in small-scale mining, can be a contributory factor to their lack of active involvement of women. These views were held by 40% of participants in this study who agreed and 11.7% who strongly agreed that an environment predominantly male in small-scale mining is not conducive to women's participation. On the other hand, 33.3% of participants in this study indicated their neutrality regarding male domination in small-scale mining environments. This might be attributed to the manual nature of activities that are undertaken in this sector, which require a great deal of physical exertion and working for long and extended hours under insecure and life-threatening conditions, which might not be ideal for women on account of their biological makeup. The

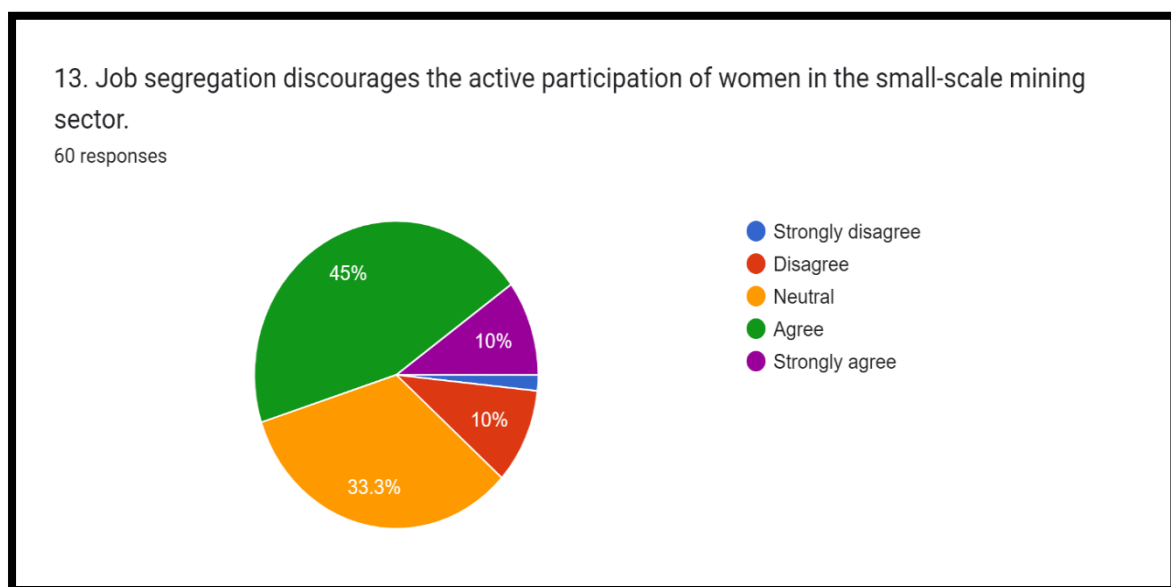
male domination perspective gives credence to biological theory, which holds that an individual's biological signature determines their life chances and the types of industries they enter later in life. Given the resource shortages that characterise the small-scale mining sector, it might appear that the strenuous, menial activities in this sector are well-suited for men rather than for the active participation of women in actual mineral ore extraction.

4.6.3 Occupational segregation

The occupational segregation of women from direct participation in small-scale mining activities has been prominently reported in the literature. The results of the study, as demonstrated in Figure 13, suggest the prevalence of occupational segregation against women participating in small-scale mining operations.

Figure 13

Occupational segregation

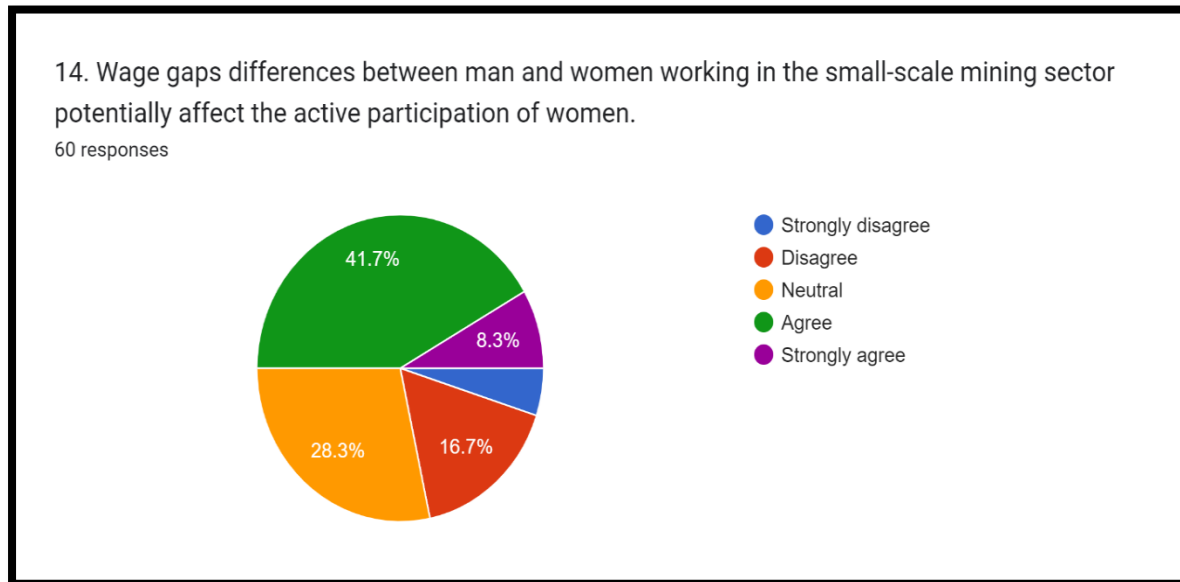


Most participants agreed that occupational segregation affects female participation in small-scale mining (45%). This occupational segregation stems from the job roles and activities

assigned to women participating in small-scale mining operations, which are, in most circumstances, peripheral, windless, and less lucrative than those undertaken by their male counterparts. The gender-based occupational segregation and assignment of tasks and responsibilities is a central theme, particularly in predominantly male environments, which characterise the small-scale mining sector. The findings of this study confirmed that in small-scale mining, many women have been confined to supportive and peripheral activities. The Current results of the study on occupational segregation indicate that 10% of women who expressed indifference to the adversity of occupational segregation do not significantly affect the participation and inclusion of women in small-scale mining operations.

4.6.4 Wage differences

Remuneration is one of the key drivers motivating women to consider small-scale mining as a form of sustenance and to supplement family income. The results of the study indicate mixed feelings about the existence of gender-based wage differences in small-scale mining, as shown in Figure 14.

Figure 14*Gender-based Wage differentials*

While 41.7% of participants agreed that there is gender-based wage differences in small-scale mining between men and women, 28.39% were indifferent. Wage differentials are tied to the nature of the jobs and responsibilities that individuals perform in various small-scale mining activities. Through these lenses, a sizeable number of women were found to be participating in operational and peripheral activities that are not central to core mineral ore extraction. As a result, the average wage was lower than that of men who are directly involved in mineral ore extraction, especially gold.

It appears that a relatively smaller proportion of participants in this study do not agree that there are any wage differences in small-scale mining. Some of the explanations for the perceived lack of wage differences in the small-scale sector stem from the different roles and responsibilities assigned to males and females, which are tied to specific reward systems. The wage differentials in the small-scale mining sector are closely tied to occupational segregation, a predominantly male environment, and the assessment of roles based on

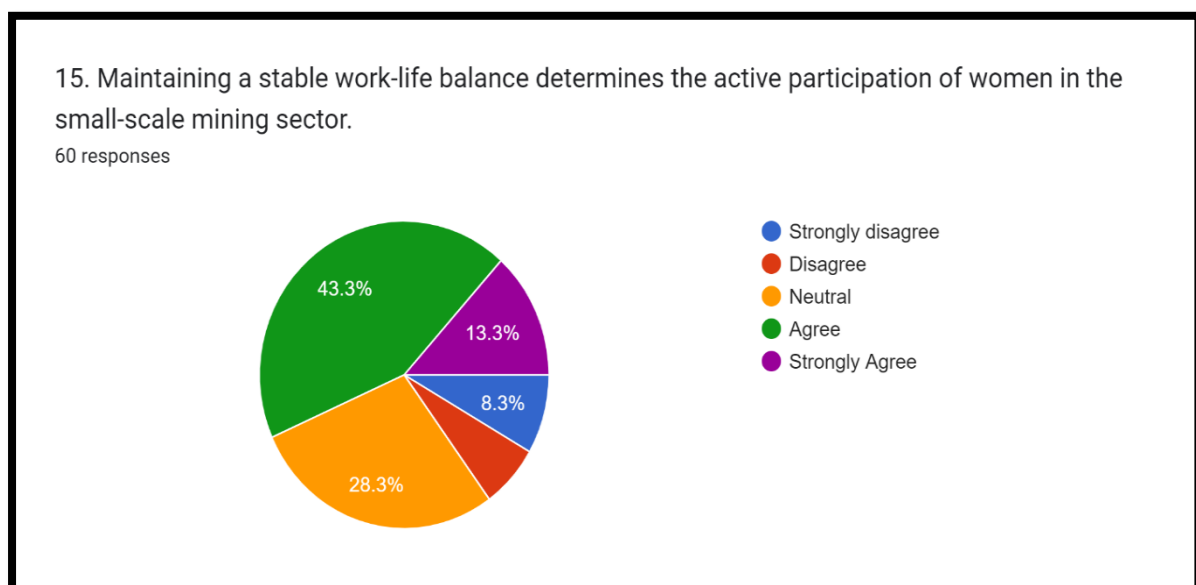
biological sex. The combined effect of these variables has effects on the expected earnings that individuals, particularly women, can anticipate from the contributions they make in this sector.

4.6.5 Work and life balance

The biological makeup of women, especially when we consider the childbearing role of women in the family unit, can be seen as one of the key stumbling blocks to career development in unregulated environments, which characterise small-scale mining. The notion of weak life balance examines the strategic link between women's social and professional lives, which is often destabilised by their biological makeup. Maintaining work and life balance was identified as a key challenge to the active involvement of women in small-scale mining operations, as shown in Figure 15.

Figure 15

Work and life balance



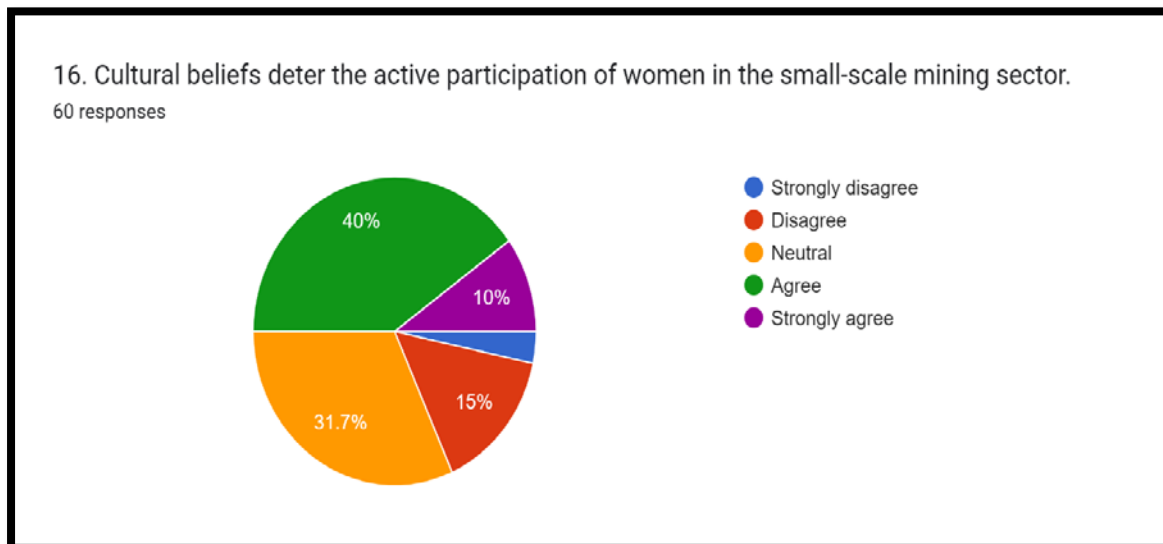
Most participants in this study (43.3%) agreed that maintaining a work and life balance was a challenge for women participating in small-scale mining operations. Related insights

were expressed by 13.3% of participants in this study who strongly agreed with the perspective that maintaining a stable work and life balance determines the active participation of women in small-scale mining operations. Women bear an additional burden in having to managed households' affairs in addition to taking care of their professional career activities as participants in small-scale mining. This creates an intricate challenge for women in managing work and life balance. The study showed that 28.3% of participants in this study were indifferent to the effect of work and life balance on the career prospects of women participating in small-scale mining activities.

The effects of management work and life balance on the active participation of women in small-scale mining operations are further intensified by the lack of a formal operating structure in terms of regulated operating times.

4.6.6 Cultural beliefs and active involvement of women in small-scale mining operations

This study focused on the prevailing culture of beliefs and how they have precluded the active involvement of women in small-scale mining activities, as presented in Figure 16.

Figure 16*Cultural Beliefs*

The results of the study are presented in Figure 17 and indicate that most participants in this study (40%) agree that cultural beliefs play a significant role in curtailing the involvement of women in small-scale mining operations. Overall, half of the participants in this study believed cultural beliefs have a negative effect on the active participation of women in small-scale mining operations. It was found that 31.7% of participants in this study were indifferent regarding the influence that cultural beliefs have in the small-scale mining activities. These views might be attributed to the evolving nature of economic activities, which have resulted in both men and women being participating in almost similar economic activities.

In the yesteryears, some activities like street vending were exclusively the domain of women. However, with the progressive deterioration of the economic fundamentals in Zimbabwe, we have witnessed a significant increase in the number of men who are actively engaged in street vending. Therefore, it is not surprising that women are also venturing into operations in small-scale mining, which is That a more regulative economic activity to improve

their life chances in response to a challenging economic and atmospheric conditions that are making agricultural activities unfeasible.

4.7 Objective 3: Coping mechanisms

The last objective of this study was focused on the mechanisms that can be employed to assist women in overcoming the challenges presented in the first two objectives in the study. This objective culminated in the asking of open-ended questions, which provided participants in this study with options to express themselves freely by proposing ideal strategies that can be employed to improve the life chances of women regarding their participation in small-scale mining.k,

4.7.1 Strategic networking themes and codes

Themes and codes for strategic networking are summarised in Table 3.

Table 3

A Summary of the strategic networking themes and codes

How important do you think strategic networking is for women participating in small-scale mining operations to cope with gender imbalances?	
Theme: Voice to women	Theme: breaking stereotypes
Codes	Codes
Support system	Solidarity
Coping with challenges	Resources mobilisation
Goal orientation	Sharing ideas
Empowerment	Building confidence

The focus of the first question was on the essence of strategic networking in assisting women deal with gender imbalances in the small-scale mining activities. Several perspectives were proposed by participants in this study on the importance of strategic networking, as it

enables women to articulate their personal experiences and perspectives, which is critical in inspiring others to exert greater effort.

4.7.1.1 Theme: Voice to women

Strategic networking of women was taken to be a positive drive towards empowering women by giving them a voice. Participants in this study highlighted that strategic networking *“helps women to have a voice in mining activities”* (Interviewee 1). Similar beliefs and perspectives were expressed in the sense that *“Strategic networking helps women participating in small-scale mining activities to develop their voice in access to resources* (Interviewee 30). Yet other participants in this study related the essence of strategic networking to the resources best viewed by specifying that it *“helps women participating in small-scale mining activities to develop their voice in access to resources”* (Interviewee 33). Other participants in this study expressed that *“It is very important, as one hears or sees another woman’s story, they are encouraged to cope”* (Interviewee 3). It was highlighted that leveraging strategic networking helps *“... women to share what they’re going through and are able to share solutions.”* (Interviewee 4).

Using strategic networking was perceived as a support system that is *“important to work as a group of ladies to succumb the challenges together”* (Interviewee 6) Other perspectives emphasize to the essence of strategic networking in *“helping women who share ideas on how best they can be able to navigate through the complexities associated with operating in a male dominated environment* (Interviewee 32). Yet other participants in this study felt that strategic networking *“provides women with valuable access to resources, expertise, and information, helping them navigate the industry”* (Interviewee 19). It was highlighted that strategic networking for women participating in small-scale mining operations

activities can play a vital role in helping them “*achieve their goals, focus on new business directions and the stakeholders they must get on board to pursue their goals*” (Interviewee 22). Other participants in this study emphasised that strategic networking is important “*To empower women and give them confidence that mining is not gender based dominated.*” (Interviewee 22).

4.7.1.2 Theme: breaking stereotypes

Strategic networking was taken to be instrumental since it helps women “*acquire support, be it monetary or skills and competencies-based support and empowerment*” (Interviewee 5). Related beliefs and perspectives focused on the contribution of strategic networking “*...in breaking down stereotypes*” (Interviewee 8), given that “*women who have made it can share their knowledge with new entrants in mining*” (Interviewee 9). This was found to be “*critical in building solidarity among women*” (Interviewee 12) and assisting in “*amplifying women's voices and organisation and mobilisation of resources*” (Interviewee 16). The results of the study indicate that “*Networking amongst women is important in sharing ideas and creating opportunities*” (Interviewee 36). Strategic networking was perceived as essential as it “*... gives women the required support*” (Interviewee 11). Other participants in this study viewed strategic networking as key in “*building confidence*” (Interviewee 17). It was highlighted that strategic networking was essential in “*creating order and providing access to financial and material resources to women so that they can compete effectively*” (Interviewee 38). Strategic networking was thought to “*provide a platform for women to express themselves without any discrimination and provide a source of empowerment.*” (Interviewee 55).

4.7.2 Leadership style's themes and codes

The study sought to assess the contribution of leadership style to the likelihood of success for women in small-scale and artisanal mining. Key themes and codes are presented in Table 4.

Table 4

Leadership style themes and codes

What are some leadership styles that can help address and cope with gender imbalances in small-scale mining?	
Theme: Building confidence	Theme: Recognition
Codes	Codes
Raise awareness	Sensitivity
Cope with gender imbalance	Equal opportunities

4.7.2.1 Theme: Building confidence

Findings from this study have established that democratic leadership is essential to support women's advancement in small-scale mining activities. This leadership style and approach encompass the interaction, consultation, involvement, and delegation, which was essential in “addressing the governance issue with democratic leadership (Interviewee 1). Leadership was found to be key in “raising awareness... and make women feel normal and treated equally in the workplace (Interviewee 8). It was reiterated that adopting appropriate leadership styles empowers women, enhances their confidence, and imparts industry knowledge. It was explained that “having women in top positions will mean more sensitivity to women's issues and more recognition for women in the mining section” (Interviewee 11). Yet other participants in this study examined leadership at the macro level and stated that “The Zimbabwean government has introduced the quota system from local authorities that will then help instil confidence in women, especially in the operations in small-scale mining” (Interviewee 13).

Leadership was thought to help mitigate gender inequities and “foster an inclusive environment, actively seeking diverse perspectives, and promoting equal opportunities” (Interviewee 19). It was intimated that “situational and agile leadership styles would assist the small-scale mining as she deals with situations as they arise and be able to use various leadership styles” (Interviewee 23). It was highlighted that “*Inspirational leadership styles are very important to provide confidence and empowerment to other women* (Interviewee 47).

4.7.2.2 Theme: Recognition

Having women in top positions was linked with “more sensitivity to women's issues and more recognition for women participating in small-scale mining activities”. (Interviewee 11). Other participants in this study expressed that “Having women participating in small-scale mining operations represented even legally to address issues of being underpaid due to rigid gendered cultural norms.” (Interviewee 18). Leadership was believed to “*encourage female participation in mining by identifying key challenges confronting women participating in small-scale mining operations and providing practical data upon which effective steps can be taken to improve female participation in mining.*” (Interviewee 23). Other perspectives specified that the essence of equitable leadership, encompassing Laissez-faire and democratic styles, such as “*participative and transformational leadership styles can help address and cope with gender imbalances in the small-scale mining*” (Interviewee 21). In this respect, inspirational leadership was key in “*creating participatory leadership styles are very important so that they can help women who are under privileged to express themselves on how best they interactions in the environment can be improved*” (Interviewee 46). The study results suggests that Inspirational leadership style creates “*a support system where women are free to approach their leader and to express their views in the fair way so that women can be recognized in the sector.*”

4.7.3 Female role models, themes, and codes

The results of the study on themes and codes related to female role models are presented in Table 5.

Table 5

Female role themes and codes

What role do you think having strong female role models plays in helping women in the industry cope with gender imbalances?	
Theme: Motivation Codes	Theme: Challenge male domination Codes
Encouragement Morale boost Inspirational Education of women	Advocate for women's rights Promote career progress
Theme: empowerment Codes	
Confidence building	

4.7.3.1 Theme: Motivation

Findings of this study have established that female role models “*encourage other women that they are capable and willing send a message to males that women are capable of doing the same or better than them.*” (Interviewee 4). It was highlighted that female role models “*boost the morale of women in the industry and give that assurance to a lady that women can do it as well*” (Interviewee 5). Female role models were found to “*play a pivotal role in encouraging women to get into mining.*” (Interviewee 9). Others expressed that female role models are “*very encouraging and inspiring to other women to excel*” (Interviewee 11). Female role models can inform communities, organisations, and government agencies about

equal opportunities and propose innovative solutions to the issues faced by female miners. “They help in inspiring others and help others to cope” (Interviewee 10).

The study results indicate that women are inspired to enter and navigate the complexities of the small-scale mining sector, provided they look up to female role models who have achieved success in this sector. These role models were found to be pillars of hope in encouraging other women to excel in an environment predominantly male.

4.7.3.2 Theme: Challenge male domination

Findings of this study have established that female role models will “*just have a way and encourage other women who will be hesitating to be in the so-called male-dominated industry*” (Interviewee 13). It was intimated that female role models “*can inspire a new generation of women to pursue careers in industries predominantly male, creating a lasting impact.*” (Interviewee 19). Other participants in this study expressed that female role models “*act as ambassadors; they can advocate for the rights of women in a sector predominantly male and are critical in grooming the next generation of female miners*” (Interviewee 12). Female role models were found to provide strategic direction to women in the small-scale and artisanal mining by aiding “*strengthen one’s objective to continue operations with confidence*” (Interviewee 14). Female role models were viewed as torch bearers as “*they present solutions to challenges that are unique to the female miners*” (Interviewee 23). Female role models were believed to “*educate and empower fellow women that it's possible for a woman to venture and be successful in this predominantly male industry apart from the challenges they come across*” (Interviewee 45).

The key insights emanating from this theme demonstrate the influence of role models in challenging the predominance of the lucrative small-scale mining sector and reasserting the contribution that women can make in this sector.

4.7.3.3 Theme: Empowerment

Findings of this study have established that *“Having strong female role models in helping women in the operations in small-scale mining helps in educating the mining communities, organisations, and government ministries about the need for equal opportunities in the small-scale mining activities.”* (Interviewee 22). Female role models were found as key to women empowerment *“...as they present solutions to challenges which are unique to the female miner”* (Interviewee 23). It was highlighted that female role models *“helps because women can see that, it is doable.”* (Interviewee 25). Female role models are very important as they *“can educate and empower fellow women that its possible for a woman to venture and be successful in this male dominated industry apart from the challenges they come across.”* (Interviewee 26).

Female role models were found to *“give other women references and a sense of empowerment as they look up to other women in the industry.”* (Interviewee 27). Role models are very important in building confidence in women so that they believe that they can *achieve what other people in the small-scale mining activities achieve”* (Interviewee 30). Related beliefs and perspectives expressed that female role models are *“very important in providing inspiration to other women to work”* (Interviewee 32). It was highlighted that female role models *“are important in the promotion of confidence and the motivation to encourage other females in the small-scale mining activities* (Interviewee 35). Female role models *“Provide an*

opportunity for women to share the experiences of my challenges and success stories, which can inspire others.” (Interviewee 50).

4.7.4 Statutory laws

The study focused on the influence of statutory laws in fostering a salubrious environment for women's active participation in small-scale and artisanal mining. The legislative themes are shown in Table 6.

Table 6

Statutory law's themes and codes

How do you think statutory laws and government policies can be used as coping strategies to address gender imbalances in small-scale mining?	
Theme: gender-based disparities	Theme: Representation of women
Codes	Codes
Anti-discriminatory laws Fair treatment of women Creation of opportunities	Safety

4.7.4.1 Theme: addressing Gender-based disparities

The key insights elicited were that the enforcement of rules and regulations can help lower gender-based disparities in small-scale and artisanal mining and ensure that “*women could be given more concessions, like no collateral when borrowing money for mining*” (Interviewee 11). The enforcement of anti-discriminatory statutory laws was proposed to influence “*nepotism to be shunned and policies to be adhered to*” (Interviewee 6). Rules and regulations have been looked at the national level, with the “government is mandated to obtain information in the form of baseline surveys to ascertain the level of participation by women (Interviewee 9). This is believed to be “ensuring the government policies are developed with a gender lens” (Interviewee 12). It was highlighted that “*Gender sensitive policies must be made*

and enforced.” (Interviewee 3). Others indicated that *“An act of law should be in place and those who break it should be punished.”* (Interviewee 14).

From a financial perspective, *“funds set aside for women participating in small-scale mining operations and to educate women countrywide”* (Interviewee 26). There is a need to *“regulate and ensure fair treatment in the sector and ensure that those who are held accountable for violating the rights of women experience the wrath of the law”* (Interviewee 56). It was specified that *“government policies should primarily deal with the access to finance provisions by reducing the need for women to put up collateral security to get finance from the formal banking sector”* (Interviewee 57). Statutory laws are critical in *“creating a fair operating environment and dealing with the culture of discriminating against women.”* (Interviewee 58). The government was urged to *“put up statutory laws to address gender imbalances...players are hesitant to exercise their rights in a male-dominated field.”* (Interviewee 23).

4.7.4.2 Theme: Representation of women

Participants in this study specified that *“government should strive to eradicate unsafe mining practices...creating a safe working environment for women is important”* (Interviewee 5). Another interviewee stressed that *“we must be fully represented as women in the small - scale mining activities from the parliamentary mining portfolio through to the cabinet”* (Interviewee 13). Fairness and impartiality were raised *“They should consider all challenges women are facing and address all of them, and update the constitutional rights to protect women in cases of sexual and emotional harassment”* (Interviewee 18). Government statutory laws, *“through effective implementation in the small-scale mining activities, can help women to participate effectively.”* (Interviewee 48). Government statutory laws are important *“in*

ensuring that there's minimal discrimination of women participating in small-scale mining operations.” (Interviewee 46).

4.7.5 Suitable coping mechanisms

Table 7

Suitable coping mechanisms' themes and codes

How do you think statutory laws and government policies can be used as coping strategies to address gender imbalances in small-scale mining?	
Theme: Workshops	Theme: equality
Codes	Codes
Training Capacity building Collaboration	Safety

4.7.5.1 Theme: Hosting workshops

The study underscored the essence of “*team participation in training and workshops*” (Interviewee 1). Related beliefs and perspectives were highlighted that “*training that was fully funded by Fidelity Printers and Refiners to empower women*” (Interviewee 9). Other participants in this study reinforced the importance of “*capacity building in supporting women with mining equipment, enrolling the women with tertiary institutes for technical capacity building, helping with getting mining claims, and providing legal support*” (Interviewee 12). Leveraging “capacity building is important in ensuring that women are able to deal with

challenges they face in the sector.” (Interviewee 46). Others indicated that *“We have managed to create advocacy groups that account for policy changes through exploring mentorship and role model programs to enhance activation of women participating in small-scale mining operations. (Interviewee 34). Similarly, it was expressed that “Training workshops and site visits are important in getting insights into how best women can cope with challenges they experience in the sector” (Interviewee 57).*

4.7.5.2 Theme: Equality

It was reiterated that there is a need to *“Promoting equality and transparency”* (Interviewee 24). Through *“fair recruitment by give equal amount of salary to both sexes.”* (Interviewee 25). The creation of collaborations was identified as key as *“female miners form associations to help them share ideas so that they can be deposed to improve their general welfare”* (Interviewee 31). It was specified that some women have *“created woman empowerment groups to identify opportunities for females in the small-scale mining activities.”* (Interviewee 31). It was stressed that *“We operate it on the principle of the wisdom of crowds, where we always try to interact with each other so that we can share our experiences and come up with a position that can enhance our participation in the section. (Interviewee 51). It was highlighted that “in 2020, during the COVID lockdown, miners were exempted from shutting down operations. The chrome buyers then started sidelining their service to women chrome miners from our association. We organised a demonstration, but because we were not allowed to gather, as the leader, I then did a one-woman demonstration with my peers supporting me from a distance. Since then, the buyers started treating us as fairly as our male counterparts. They even gave us a schedule for collecting our chrome, and they adhered to it. They increased the buying price from \$35 to \$60/tonne”* (Interviewee 3).

4.8 Evaluation of the results of the study and implications

The focus of data analysis was to articulate the results of the study in relation to the study's objectives. The first two objectives incorporated data collection using semi-structured data, using closed-ended questions as part of the interviews. The presentation of data in this regard incorporated descriptive analytical statistics to highlight the position and opinions of participants in this study regarding their degree of agreement or disagreement with predetermined questions that sought to establish the barriers that curtail the active involvement of females in small-scale mining and the gender-based challenges they face. The third research objective incorporated open-ended questions that reflected on the possible coping mechanisms that could be employed by women to sail through some of the barriers and challenges they have faced while trying to operate in small-scale mining.

Even though the study found that women are participating in various activities in the small-scale mining sector, their level of engagement is relatively low. Participation is a descriptive term which looks at the active level of activity. The physical presence of women within small-scale mining arenas performing various tasks and contributing labour. In this respect, women can participate in the small-scale mining sector, doing a host of other activities, such as crushing, loading, transporting materials, providing entertainment, and panning for gold.

Within the scope of recognised women's participation in the small-scale mining sector, this research focused on analysing the barriers women encounter in their efforts to be actively engaged in the sector. Engagement is a high level of participation that focuses on analytical involvement, agency, and commitment within the broader small-scale mining sector. Engagement implies that women are not only labourers but are emotionally vested in the

activities that take place and influence their social and economic well-being. In this respect, women are expected to wield influence in decision-making and to carve out their identities and livelihoods around small-scale mining activity. This level of engagement focuses on its holders at the small-scale level, who control equipment and advocate for better statutory laws that favour their sustenance in this small-scale mining sector.

This level of women's engagement in the small-scale mining sector represents a paradigm shift from mere physical presence. Through the lens of this study, the active engagement of women in this sector is what is lacking and contributes to systemic barriers they face when advocating for better conditions and improving their life chances. The low levels of engagement of women in this sector have manifested it so in various forms through barriers like the lack of control and ownership of immovable property, constraints in gaining access to finance, the prevalence of rigid gendered cultural norms shaped by a predominantly male environment as well as inadequate legal framework to promote the voice of women.

The relatively low levels of engagement of women in small-scale mining activities have also been evident in the form of gender based sexual and emotional violence and harassment, entrenched occupational segregation, which results in differences and a lopsided work and life balance. These gender-based challenges have been compounded by a patriarchal cultural belief against the active involvement and engagement of women in predominantly male environments, as they are thought to contribute to calamities and misfortunes.

4.9 Objective 1: Barriers to women's progress in small-scale mining

The first objective was focused on the barriers faced by females in small-scale mining. These were articulated through six questions that included closed-ended responses, which elicited responses from participants regarding their degree of agreement or disagreement with

the statements meant to measure the barriers that women experience in small-scale mining. These systemic barriers were presented and analysed in the sections that follow.

4.9.1 Immovable property rights for women

The results of the study regarding the immovable property rights for women, as presented in Figure 6, indicate that the girl child is placed at the periphery when it comes to the distribution of wealth and the assumption of heirship in a traditional family and cultural set-up. This confirms outcomes from a study by Adam et al. (2022), who assert that in the family set-up, women have limited decision-making choices since men impose their patriarchal rules. According to the results of the study, women have limited choices when it comes to owning property independently of their husbands. This lack of free will in controlling immovable property rights has been culturally constructed such that it becomes challenging for an individual woman to challenge the patriarchal cultural practice, especially when it is affecting their life chances in small-scale mining. While the men have the free will to decide upon the available property, sometimes without even making consultations with their wives.

The results of the study appear to suggest that women find themselves in an underprivileged position in society since they are naturally not expected to inherit anything else in the family. This is a typical African culture constructed principle where heirship is passed along patriarchal lines. These cultural legacies in favour of the boy child negatively affect the life chances and prospects of success for women later in life when they want to venture into entrepreneurial drives, such as penetrating an industry predominantly male, such as operations in small-scale mining. Ultimately, the challenges that women in the counter are evident in their failure to gain control of immovable property rights, which are a key component that is

demanded by the lending institutions in the form of collateral security as a precondition to receive financial assistance.

In a typical traditional African community, the defenders of patriarchal tradition state that the orders of the husband in the family ought to be complied with without any questions asked (Mensah, 2024). In relation to these traditions and their patriarchal rules, the results of this study established that 80% of participants believed that the lack of control over immovable property rights was a key deterrent to the success of women interested in small-scale mining. From the standpoint of control of immovable property rights, it appears that cultural belief systems are a key stumbling block that systemically influences the gender-based occupational segregation of women regarding their participation in small-scale mining.

4.9.2 Access to finance

The results of the study, as per Figure 7, highlight that the lending institutions, particularly commercial banks, is the most preferred option for funding business initiatives, as they have relatively low interest rates with an extended repayment period. These funding conditions allow businesses to build up sufficient cash flows before a payment is settled. The downside of commercial banks as an ideal social finance for women participating in small-scale mining operations is that they demand collateral security pledges mainly against immovable property, such as title deeds to land, legal ownership of mining claims, any immovable property, or even movable properties such as motor vehicles that are registered in the name of the owner, which most women participating in small-scale mining operations lack. Challenges in accessing lines of credit and finance, mainly from the commercial banking sector, are linked to the systemic influence of culture and the failure of women to inherit property in the family.

The other option is to use microfinance institutions, which, in addition to requiring fixed asset-based collateral, require proof of income, such as a payslip or bank statement. These requirements might present challenges for ordinary women interested in investing in small-scale mining. The relatively more convenient option might be resorting to money lenders, who may not demand either a pledge in the form of an immovable property or proof of income, but they impose extremely high interest rates over a shorter repayment period, such as 30 to 90 days. This poses credit risks for financially illiterate women miners who might opt for money lenders as a convenient finance option. The lack of mastery of financial literacy and business finance, especially cash flows, might potentially hamper operations in small-scale mining if incorrect projections are made. In essence, challenges relate to access to finance research, not only limited to the availability of funding; they are ascribed to the financial literacy levels of women participating in small-scale mining operations

Given that the current study's results indicate that a significant number of women do not have legal ownership of property, this severely constrains their access to finance. Such conditions have negatively influenced the active involvement of females in small-scale mining, resulting in a significant number of them playing second fiddle to men who have control and access to land and immovable property rights, and can get finance with relative ease. However, the works of Otoijamun *et al.* (2021) state that men who work in small-scale mining are not spared from being constrained in accessing loan advances from the formal commercial banking sector. Apart from these beliefs and perspectives, it is apparent that the financing system is heavily stacked against women's interests, especially given the demand for collateral in the form of fixed ownership of fixed assets, which women might not control.

4.9.3 Gender stereotypes

The results of the study, as per Figure 8, indicated that some small-scale miners were exposed to unsafe operating conditions since they had to go underground for extended shifts in most instances, with improper safety wear and inadequate occupational health being observed. Such conditions may not be ideal for women to work under, as they are largely unregulated without a sound organisational policy of occupational health and safety. While it is laudable to assert that women experience rigid gendered cultural norms in small-scale mining, some of the tough operating conditions that characterise some mines can justify the prevailing stereotypes against the active involvement of women in the actual mineral ore extraction. This is notwithstanding that capable women can still own such mines and operate them from a strategic leadership level and not be exposed to the vagaries and risks associated with mineral ore extraction operations.

Events at the operational level in most operations in small-scale mining, including the absence of sound Empire occupational health and safety protocols, may justify the systemic exclusion of women from actively participating due to unfavourable working conditions. However, at the strategic level, the operation of women in leadership and ownership of mining claims may not justify gender stereotyping or the exclusion of women from influential leadership positions in small-scale mining. It is at the leadership level that the current study asserts that women appear to be facing rigid gendered cultural norms as inadequate leaders to direct the operations of mines. Current results of the study on rigid gendered cultural norms relate to the cultural value systems and proclaimed duties and responsibilities that women must play in the family and social setup. These preclude the active involvement of women in small-scale mining operations. To achieve success and occupy influential positions of leadership, particularly in conditions and environments that are dominated and dictated by men,

enterprising women must challenge existing cultural legacy and rigid gendered cultural norms that aim at systemically segregate them from actively participating in high-yield activities.

4.9.4 Limited technical skills and competencies

The results of the study, as per Figure 9, confirm the essence of the biological theory, which states that, considering the biological makeup of women, the conditions prevailing in most small-scale mining may not be suitable for women since there are no regulated operating times as opposed to the large and established mining firms. Most mining activities that take place in small-scale mining are manual. It implies that there is a need to exercise strength in completing some of the tasks, such as digging underground using traditional tools like picks and shovels. The works of Katz-Lavigne, Mkodzongi & Nyandoro (2024) confirmed that small-scale mining is characterised by rudimentary methods of mineral ore extraction that can be done either legally or illicitly. The constrained working conditions that characterise the small-scale mining activities in these areas are, to a greater extent, not ideal for women; all by their biological nature, they may not be suited to such conditions. These views are being interpreted from an operational perspective. We are advocating for equal participation by women in the actual mining activities in small-scale mining.

From an operational perspective, it is apparent that women lack the technical skills and competencies to actively participate in small-scale mining due to limited exposure. Such a scenario explains why most females who intend to engage in small-scale mining usually occupy peripheral roles and activities that support the actual mining that takes place in these mining areas. However, the lack of technical skills and competencies does not explain the under-representation of women at leadership and strategic levels in small-scale mining. The person in leadership is not directly involved in the operational activities, but they are there to influence

and direct operations in the small-scale mines. At this level of responsibility and accountability, we are noticing that relatively few women occupy influential positions in small-scale mining.

4.9.5 Access to mining tools and equipment

The results of the study, as per Figure 10, imply that women experience challenges in accessing mining equipment and tools to make themselves independent of men when investing in small-scale mining, which are related to their lack of control of property and land rights, minimal access to capital, and a significant number of women forming partnerships with men to participate in small-scale mining. These perspectives suggest that the lack of adequate tools and equipment hinders women participating in small-scale mining. The challenges are deeply entrenched, especially given that the inability to access lines of credit at lower interest rates from the formal financial sector prevents the acquisition of adequate machinery for mining activities. This creates additional downstream challenges regarding the productivity of such mining ventures, which negatively contribute to comparatively lower earnings because women earn less compared to men, given the menial nature of operations in small-scale mining.

Independent and financially secure women with access to capital effectively manage to navigate through the challenges faced by women and actively take part in small-scale mining. These participants in this study are small-scale mining owners with legally recognised mining claims and employing people in the sector. Most women lack the capacity to own proper mining equipment to improve their efficiency in small-scale mining, which is not the least common.

4.9.6 Legal frameworks of ownership of immovable property by women

The results of the study, as presented in Figure 11, indicate that the constrained legal recognition of women is closely related to the challenges they face in owning intellectual and immovable property rights. Most women who enter customary marriages often lack legal recognition of property ownership, which may hinder their active and independent participation in small-scale mining. Women in most developing contexts have historically been disadvantaged when it comes to ownership of immovable property and land. This is a result of the interplay of formal and customary laws and patriarchal legacy. In some contexts, there is equality on paper, but in practice, the traditional and cultural practices create barriers for women in terms of ownership of land and property. This might be a testimony to the existence of glass ceilings and glass cliffs in the context of ownership of immovable property for women.

Ownership of immovable property is a key issue, especially in contexts characterised by male dominance in small-scale mining. Land affects their proclivity to obtain licenses, which is instrumental to the formalisation of mining activities. The results of the study imply that the current legal frameworks may be inadequate to properly represent the expectations of female participation in small-scale mining activities. This may indicate a lack of awareness about the role that legal instruments can play in enhancing the active participation of women in small-scale mining operations. This is notwithstanding 3.33% of participants who strongly expressed disagreement with this position. These participants in this study are likely to be independent women with the requisite financial resources to participate actively in mining activities.

4.10 Objective 2: Gender-based challenges experienced by females in mining

This objective was focused on analysing gender-based challenges faced by women in their endeavour to participate actively in mining activities. Some of the prominent challenges

documented in the literature that this study sought to explore further included sexual and emotional harassment, operating in an environment predominantly male, occupational segregation, the existence of gender-based wage disparities, cultural beliefs against female participation in small-scale mining, and challenges in maintaining a stable work and life balance.

4.10.1 The prevalence of sexual harassment

The results of the study, as presented in Figure 12, imply that, unlike formal mining activities, the reporting relationships in informal mining activities are vague. This creates a breeding ground for the proliferation of sexual and emotional harassment against women. A sizeable number of uncouth characters dominate this sector due to the lack of educational requirements, which is one of the preconditions for participating in the sector. It is not surprising that sexual and emotional harassment is rife in small-scale mining, which negatively affects the proclivity towards which women are prepared to participate in this sector.

Study results imply that sexual and emotional harassment is prevalent in small-scale mining, which is an indication of the lack of professionalism amongst men in the sector. The informal nature of operations in small-scale mining, which lack an organised structure to seek redress in cases of sexual and emotional harassment, can be attributed to the perpetuation of sexual and emotional harassment that is endured by women. This is a stark contrast to the industrial relations which characterise the formal mining organisations, which have formal complaint reporting structures and policies to address discrimination and harassment against women. Operations in small-scale mining are characterised by unequal power and influence distribution, which can significantly contribute to the continuation of sexual and emotional

harassment against women, especially those whose advancement has restricted their earning potential.

4.10.2 Male domination

The results of the study, as presented in Figure 13, imply that most activities in small-scale mining are predominantly biased towards men, to the disadvantage of women. This has resulted in most women occupying peripheral roles in the sector, which prejudices the financial returns in terms of wages and rewards given to women. Moreover, the results of the study suggest that some women are not comfortable working in an environment where there are more male workers, especially when such environments do not have adequate safety precautions and provisions that protect women against abuse. However, limited viable economic opportunities in communities push women into operations in small-scale mining as a readily available option.

Alternative economic activities in areas where small-scale mining takes place include market gardens and general agriculture. The main drawback aligned with these options is that they are heavily reliant on the prevailing climatic conditions. Most areas in Zimbabwe have received below-normal rainfall, which makes agriculture-based activities without supplementary irrigation unfeasible. It appears that climatic factors have emerged as key drivers, forcing women to venture into operations in small-scale mining. The results of this study, pertaining to the effects of a predominantly male environment on the inclusion and participation of women in small-scale mining operations, support existing literature that has focused on the role women play in mining activities worldwide.

4.10.3 Occupational segregation

The results of the study, as shown in Figure 14, indicate that the gender-based occupational segregation of women by tasks they are expected to perform in this sector can be justified based on the risky nature of activities typically undertaken in most mining activities visited by the researcher. The operating conditions are way below the minimum expected standards regarding occupational safety and health. Minimum safety standards, such as wearing safety helmets, safety shoes, and even protective gear and clothing, were found to be non-existent at some small-scale mining sites. The results of the study suggest that most women do not typically take an active role in mining due to the physical exertion required.

It should be noted that a significant number of small-scale mining processes lack adequate equipment, necessitating manual labour to extract minerals. Due to their biological makeup, a significant number of women might feel segregated in performing such physically demanding duties, and they are assigned peripheral activities in the small-scale mining activities. Such instances are non-existent in small-scale mining, as they can result in high operating costs, which would reduce the profits of the mining owner. Many large-scale mining companies appear to have safety frameworks in place that protect the occupational health of their mining workers. Therefore, it is justifiable to exclude women from certain risky mining activities. However, occupational health and safety regulations do not define the means based on gender, suggesting that occupational segregation is the underlying principle behind the exclusion of women from potentially lucrative mining activities.

4.10.4 Wage differences

The results of the study, as shown in Figure 15, can be understood by examining some justifications behind this position, which include the fact that women who own mining claims earn more than their male employees. While males are actively involved in the actual digging

and extraction of minerals from the earth's crust, they earn more than women, who occupy peripheral operational activities in the same mining claims. These variations in rewards cannot be directly compared because the term 'wage differences' is more appropriately used when there are variations in rewards given to men and women who perform the same task.

From this perspective, the existence of wage differentials in the small-scale mining activities has been justified from different fronts, which include the biological makeup of women, which makes them more suitable for childbearing and rearing as opposed to the physically challenging menial activities surrounding small-scale mining. Ultimately, the earnings that women get from their engagements in the sector are relatively lower than those enjoyed by their male counterparts. These differences have been justified by the peripheral activities that women perform mainly at the operational level in the sector.

In most instances, it has been observed that women provide a supportive role, which might in most cases not be strategic to the actual mining activities that take place. In addition, wage differentials are very noticeable given that there is no specific reward that can be given to people over a certain period, as is the case for people who are paid on a regular basis, such as weekly or monthly. Returns from mining activities vary regarding the ability to extract minerals that are later sold. When the financial returns in terms of sales of minerals are high, the anticipated rewards are higher. The lack of certainty regarding the anticipated wages that women can expect to receive from their economic engagement in small-scale mining has compounded the differential perceptions.

Apart from the variations in the interpretation of earnings differences between men and women participating in small-scale mining operations, the ultimate position is that women are discriminated against compared to men in the sector since they have a relatively lower

bargaining position. As is alluded to earlier in the literature, most women occupy peripheral and supportive roles that are not even central to the extraction of minerals. From that weaker position of bargaining, it is practically challenging for women to negotiate for improved earnings.

4.10.5 Work and life balance

The results of the study on work and life balance, as presented in Figure 16, indicate that women are not typically considered the breadwinners in family settings. They have other roles and responsibilities that are not naturally assumed by men. At home, women usually occupy the role of housewives. This implies that women play a dual role: first as a housewife, then as an employee in the mining industry. This usually creates tensions and challenges in managing the work and life balance, especially regarding career breaks when a woman must take care of the family or when they are pregnant or has just delivered a baby. The finding that most participants in this study believed women participating in small-scale mining operations experience challenges in balancing their work and social life corroborates existing literature, which shows that traditionally and culturally assigned gender roles of carers and housewives affect their career progression (Awais, 2022).

Moreover, the complexities associated with trying to manage the work and life balance are intensified by the existing cultural taboos against the active inclusion of lactating women and women in their menstrual periods, since such women are considered unclean and might possibly bring misfortune to the mining areas. Apart from the exclusionary position of these cultural taboos, there is no scientific mechanism for determining whether a woman is on her menstrual period, which might lead to the wholesale segregation of women from actively partaking in mineral ore extraction activities.

It is an open secret that the responsibilities bestowed on women are different from those that have been culturally assigned and socially accepted to be performed by men. From this perspective, women are not viewed as engaging in small-scale mining as a primary source of income, but rather as supplementing the income from the husband. The failure or unwillingness of men in this by men to recognise and to view women as independent individuals in search of financial earnings through mining activities, perpetuating sexual violence against them, has significantly compounded their lived experiences in small-scale mining.

4.10.6 Cultural beliefs and active involvement of women in small-scale mining

The results of the study on cultural beliefs and the involvement of women in small-scale mining operations, as presented in Figure 17, imply that there are culturally assigned roles and activities expected of women across different occupations, including small-scale mining. The results of the study might suggest that culture has been systemically applied as a trump card to segregate and discriminate against women regarding their participation in small-scale mining. Culture influences the social belief and value systems that have the effect of assigning socially acceptable roles to women as child-bearers, which naturally translates to their inability to culturally recognise the effective contributions and entrepreneurial role that women can play that are pivotal in the growth and development of a small-scale mining setup.

It stands to reason that women who prefer or endeavour to rise through the ranks with small-scale mining are usually ostracised, and their endeavours are taken to be taboo in the framework of the existing cultural value systems. Ultimately, Current results of the study confirm the derogatory nature of the existing culture of value systems and taboos that are systemically positioned to exclude women from influential positions in small-scale mining.

This cultural value system has influenced the legal system to fail to recognise women's independence in the control and ownership of immovable property rights and the right to tenure for mining claims, thereby creating an additional layer of challenges for women interested in pursuing careers in mining in the informal sector.

4.11 Objective 3: Coping mechanisms

To achieve this objective, it was essential to use open-ended questions, which gave participants in this study a platform to share their personal experiences and strategies that have proven effective in navigating the gender-based complexities inherent in small-scale mining. The coping mechanisms represent a step forward in addressing the systemic challenges and gender-based barriers identified in the first two objectives of the study. Strategies to cope with systemic gender-based segregation are instrumental, as they have been well documented across different economic sectors where women come across systemic obstacles due to the presence of biological determinism, the glass ceilings, and the glass cliffs hindering their career advancement. From this position of influence, coping mechanisms emerge as crucial strategic tools for career progression.

4.11.1 Strategic networking

The study's results regarding strategic networking suggest that operating in isolation and failing to interact with other successful women participating in small-scale mining operations. is counterproductive to women's initiatives to economically emancipate themselves

and to empower their vision of self-reliance in small-scale mining. The essential contribution of strategic networks is that the exchange of ideas amongst women can inform decision-making and cultivate confidence, thereby enhancing their capabilities and competencies and increasing their competitiveness in small-scale mining operations. Outcomes of this study suggest that leveraging strategic networking is essential towards empowering women and enhancing their access to privileged information that might otherwise be inaccessible to the wider public.

Strategic networking provides opportunities for women to connect with other successful entrepreneurs interested in small-scale mining. The creation of such strategic links provides inspiration for achieving career goals in the sector. The results of the study regarding strategic networking are instrumental in the development of leadership competencies in women to foster empowerment and assist other women in managing challenging circumstances and dismantling prevailing misconceptions regarding the active participation of women in small-scale mining operations.

4.11.2 Leadership styles

The study sought to assess the contribution of leadership style to the likelihood of success for women in small-scale and artisanal mining. Leadership is critical because it creates the path and the reference points others can follow. It is a success story and evidence of navigating through the complexities associated with operating in an environment predominantly male, compounded by cultural value systems that segregate against women's participation. The results of the study indicate that the assumption of democratic leadership principles is essential in the small-scale mining activities, since they encompass interaction, consultation, involvement, and delegation. It is incumbent upon the successful women participating in small-scale mining operations to provide themselves as influencers for other

women who might be struggling to come to terms with and navigate through the complexities they come across in small-scale mining.

Moreover, the operationalisation of transformational leadership principles, which are bent on emphasising the tenets of individual consideration and inspirational motivation, is critical in recognising the contribution that women as individual participants in these small mining activities can make, rather than generically labelling women as weaker and ineffective contributors to the success of operations in small-scale mining. However, principles of transformational leadership are only effective when the followers themselves can acknowledge and recognise other successful women participating in small-scale mining operations as their influencers and leaders.

The study has articulated the essence of leadership style in influencing life chances and providing direction to fellow women in small-scale and artisanal mining. Apart from the influence of leadership style, there are relatively few female leaders who can effectively provide comprehensive social support and inspiration to all women in small-scale and artisanal mining, given the fragmented nature of small-scale mining in Zimbabwe. The voice of women is not well pronounced, even at the national government level, when it comes to encouraging women's participation in mining in the country.

Beliefs and perspectives on leadership recognise that, even though there are very few female role models for successful navigation in small-scale mining, this creates an opportunity to build strategic networks and advocacy initiatives to recognise the contribution that women can make towards bringing sanity to operations in small-scale mining. Reported literature suggests that women with capital to venture into small-scale mining operations achieved

exceptional levels of success, which can serve as a benchmark for measuring the contributions women can make if they are not set back.

4.11.3 Female role models

The study was interested in the influence of female role models, where it was established that female role models are crucial in motivating women to confront gender disparities in small-scale mining activities. The presence of female role models was perceived to be critical in forming a pillar of strength for other women participating in small-scale mining operations. through encouraging them to venture into small-scale mining by creating equal opportunities and proposing innovative solutions to challenges that are faced by women. Female role models were viewed as appropriate ambassadors and advocates who can represent the case for women's empowerment and economic emancipation, given their better position to groom female miners into successful mining entrepreneurs. The results of the study regarding the influence of female role models in mining emphasised the strategic contribution they make in building confidence and capacity through the provision of training, education and empowerment of female miners, apart from the challenges they come across in small-scale mining.

Apart from the essence of female role models and the role they play in inspiring other women to achieve success in the small-scale mining activities, the Zimbabwean environment is set back by the scarcity of such female role models who can inspire others to support and put up their best performance towards achieving success in the small-scale mining activities. The most prominent and successful people recognised in small-scale mining are mainly men who might not be appropriate role models for females. This creates a complex conundrum for women participating in small-scale mining activities through advocacy initiatives towards the

transformation of the existing legal instruments that can enhance the recognition of the contributions that women make in the small-scale mining activities.

4.11.4 Statutory laws

The beliefs and perspectives that were expressed regarding statutory laws were widely favourable. It appears that participants in this study expressed confidence in the effectiveness of legal instruments in bringing sanity to the small-scale sector. However, some of the challenges that are faced by women participating in small-scale mining operations, go beyond mere statutory law, especially given the sector's informal nature and lack of a representative structure. Moreover, if such laws see the light of day, their enforcement is extremely challenging, as there are no mechanisms to impose sanctions for non-compliance. This is why the National Social Security Authority (NSS) finds it challenging to impose sound occupational health and safety protocols in such working environments as those in formal mining activities, industry, and the commercial sector. Nevertheless, statutory laws can be an effective coping strategy that encompasses anti-discrimination statutory laws, equitable access to licenses and permits, land ownership rights, training and capacity-building initiatives, access to credit and financing, health and safety regulations, childcare assistance, quotas, and affirmative action, and monitoring and enforcement mechanisms.

The effects of statutory laws are a copying strategy for women participating in small-scale mining operations, based on the soundness of advocacy initiatives that aim to inspire the legislature to recognise the changing social structure and the active contribution that women are making to the economy. Legislative arrangements must recognise the increasing number of women who are venturing into income-generating activities, which warrants the need for laws to be aligned with these changing social trends in ensuring that the financial sector, for instance,

can provide lines of credit to women without necessarily tying the fortunes of success to the existence of men. The essence of statutory laws is a clarion call for women-empowerment organisations to amplify the voices of women participating in small-scale mining so they can be heard by the central government, which might influence the passage of favourable statutory laws that effectively address the systemic segregation of women in small-scale mining.

4.11.5 Suitable coping mechanisms

Findings of this study have stressed the relevance of actively involving women participating in small-scale mining operations through training seminars funded by Fidelity Printers and Refiners. This demonstrates the government's commitment and recognition of the contribution women can make to bringing sanity to operations in small-scale mining. These educational programs were viewed as quite instrumental in empowering women to develop appropriate capabilities and business acumen, which are essential for navigating and achieving success in small-scale mining activities. It was highlighted that capacity-building initiatives are essential for equipping women with adequate knowledge, especially in financial literacy and business acumen, to support the entrepreneurial drive of women participating in small-scale mining operations.

The results of the study indicated that the provision of advocacy and training seminars provides guidance on mechanisms to effectively tackle issues related to gender imbalances that are faced by women in the industry. Promoting openness and equity is pivotal through encompassing equitable recruitment practices, promoting equal wages, and abolishing differentials. Moreover, the creation of collaborations is instrumental in the exchange of ideas and the improvement of the general welfare of women regarding their participation in small-scale mining.

4.12 Chapter Summary

This study was meant to comprehend the experiences of women whose livelihoods are based on their active participation in small-scale mining in Zimbabwe. The chapter analysed the demographic profiles of participants, where it was highlighted that the most predominant age group was of participants in this study aged between 41 and 50. This shows that most participants in this study were mature and familiar with economic and familial obligations that warranted their active engagement in small-scale mining. The least represented age category, those who were less than 25 years, comprised 3.33% of the total participants in this study. Insights from this study highlighted a diverse group of participants, most of whom demonstrated maturity in their insights and contributions to shaping the context of women participating in small-scale mining. Nevertheless, participants in this study faced significant obstacles in their endeavour to participate in small-scale mining.

The outcomes of this study indicated that the participants were directly involved in small-scale mining activities. These participants in this study were instrumental in establishing frameworks to improve the life chances of entrepreneurs and employees in small-scale mining. It was highlighted that advocating for legal representation of women's rights was instrumental in reducing gender-based discrimination and promoting safe working environments. The study found that the complexity of social, economic, and cultural factors has contributed to the systemic exclusion of women from active participation in small-scale mining. On the other hand, factors such as educational level influenced literacy levels in appreciating contextual factors that can be leveraged to improve the life chances of women participating in small-scale mining operations. Limited educational qualifications and exposure have affected the sustainability of mining ventures run by women.

This study underscored the significance of challenges and gender-based imbalances that create obstacles towards the active participation of women in small-scale mining operations. Some of the key obstacles that were highlighted included the existence of sexual and emotional harassment, gender-based occupational segregation, and disparities that are linked to male dominance in the industry. This is in addition to cultural views that oppose women's active involvement in economic activities, such as small-scale mining. Women participating in small-scale mining operations were found to face challenges in achieving a stable work and life balance. Ultimately, sexual and emotional harassment was isolated as being widespread in the field because of the absence of a recognised legal operating framework that regulated the activities in small-scale mining. On the other hand, the formal mining organisations, which adhere to acceptable industrial relations and labour law guidelines, differ from this.

The outcomes of this study highlight the significance of male dominance and the active participation of women in small-scale mining operations. Occupational segregation was highlighted by 45% of participants in this study as a significant barrier to women's career progression in active industry inclusion. This is in addition to salary disparities, which 41.7% acknowledged as a key issue that reduces the sector's conceptual appeal for active participation.

The study acknowledged the challenges faced by women participating in small-scale mining operations, including limited access to financial resources, rigid gendered cultural norms, limited availability of mining equipment and tools, and inadequate technical skills, competencies, and exposure. The study emphasised that the financial system typically provides financial assistance to individuals who possess collateral security. Due to cultural and legal obstacles, most women participating in small-scale mining operations lack control over intangible assets that could serve as collateral. This has resulted in their systemic failure to obtain an independent assessment of access to finance from lending institutions. As a result,

most women participating in small-scale mining are reliant on men for access to finance, which undermines independence and empowerment.

In response to these challenges, the study highlighted that leveraging strategic networks is a key approach to empowering women participating in small-scale mining operations to address gender disparities. Strategic networking provides women participating in small-scale mining operations with access to resources, enabling them to exchange ideas and strategies for navigating the intricate, male-dominated settings by leveraging expertise and connections. It was highlighted that strategic networking is key to capacity and confidence building, which are critical to the success of small-scale mines run by women.

In addition, the research highlighted the importance of transformational leadership skills and competencies, particularly intellectual stimulation, individualised consideration, and inspirational motivation, provided by leaders who have navigated glass ceilings and achieved influential positions of authority in mining. It was highlighted that female role models in leadership positions can empower other women to develop strategies to navigate gender disparities and promote women's rights.

The results of the study underscore the necessity of generating objectivity and equity in resolving gender disparities faced in the sector. The study emphasised the importance of enacting effective statutory laws to mitigate gender inequality and discrimination. It was proposed that there is a need for reform in the legislative environment to achieve equitable recruitment and parity in compensation and capacity-building frameworks that encourage the active participation of women in small-scale mining operations.

Ultimately, the study's results indicate that deconstructing pre-existing misconceptions and establishing a supportive environment and community are imperative before fostering staff

solidarity amongst women through the creation of strategic alliances with key partners who can promote sustainable mining operations. The promotion of formalisation of mining activities through the provision of fundamental training and development initiatives, and the development of occupational health and safety initiatives in small-scale mining, as highlighted, is a key strategic path to promoting the sound participation of women in small-scale mining operations. Through the deliberate development of strategic networks. It was highlighted that women in mining activities can circumvent the gender-based challenges they face and improve their socio-economic status, and that a full-size, more inclusive and equitable combining sector can be achieved. The research highlighted that prominent role models in the industry can help other women participating in small-scale mining operations navigate gender-based disparities and create a more inclusive and supportive atmosphere.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSIONS

5.0 Introduction

This study was inspired by the realisation that women's active participation in small-scale mining was heavily constrained by gender-based imbalances and other social, cultural, and legal challenges. It was established that apart from the existence of several financial support initiatives, the uptake of finance by women for the purposes of engaging in small-scale mining was relatively lower, which warrants the need to explore the existence of systemic challenges that women come across in their endeavour to participate in the small-scale mining activities. There were indications that several cultural factors mitigate the effective participation of women in economic activities, particularly in mining. It was observed that most women are permanently involved in agricultural activities as a form of sustenance; however, the cultural legacy significantly changes when it comes to the active participation of women in small-scale mining operations.

There is a host of cultural taboos surrounding the active participation of women in small-scale mining operations. The study reiterated that there is an unsubstantiated cultural belief that women are unclean and contribute to some misfortunes and calamities that take place in small-scale mining, which includes menstruating women. Even though these cultural taboos are not empirically grounded, they have adverse effects on the active participation of women in small-scale mining operations. Such cultural taboos have been reported mainly in the small-scale mining activities in the African context, with Zimbabwe not being an exception. Within patriarchal societies, women are regarded as housewives who are supposed to look after the family while the husbands are engaged in economic activities.

Nevertheless, changes in economic performance, such as those in Zimbabwe, are characterised by a high rate of formal unemployment, a hyperinflationary environment, and rapid currency devaluation, necessitating multiple income sources, which have inspired women to be actively involved in small-scale mining activities. Climate change, which is attributed to global warming, has made reliance on climate-related agriculture challenging due to incessant periods of flooding and droughts. As such, the prevailing climate change, which has led to drought-like conditions, has negatively affected the appeal of relying on agriculture as a source of sustenance. Such factors have inspired women to explore opportunities provided by small-scale mining activities, especially the mining of gold, which is more lucrative compared to other minerals. However, the limited access to financial resources hinders the scalability of women's entrepreneurial endeavours in small-scale mining operations. Usually, the formal banking system bases its financial assistance on collateral security. Due to the cultural view of a patriarchal society, most women do not have control or ownership of movable property, which can be pledged as collateral to get financial assistance.

Beyond this challenge, it was realised that a significant number of women participating in small-scale mining lack formal training in operational knowledge. The knowledge that most women have regarding small-scale mining is anecdotal evidence, which is not justified by any academic study regarding mining knowledge. This severely impairs the level of intimacy and embeddedness in competency in operational aspects of small-scale mining. It was realised that financial literacy is lacking among most women, making it practically impossible for them to view mining activities as a business rather than a source of sustenance. The sustainability of operations in small-scale mining is based on repositioning these activities as sustainable business entities expected to operate in the foreseeable future. Misfortunes are compounded by the lack of control over mining equipment.

Considering these factors, the scope of this study was meant to evaluate the gender imbalances that contribute to the under-representation of women participating in small-scale mining operations at both the strategic and operational levels. The focus of this study was on women's strategic leadership perspectives regarding their participation in small-scale mining activities. We have noticed that a significant number of women are participating in operational activities of a peripheral nature that do not generate adequate financial returns to make mining activities sustainable. Additionally, the study focused on identifying the barriers that constrain women's active participation in the sector. This study included the challenges in maintaining a healthy work and life balance, the presence of a culture predominantly male, and the presence of occupational segregation and sexual and emotional harassment in the sector due to the absence of specific legal instruments that promote and protect the active participation of women in small-scale mining operations.

Ultimately, the research culminated in the proposal of ideal adaptive strategies that women participating in small-scale mining operations can use to cope with the challenges they face and build resilience to continue their careers. Some of the proposed adaptive strategies to promote the perpetual existence of women's participation in the sector focused on the contribution of female role models, using strategic networks, and the implementation of transformational leadership dimensions, particularly regarding inspirational motivation, individualised consideration, and intellectual stimulation. The role of statutory laws was emphasised in this study.

Having taken these factors into account, the scope of this chapter was to articulate the implications of the study's results, including their similarities and differences with prior studies in a similar line of inquiry. Implications are analysed to contextualise the study's current results within the existing literature and to identify the contribution the study can make to the body of

knowledge regarding the systemic challenges women experience in participating in mining activities. It was imperative to note that the challenges women experience may not be confined to small-scale mining activities but may also generalise to other leadership positions, where the gender distribution demonstrates male dominance.

However, this study was not intended to generalise its results to the wider population, but to generate deep insights into the intricate challenges and gender imbalances that characterise operations in small-scale mining from the perspective of women directly involved in such activities. It was believed that the ability to generate such insights can inspire additional research that can influence policy formulations that might culminate in an improvement in the legislative environment and even a change in our cultural legacy, especially considering the changes in the economic conditions where formal employment is gradually declining with the informal sector making a significant contribution both to the economy and at the household level. This section further provides research implications for practice and for future research, and articulates the key conclusions and answers derived from undertaking this study.

5.1 Implications

This section examines the implications of women's active participation in small-scale mining in Zimbabwe. The study investigated the lived experiences from the viewpoint of women who are either directly or indirectly involved in the activities that take place in small-scale mining. It was believed that collective encounters can help shape the way we review the contributions that women are likely to make in small-scale mining in Zimbabwe. Participants in this study comprised of 50% women who own small-scale gold mining claims in Zimbabwe.

Their insights were of paramount importance in this study because they helped shape the study, considering their experiences in small-scale mining in Zimbabwe. The study found

that, on average, participants in small-scale mining had lower levels of education. This has implications for the magnitude of financial literacy required to actively participate in the financial system, especially when we consider alternative forms of finance that can improve women's economic and financial participation in the mineral ore extraction sector.

5.1.1 Immovable property rights for women

The results of the study regarding immovable property rights for women with an interest in small-scale mining resonate with the existing literature, which has isolated immovable property rights as a stumbling block in the success of women-driven small-scale mining. Key highlights from the works of Iguma *et al.* (2021) reiterated that women lack the right to property ownership, and they face challenges in getting mining licenses in the Eastern Democratic Republic of the Congo. These have led other women participating in small-scale mining operations to seek the assistance of men to register the mining claims on their behalf as they come across challenges in accessing markets. Relatedly, the lack of legal recognition and ownership of immovable property and land rights was found to have influenced the business success rates for women in artisanal mining in Ghana and lowered their economic empowerment (Buss *et al.*, 2020).

Current results of the study confirmed the assertion that culturally, women are usually segregated when it comes to ownership of immovable property and land rights. Even in customary marriages, everything is registered in the name of the husband who exercises their “*patriarchal rules*” (Adam *et al.*, 2022) These the results of the study confirms the earlier position by Danielsen and Hinton (2020) who stipulated that the scant provision of immovable property rights for women disempowered them in making independent choices, or rather limit the scope of choices they have especially when they relate to property. On the other hand, the

formalisation of property and land rights is a complex and cumbersome process in small-scale mining, which has led to a sizeable number of miners being participating in the informal or illegal mining activities (Adam et al., 2022). It stands to reason that apart from the lack of immovable property rights, a sizeable number of operations in small-scale mining lack legal recognition on account of the failure to utilise proper channels. Notably, the works of Ibrahim *et al.* (2020) emphasised the risk of domestic abuse that women experience at the behest of a lack of immovable property rights, as affecting their life chances in small-scale mining.

Apart from the influential appeal on women empowerment in small-scale mining, these views are inadequately supported by existing literature which stipulates that in the absence of land and immovable property rights, the voice of women is unheard in small-scale mining and in the public space (Danielsen & Hinton, 2020). Schrenker (2023) goes further to propose that women experience hurdles in advocating for legal frameworks that improve their chances in small-scale mining

Ultimately, the study found that the processes of being granted these immovable property rights have always remained elusive, complex and cumbersome for women to navigate through as opposed to males. Leading to some men fronting for women regarding registration of mining claims and ownership of immovable property. These legally unenforceable agreements might pose challenges for women in the event of a dispute. This explains why a significant proportion of participants in this study agreed or strongly agreed that such processes of obtaining immovable property rights or even getting mining claims were very challenging for women and curtailed their prospects of success in small-scale mining. It appears that the constraints that women come across in the confines of operations in small-scale mining are allegedly culturally constructed.

5.1.2 Access to finance

Current results of the study on access to finance by women participating in small-scale mining operations corroborate similar insights that were echoed by Jackline (2022), where women were found to come across discriminatory attitudes in getting credit from the financial sector on account of their lack of collateral security and lower levels of financial literacy and education. On the other hand, Current results of the study contradict the works of Ngwerume (2023), who proposed that women participating in small-scale mining operations can leverage social financing options as a panacea to the collateral security constraints they face. Apart from the appeal of these methods of raising finance, their relevance to women participating in small-scale mining operations is lowered by the relatively punitive interest rates that deter their uptake by women.

Zimbabwe has witnessed a phenomenal rise in loan sharks who are prepared to provide funding for consumptive and investment purposes without demanding collateral security. However, they are setting apparent pitfalls associated with relying on these sources of funding. Principal among them is that they charge exorbitant interest rates of over 33% over a relatively shorter repayment period, which may not consider the cash flow position of women participating in small-scale mining operations entrepreneurial activities. A great deal of financial literacy is required on the part of women to be able to evaluate the relevance of different sources of finance that can potentially fund the sustainable operations in small-scale mining. Given that most women in this study indicated they lack basic education, this may adversely affect their ability to demonstrate proficiency in financial education and literacy, thereby hindering their ability to evaluate the financial options at their disposal.

However, a particular segment of participants in this study believed that access to finance was not a challenge that constrained their sustainable operations in small-scale mining. These views are attributed to existing minus, but they managed to establish supply chain relationships which promote their sustainable operations. Additionally, such respondents have sufficient internally generated funds to support their operations without relying on the financial sector.

5.1.3 Rigid gendered cultural norms

Current results of the study corroborate existing beliefs and perspectives expressed by Valadares *et al.* (2022) who positioned males as stronger and more adaptable to the strenuous mineral ore extraction activities than women, given the relatively lower echelons of automation. The works Pasterski *et al.* (2022) stressed that the biological perspective perpetuates the gender inequality in small-scale mining, as women are viewed as child-bearers who are not suitable for working in mines. The results of the study corroborate related insights from the works Canevello (2020) who stated that women are stereotyped as domestic workers and carers rather than as mining employees. However, these studies appear to cast a blind eye to the menial intricacies that characterise some small-scale mines, which might at face value not be suitable for women to venture into.

This study found that there are stereotypical economic considerations regarding the effort that women must make as compared to men when it comes to the ultimate gains and efficiency associated with operating operations in small-scale mining. These rigid gendered cultural norms contribute to a sizeable number of interviewees believing that existing social, cultural, and economic perceptions are against women and negatively affecting their active involvement in the small-scale mining activities (31.67%). The results of the study on the

economic contribution of rigid gendered cultural norms corroborate related insights expressed by Ibrahim, Rutherford, & Buss (2020), who stated that rigid gendered cultural norms are intertwined with the ownership and control of immovable property rights, thereby raising men's bargaining power in mining activities.

The results of the study show that women are discriminated against due to the presence of gendered stereotypes that favourably position men over women participating in small-scale mining operations. These outcomes confirm the extent of literature which has indicated the entrenched prevalence of gender-based prejudice against women, especially in segments of the economy predominantly male, like construction and mining.

5.1.4 Limited technical skills and competencies

The study established that there is a collaboration regarding beliefs and perspectives on limited technical capability among women participating in small-scale mining operations that is in support of the existing literature, which shows that limited access to education affects skills and competencies acquisition and technical competency by women in small-scale and artisanal mining (Buss *et al.*, 2019). Current results reiterate the essence of imposter syndrome, whereby women are viewed as being inferior to men since they lack the requisite technical skills and competencies, which creates a significant cognitive barrier to career advancement (Danielsen & Hinton, 2020).

In addition, current results confirm the insights by Madikizela (2018) who expressed that women lack professional development because of the underdeveloped scientific capabilities and expertise. Related insights were expressed in the works Otoijamun *et al.* (2021) who identified weak mining skills and competencies as one of the challenges faced in small-scale mining in Nigeria.

In the absence of adequate automation in the mechanisation, the life chances of women participating in small-scale mining operations are limited, given their scant mastery of the technical skills and competencies involved in the direct operations. To that end, a relatively higher segment of women is found to occupy peripheral activities that support the core mining activities. These views are in support of similar outcomes that were established in Zambia, where a sizeable number of women were found to be offering sexual and entertainment services to men, something which is not cool or instrumental in the mineral ore extraction activities.

5.1.5 Access to mining tools and equipment

The results of the study expressed in this study regarding constraints in accessing mining equipment are in support of existing literature, which highlights that technology infusion has been a significant barrier for women participating in small-scale mining (Valadares *et al.*, 2024). Outcomes of this study established that most small-scale entities make use of rudimentary equipment and tools in mineral ore extraction. This goes against the dictates of best practices in using proven machinery and tools that create a safe working environment. This perspective is closely related to occupational health and safety issues due to the failure to use acceptable mechanisms and equipment during mineral ore extraction. The compromise that characterised the extraction of minerals such as gold has more often been a bone of contention that has relegated women to the periphery.

Resultantly, women experience severe challenges in acquiring the resources necessary to operate efficiently in the small-scale mining activities (Sasikala & Sankaranarayanan, 2022). Limited access to requisite technologies makes it challenging for women to stay ahead of the latest technological developments in the industry, contributing to underproductivity (Njonge,

2023). The inability to have adequate machinery and equipment isolates women's contribution in small-scale mining and reduces the chances of networking (Yakovleva *et al.*, 2022).

5.1.6 Legal frameworks of ownership of immovable property by women

The results of the study on the weak legal frameworks of ownership of immovable property by women for women collaborate with existing literature, which features that limited immovable property rights and legal status of women influenced their effective participation in small-scale mining (Bussa *et al.*, 2020). This study has specified the presence of gendered imperfections against the legal frameworks of ownership of immovable property by women participating in small-scale mining operations, which have been a significant barrier towards their advancement, given that existing rules and regulations have a bias towards men. Similar beliefs and perspectives were expressed by Arthur-Holmes, Yeboah, *et al.* (2023), who expressed that the lack of legal recognition and protection was a significant drawback for women's career advancement in small-scale mining.

This comes against a background where countries like Ghana have statutory laws granting women equal rights to ownership of immovable property, which includes lands where small-scale mining activities can be conducted (Gyan & Behrends, 2024). However, there is a contradiction when considering property ownership from a custom and cultural perspective, where the practices often prioritise men on inheritance issues. It can be argued that the existence of a customary system in property ownership often creates conflicts that limit women's actual ownership of land and its control. The results of the study on a weak legal framework that does not safeguard the interests and rights regarding the ownership of immovable property appear to resonate with similar beliefs and perspectives expressed in Nigeria and Ghana. Women in Ghana were found to be working on the periphery on account of a lack of legal and economic

rights regarding their participation in artisanal mining activities (Arthur-Holmes & Abrefa Busia, 2021).

The current study results on weak legal frameworks that do not adequately serve the legal interests of women participating in small-scale mining operations corroborate outcomes from the works of Koomson-Yalley and Kyei (2022) who articulated that the prevalence of hegemonic characteristics in the small-scale mining industry is deeply entrenched in the patronising livery system, which prevents men from accessing land and acquiring mining licences and other legal provisions at the expense of women.

In most jurisdictions, including in the DRC, the provision of mining licenses is a function of ownership of land that discriminates against women, who face difficulties of owning property rights (Bashwira & van der Haar, 2020). That is managed to do, putting in place something that sounds like a remix to protect women against exploitation in mining, except in developed countries like Canada and Australia, which promote gender inclusion through anti-discriminatory laws (Parmenter, Leroy-Dyer & Holcombe, 2024).

Ultimately, Zimbabwe lacks a gender-specific legal framework to encourage women participating in small-scale mining. Policies are generic in their attempt to counteract discrimination against women. However, they appear not to have implemented any operations in small-scale mining-specific frameworks that have successfully encouraged the active participation of women and addressed the challenges they face from a legal perspective. These beliefs and perspectives are in support of the works of Mkodzonge (2023) who reiterated that women's voices and opinions are frequently not heard in forums where decisions affecting their welfare are made.

On the other hand, the lack of awareness of legal instruments that can be used to enforce compliance with gender equity expectations appears to be perpetuating the gender-based occupational segregation of women participating in small-scale mining operations.

5.2 Objective 2: Gender-based challenges experienced by females in mining

The overarching aim of the second objective was to articulate the gender-based challenges faced by women participating in small-scale mining operations. The key implications regarding this study objective are outlined below.

5.2.1 The prevalence of sexual harassment

The results of the study on the prevalence of sexual and emotional harassment among women participating in small-scale mining operations support existing literature, which identified the presence of sexual misconduct contributing to the restrained participation of women in small-scale mining operations. Grech *et al.* (2023) have shared related insights about the impact of sexual and emotional harassment on women's participation and the subsequent discouragement it causes due to the hostile and unequal operating context in the small-scale mining activities. Existing literature pinpoints that the presence of sexual and emotional harassment is contributing to the fear and vulnerability that women have in a predominantly male environment. This contributed to the existence of psychological disorders such as depression, anxiety, and poor general well-being while working in the small-scale mining activities (Mugo *et al.*, 2020). The exploitive view of women as objects of sexual pleasure was highlighted in the Solwezi mining area in Zambia, where women were found to supplement their income through engaging in commercial sex work (Johnston *et al.*, 2024).

Elements of sexual how to spend a life in the context of most small-scale mining environments in Zimbabwe. Due to the relatively depressed earning capacity for women, some of them complement their peripheral activities with the provision of alternative entertainment, which includes sexual entertainment for miners. The rampant nature of sexual exploitation in the informal mining setups is a result of the lack of an operating structure that promotes the enforcement of policies against sexual and emotional harassment. This is distinguished from established mining companies that have discernible service charters and ethical codes of conduct that clearly articulate the measures that can be taken in dealing with incidents of a sexual and emotional harassment nature. Because of these events, the outcomes of this study suggest that the prevalence of sexual and emotional harassment is one of the key stumbling blocks affecting the proper inclusion of women in the confines of operations in small-scale mining in Zimbabwe. There is no sound mechanism in small-scale mining, which is there to regulate the behaviour of people in the small mining activities where sexual and emotional harassment is concerned.

5.2.2 Male domination

Existing literature appears to suggest that, due to the menial nature of most artisanal mining activities, are such that most men are involved in the actual manual activities with women occupying the periphery (Kumah *et al.*, 2020; Ofori *et al.*, 2022). The works of Paschal and Kauangal (2023) specified that women are readily available in lower echelons in the artisanal mining sector as a result of deficiencies in skills and competencies and capabilities, relatively lower levels of education, and the presence of discriminatory cultural norms. The environment predominantly male has perpetuated the existence of sexual exploitation of women. Another perspective is that the existence of an informal structure in the informal mining activities has attracted commercial sex workers who further perpetuated male

dominance and exemplified women as the weaker sex (Chimoyi et al., 2024; Iguma Wakenge et al., 2021).

The study's findings on the impact of an environment predominantly male on women's inclusion in participation in the small-scale mining activities are aligned with prevailing literature where the role of women participating in small-scale mining activities is underrecognized. Existing literature appears to suggest that due to the nature of most small mining activities, most men participate in the heavy activities, with women occupying the peripheral roles (Koomson-Yalley & Kyei, 2022). The existence of an environment predominantly male perpetuates the existence of sexual exploitation of women. Another perspective is that the existence of an informal structure in these mining activities has attracted commercial sex workers who are predominantly male and exemplify women as the weaker sex.

Even though the domination of men in small-scale mining can be culturally constructed to systemically segregate women, an alternative perspective focuses on the actual activities that take place in the sector, which by their nature may not be ideal for women to actively partake in. From this perspective, it is apparent that using rudimentary methods of mineral ore extraction and working in confined workplaces while having inadequate occupational health and safety gear can obviously affect the lives and experiences of women who might be interested in engaging in actual mineral ore extraction activities. The apparent male domination in the small-scale mineral ore extraction sector, especially of gold, appears to support the biology theory, which stipulates that there are some jobs that are ideal for men to do, whereas others should be the preserve of women.

5.2.3 Occupational segregation

The findings defy the established minimum safety and occupational health standards at formal mining entities, which mandate reporting on occupational hazards and implementing disaster recovery plans to handle unforeseen events (Arora *et al.*, 2023; Block, 2023). Current results of the study regarding the absence of occupational segregation in the small-scale mining activities contradict existing literature that has established the existence of such forms of segregation against women's participation through the assignment of specific types of jobs, such as general labourers and other manual activities, to women, which affects their earning capacity (Ragins & Scandura, 2018).

Current results of the study suggest that the gender-based occupational segregation of women regarding the types of roles and responsibilities they are assigned to in small-scale mining has significantly influenced the contributions they can make to the sector in terms of policy pronouncements. However, when we consider the predominantly menial nature of operations in small-scale mining that are, in most circumstances, bereft of ideal mining equipment and utilities, we might be compelled to believe that it is just defined for women to occupy some peripheral and less risky activities.

Most operations in small-scale mining are characterised by working in confined workspaces and doing so with minimal occupational safety and health considerations. This might pose challenges to women, especially when we consider the need to maintain a healthy work and life balance. In addition, the less structured and unregulated nature of operations in most small-scale mining entities is such that there are no specified operating times, which might entail spending a great deal of time underground, further destabilising the work and life balance.

5.2.4 Wage differences

Current results of the study in relation to which differentials in small-scale mining are in support of existing literature, which has proven that women are not paid as much as men due to the nature of jobs and activities they are assigned (Valadares *et al.*, 2024). The justifications have been given from a cultural perspective where women are expected to be confined to the family and look after the family rather than being breadwinners. However, the prevailing economic context in Zimbabwe has led to a significant number of women engaging in economic activities to supplement family income, defying cultural and biological norms as they strive to establish a livelihood in the potentially lucrative small-scale mining.

Women seeking potential financial gains in small-scale mining have faced the obstacle of salary differences. Current results of the study support the gender gap and email dominance in small-scale mining, which influence these dynamics (Sasikala & Sankaranarayanan, 2022). The prevalence of wage differentials reflects the existence of occupational segregation where women occupy less lucrative roles like processing, sorting, and cleaning duties that are typically endless compared to the technical and managerial occupations occupied by men. Another perspective on wage differentials in the small-scale mining sector stems from the lower educational qualifications and technical skills and competencies, which hinder women's ability to secure higher-paying positions in small-scale mining activities.

5.2.5 Work and life balance

Current results on the work and life imbalance are in support of related beliefs and perspectives by Jiang (2021), who indicated that since women take time out of their career duties during pregnancy and child support, they regress their careers and income prospects. Ultimately, women find themselves in a quandary as to whether they should focus on their

careers or their personal lives. It appears their competing demands between work and life are to the disadvantage of women since they cannot effectively begin for high wages when they take care of breaks. These the results of the study support similar insights that were shared by Yakovleva *et al.* (2022) were it suggested that the dangerous working conditions that surround the small-scale mining activities make It challenging for women to spend most of their time at work and, in the process, sacrifice their earnings.

Current results of the study on the imbalance between work and life align with existing literature, highlighting the absence of support systems and mechanisms in this sector to ensure a stable work and life balance for women (Silva *et al.*, 2023). The small-scale mining sector's informal nature, which is characterised by its lack of maternity leave provisions, discriminates against women by denying them income during the time they spend away from work caring for their children (Tobalagba & Vijayarasa, 2020). However, the same does not apply to men participating in small-scale mining. This contributes to and demonstrates the existence of gender discrimination in small-scale mining regarding the payment of fair wages (Arthur-Holmes & Abrefa Busia, 2021).

5.2.6 Cultural beliefs and the involvement of females in small-scale mining

In a typical African context, which surrounds Zimbabwe, culture plays an overbearing role in influencing the belief systems and active engagement of women in a typical male-dominated environment like small-scale mining. In this regard, the Current results of the study are supported by the existing literature, which shows that male domination in small-scale mining activities fails to create a fair and inclusive working environment that incorporates women in strategic decision-making (Ibrahim *et al.*, 2020).

The absence of a collaborative approach in mining activities has disadvantaged women, as they lack decision-making power and rely on men to make decisions on their behalf. This close limit is the situation women experience in their social lives. The works of Arthur-Holmes & Matey (2025) reiterate that women suffer from several inequalities of a political, social, and economic nature that impede their economic empowerment and participation in small-scale mining.

5.3 Objective 3: Coping mechanisms

The third research objective was to devise the ideal coping mechanisms to enable women participating in small-scale mining operations to handle the challenges they face and advance their career paths.

5.3.1 Strategic networking

Findings of this study on strategic networking as established in this study are in support of existing literature, which shows that the lack of business and networking possibilities has a high chance of lowering the chances of women's career advancements (Buss *et al.*, 2019). The inability to create sound strategic networks affects the career progression of women and restricts their access to information and opportunities (Danielsen & Hinton, 2020). The essence of networking was found to contribute towards building strong support networks and coalitions that increase their chances of acceptance in senior management roles (Hutchings *et al.*, 2020).

5.3.2 Leadership styles

The study has articulated the essence of leadership style in influencing life chances and providing direction to fellow women participating in small-scale mining operations. Apart from the influence of leadership style, there is a dearth of female leadership that can effectively

provide all-around social support and inspiration to all women in small-scale and artisanal mining, given the dissected nature of operations in small-scale mining in Zimbabwe. The voice of women is not well pronounced, even at the national government level, when it comes to encouraging women's participation in mining in the country. Nevertheless, the views on leadership style confirm similar beliefs and perspectives expressed in the existing literature, which found that leveraging mentorship influences leadership's followers in sharing information, experiences, capabilities, and competencies (Hilson et al., 2018). Leadership serves as a reference point to assist women in navigating the complexities of small-scale and artisanal mining (Rutherford & Chemane-Chilemba, 2020).

5.3.3 Female role models

Findings from this study have established that female role models provide orientation, enabling women to realise their full potential in small-scale and artisanal mining. There are several female role models in the mining sector that women participating in small-scale mining operations can look up to for motivation and orientation.

There are numerous organisations that have been put forward to help as role models for women's empowerment and emancipation. These include the Zimbabwe Association of Women in Mining Associations (ZAWIMA), the Women in Mining Zimbabwe (WIM Zimbabwe), and the Zvishavane Women's Mining Association (ZWMA). The ZWMA is made up of fewer than 300 women in Zvishavane and Mberengwa who meet through workshops and gatherings to raise awareness of the intricacies in small-scale mining. The ZWMA plays an important role in advancing women's growth and development in the small-scale mining sector.

Women in Mining Zimbabwe acts as a critical partner in developing an inclusive, sustainable, and resilient mining ecosystem that encourages women's participation in ethical,

safe mining practices. This stems from the realisation that women's conventional participation in small-scale mining activities has been affected by a male-dominated environment. The strategic role of women in mining in Zimbabwe is to sensitise women on prospecting, value addition, and market access across the mining value chain. Women in Mining Zimbabwe also aims to promote inclusion, formalisation, safety, sustainability, and community rebuilding through resilience.

The Women Empowerment in Mining Zimbabwe aims to promote the inclusion and active participation of women across the mining value chain through creating a network of strategic links. The organisation establishes a strategic link to recognise the commercial potential of advocating for women in mining in Zimbabwe. Through celebrating the success stories of women and advocating for inclusive policies, the organisation also provides essential financial strategies and practical training. Ultimately, the Women Empowerment in Mining Zimbabwe systematically aims to dismantle barriers and foster an environment where women can succeed as professionals, common leaders and entrepreneurs in the critical mining sector.

The existence of women's mining organisations in Zimbabwe provides a platform through which women in mining can access role models to look up to for motivation and direction. Despite the existence of such organisations in Zimbabwe, their numbers are relatively few, in a way that a sizable number of women actively participating in small-scale mining may not have access to them. As a result, the effect of women's representative organisations is not felt by all women participating in small-scale mining operations, especially those at lower levels.

Despite this shortcoming, women's empowerment groups are nevertheless instrumental in capacity building, cultivating a culture of confidence, fostering economic emancipation, and

fostering a sense of community and self-awareness. These views resonate with insights from Jiang (2021) who expressed that the growth of professional women is likely inspired by the contributions of role models on similar career journeys. This pathway has been used as a career where women can effectively utilise as a tool to break glass ceilings. The works Arora *et al.* (2023) stress that by showcasing successful women who have excelled in this field, aspiring professional women can gain confidence, motivation, and a sense of possibility for their own careers.

In the final analysis, the influence that women's role models have over their counterparts in the small-scale mining sector is overbearing in motivating them to navigate the complexities of operating in a predominantly male environment.

5.3.4 Statutory laws

There is yet to be a legislative framework guiding the gendered performance of women participating in small-scale mining operations, with the intention of protecting their interests and improving their legal protection. The absence of a gender specific statutory laws are also compounded by the relatively informal structural makeup of most small-scale mining activities. As a result, it becomes difficult to enforce sound occupational health and safety protocols in line with the social security expectations. These beliefs and perspectives resonate with the works of Ibrahim *et al.* (2020) who stressed that statutory laws governing workplace safety and protection can create and enforce occupational health and safety requirements that expressly meet the special requirements and challenges faced by women, such as protection from sexual and emotional harassment and measures for support for mothers and children. Research by Ngwerume (2023) emphasised the promotion of women's rights towards the development of operations in small-scale mining in Africa. Through the lens of this study, the promotion of

women's rights in the small-scale mining sector begins by ensuring that adequate occupational health and safety standards are adhered to, even for men, so that they can be extended to women participating in this sector.

5.3.5 Suitable coping mechanisms

These the results of the study relating to the coping mechanisms resonate with the works of Jiang (2021) who stressed that the growth of professional women is likely inspired by the contributions of role models on similar career journeys as a tool to break glass ceilings. Schwartz (2020) states that the obstacles to gender equality that women participating in small-scale mining operations must overcome can be actively addressed by women themselves.

5.4 Recommendations for policy application

Outcomes from this study have confirmed the presence of deeply entrenched challenges that women experience in their endeavour to navigate the complexities of operations in small-scale mining in a typical developing economic context. There are several cultural, economic, and fundamental legal gaps that create fissures for the perpetuation of the gender-based occupational segregation and discrimination of women from actively participating in the small-scale mining activities. The principal outcomes of the study highlight the gendered challenges women encounter as they navigate a predominantly male environment.

5.4.1 Recommendations to the Government of Zimbabwe

The research established that women lack immovable property rights, which affects their participation in mining activities. Considering this, future research should focus on women's gendered immovable property rights. These proposals are consistent with insights from the works of Tobalagba and Vijayarasa (2020) who specified that a gendered approach

towards transferable immovable property rights was a key milestone in formalising mining activities to capacitate the formal recognition of women participating in small-scale mining activities and enhance their access to finance.

Related beliefs and perspectives were echoed by Jackline (2022), where it was reiterated that rural women with an interest in artisanal mining face constraints in controlling immovable property rights due to the current customary laws and the lack of legal documents required for securing immovable assets under the prevailing statutory law. The realisation that many women with interests in the small-scale mining activities lack territorial rights (Mugo et al., 2021), demands further research to advocate for revisiting legal statutes regarding women's property rights.

Future research can explore the possibility of realigning legal frameworks with societal trends, where women are increasingly actively participating in income-generating activities, including mining. Therefore, it is imperative for future research to explore the possibility of a paradigm shift in legal reasoning and to recognise that women can achieve independence even in marriage, thereby enhancing their chances of gaining legal title to property and mining claims. We can consolidate their competitiveness in small-scale mining.

The outcomes of the study underscore that immovable property rights are tipped against women in a patriarchal society. The legislative environment has not improved, with current laws not being favourable to women's ownership of immovable property. Even though amendments to the Marriage Act have granted women rights over immovable property, it is imperative that this be advanced through amendments to inheritance and property laws to capacitate women to own land and mining claims. This is instrumental in addressing systemic cultural prejudices against women's control over productive resources and in securing

women's right to access finance from financial institutions by pledging their assets as collateral. Strengthening immovable property rights to recognise women-enforced legal parity and gender equality in public office. It is effective in dismantling the prevailing patriarchal practice that discriminates against women property owners.

Advocacy initiatives to amend immovable property rights must recognise women's independence as parties to legally binding and enforceable contracts, without having to rely on a man to act on their behalf. This comes out of the realisation that a significant number of mining claims in Zimbabwe that are purported to be owned by women are owned by men who act as a front for women to get legal recognition and registration. Therefore, initiatives to recognise the emancipatory potential of women's independence can go a long way towards providing a sustainable route to economically empowering women's entrepreneurial drives in small-scale mining.

The study identified a knowledge gap in women's ability to apply the requisite skills and competencies in small-scale mining. The Ministry of Women's Affairs must implement specific small-scale mining initiatives to impart the necessary know-how regarding the intricacies of operations in small-scale mining in the Zimbabwean context. Capacity-building initiatives must be tailored to the identified skills and competencies gaps among women in relation to their contributions to operations in small-scale mining. The scope of capacity building initiatives can be defined along the lines of recent mining technologies, business management, and acceptable occupational health and safety standards. It is imperative for the Ministry of Mines and Mining Development to provide incentives to established mining companies that prioritise mentorship for women interested in pursuing mining as a career.

Zimbabwe has a School of Mining; it is imperative that women interested in pursuing a career in entrepreneurship in small-scale mining complete the formal capacity-building training provided by the Zimbabwe School of Mines. These capacity-building initiatives stand to benefit women by imparting the requisite know-how related to the technical and business sides of mining operations. Capacity building is an essential strategy to address the gender-based occupational segregation of women participating in small-scale mining operations, due to their failure to demonstrate proficiency and competency in utilising available tools, techniques, and equipment. Acquiring know-how in the operational and intricate aspects of small-scale mining can enhance women's bargaining power regarding their earnings and earn them respect and recognition for the contributions they make in the small-scale mining sector.

The legislature has a key role to play in strengthening existing legal frameworks to promote women's participation in mainstream economic activities, given that women make up 52% of the population in Zimbabwe. Specific legal instruments must be created to increase the proportion of women participating in small-scale mining operations by providing them with equal rights to ownership and control of mining ventures nationwide. The scope of legal instruments that can be implemented includes granting women legal recognition as mining owners, empowering them to enter into enforceable contracts, and easing access to loans and to legal protection in the event of misunderstandings regarding small-scale mining ownership. Advocacy measures towards the enforcement of a legal framework must culminate in policies that punish perpetrators of women's discrimination and gender-based occupational segregation, especially when it comes to the ownership and control of mining claims.

Apart from the allure of legal frameworks, one key drawback of pursuing the legal route to address the gender-based imbalances and systemic challenges women experience in small-scale mining is the informal structure of most small-scale mines themselves. Even though

statistics put the number of legally registered small-scale miners at around 535,000 nationwide, with women owning 10% of such mines, the actual number of people participating in small-scale mining in Zimbabwe is exponentially higher, at around 1.5 million.

This is a sector that is largely unregulated in terms of compliance with acceptable occupational health and safety protocols and with industrial relations regulations. From such a perspective, it becomes a challenge to try to regulate a sector that is largely recognised as illegal or of flouting basic laws of the land in terms of the protection of intellectual immovable property rights and the invasion of property. It suffices to say that even though the focus of this study was on the formal small-scale sector.

The government, through the Ministry of Women Affairs, Community, and Small and Medium Enterprises, along with the Ministry of Mines and Mining Development, ought to establish a mining supply chain system that expedites the provision of mining equipment to women interested in venturing into mining activities. These initiatives can operate on a range of lease arrangements to provide the necessary equipment to enhance the productivity of women participating in small-scale mining operations. In addition, initiatives that provide funding for women to develop their mining cooperatives can go a long way toward collectively procuring the relevant mining equipment. Mechanisms to create transparent, small-scale supply chains ought to be optimised to recognise women's leadership talent in the sector and provide preferential support for their economic emancipation.

5.4.2 Recommendations for the Financial Sector

One of the noted hindrances to women's participation in mining activities is the lack of financial literacy regarding available financial options to enhance their access to capital. The financial sector has a role to play in promoting and capacitating women through financial

literacy and education programs. Additional research can explore the challenges that women come across regarding financial literacy, as it was identified as a barrier to their financial participation. This calls for future research on hybrid financing models that leverage crowdfunding, microfinance, and cooperative funding as key solutions to the challenges faced by women. This comes from the indications from Perks and McQuilken (2020), it was noted that financial literacy programs solidify the scope of entrepreneurial activities and business acumen in the manner in which women engage in the small-scale mining activities.

The findings of this study have established that the Ministry of Women Affairs and the Ministry of Mines and Mining Development can partner with Fidelity Printers and Refineries to promote financial literacy programs targeted at women participating in small-scale mining operations. This is instrumental in raising their level of financial awareness and education so that they do not play second fiddle to men in the mining sector when it comes to accessing finance. These initiatives can complement the prevailing National Financial Literacy Strategy that is being championed by the Reserve Bank of Zimbabwe through various players in the financial system in Zimbabwe.

These initiatives have proven to be effective in enhancing access to capital by women in related operating environments. Programs aimed at improving women's financial literacy and financial education are critical to their emancipation and to their gaining knowledge of alternative sources of finance they can explore. Moreover, the government, through the relevant Ministry of Women Affairs, Community, and Small and Medium Enterprises, can advocate to the Ministry of Finance and Economic Development for policy frameworks that should culminate in the provision of collateral-free loans for investment purposes in the small-scale mining activities, given that the gold mining activities are one of the main foreign currency earners in the country. Preferential interest and collateral-free loans may be provided on the

condition that women in small-scale gold mining pledge to sell all their gold ore to Fidelity Printers and Refiners.

5.4.3 Recommendations for Non-Governmental Organisations

The research has identified segregation as a key barrier to women's active progression in the small-scale mining activities. Future studies can investigate the application of creative strategies aimed at changing the prevailing cultural norms that hinder not only the involvement of women but also their growth in the small-scale mining activities. These calls come from the backdrop of related sentiment that was expressed by the works of Sharma et al. (2019), who reiterated the essence of appreciating and resolving the interlink of organisational, personal, and societal determinants that promoted the vertical segregation of women, limiting their rise to influential positions in business and organisations. Comparative research must be undertaken in varied social and economic jurisdictions to examine the detrimental effects of cultural practices that hinder women's participation and property ownership. These insights shed light on how to operationalise Zimbabwe's legal frameworks in a similar manner to curb the proliferation of gender-based occupational segregation.

Rigid gendered cultural norms and social norms are part of the complex web of culture that undermine the contribution that women stand to make in small-scale mining in Zimbabwe. Addressing them requires collaborative action through community awareness programs aimed at sensitising people to the changing social and economic structure, requiring both men and women to collaborate in contributing to the sustenance of the family. These initiatives can be supported by Non-Governmental Organisations through community sensitisation programs to embrace cultural dynamics that challenge pre-existing norms that deter women's active participation in economic activities, including small-scale mining. The scope of these

community sensitisation initiatives is meant to sensitise public perceptions regarding the active participation of women in small-scale mining operations.

It must be brought to the fore in these community sensitisation initiatives that society is undergoing a transformation in which not only men are expected to look after the family by securing employment, given the challenging economic conditions. As a result, the community must embrace women who are prepared to venture into operations in small-scale mining if they have the required skills and competencies, capacity, and capabilities. In addition, it is imperative to set up gender-sensitive workplace policies that encourage the active participation of women in small-scale mining operations by established mining entities. This serves as a launch pad for developing the skills and competencies and capabilities women need to pursue their personal endeavours as small-scale miners.

5.5 Recommendations for future study

One of the key outcomes of this study was the realisation that there is an apparent lack of supply chain transparency, especially in the small-scale gold mining supply chain. In effect, the operations of most small-scale mines are shrouded in mystery and secrecy, which runs counter to the dictates of collaboration in sustainability (Huggins, 2023). This lack of transparency is meant to keep others, especially women, in the dark, so they do not assume influential leadership positions in the sector. The lack of mastery of the supply chain is mainly to the disadvantage of women who are largely exploited on account of their lack of mastery of the intricacies and synergies necessary to achieve success in the sector.

In this regard, future research must explore the efficacy of existing diversification of entrepreneurial activities as a gender-focused strategy to circumvent the prevalence of discriminatory policies in the sector. Such a research approach would aid in evaluating the

impact of gender policies on the participation of women not only in small-scale mining but in the mainstream economy. These recommendations are consistent with insights from Mabe, Issifu and Wongnaa (2024) where it was established that the adoption of social networking and diversification were effective coping strategies for women farmers who supplemented their income from operations in small-scale mining.

This comes from the realisation that women entrepreneurs are systemically excluded from the supply chain across different industries. The works of Orser *et al.* (2020) proposed gender-responsive strategies to enhance the active participation of women entrepreneurs in public procurement practices. This implies that the gender-based occupational segregation of women in business is far-fetched, which requires a concerted approach to future research in proposing strategies that can enhance the chances of success for women, with their involvement in the manufacturing sector not being an exception.

Apart from giving emphasis on challenges that women come across in the context of the small-scale mining sector, future research can emphasise how women can leverage sensing, seizing and reconfiguration capabilities, strategic agility and resilience in navigating through the complexities they come across in the small-scale mining sector. This represents a paradigm shift in repositioning the contribution that women can make to the economy at large and to the small-scale mining sector from a strategic perspective rather than as mere employees in the small-scale mining sector.

5.5.1 Recommendations for women empowerment groups

Additional research must explore the possibilities of altering rigid gendered cultural norms and cultural norms that limit the active participation of women in the small-scale sector through collective action. The study by Cheek, Bandt-Law and Sinclair (2023) focused on

intersectional stereotypes faced by women participating in small-scale mining operations based on their race, poverty levels and called for additional research aimed at developing intervention mechanisms to lower the gender-based stereotypes. This involves shifting perceptions in rural communities about intervention measures that promote women's technical participation in the small-scale sector.

Research by Musonda (2020) and Valadares *et al.* (2024) underscored how the masculine stereotypes affect the active participation of women in large-scale underground mining. The legacy of being predominantly male surrounding the operations and participation of women in mining activities is a historical legacy from the 19th-century Gold Rush era, where women were typically assigned to the service sector. In contrast, men were assigned to sectors such as mining and construction. In line with insights from the works of Silva, Silva and Fontana (2023) additional research has to focus on how rigid gendered cultural norms regarding the inclusion and participation of women in small-scale mining operations can affect the elevation of women in leadership positions in different areas of business.

Future research can explore the possibility of transforming rigid gendered cultural norms in line with acculturation, as historical cultural value systems gradually lose their appeal as new cultures are adopted. Primarily, future research can explore the intersection of cultural dynamics and economic performance, which has proven instrumental in motivating the entry of women into the corporate sector and into traditionally male-dominated industries.

The study is cognisant of the fact that there are relatively few females occupying influential leadership positions in the small-scale mining sector in Zimbabwe. This implies that entrepreneurial women participating in small-scale mining operations must look beyond their own spheres of influence and sector if they intend to find inspiration in the success stories of

women who managed to navigate the complexities of operating in an environment predominantly male. It is imperative to promote women's empowerment programs that provide a platform through which they can inspire women's participation in the sector.

These leadership programs must be conducted by women leaders and female entrepreneurs with lived experience in the small-scale mining sector and beyond. These leaders play a key role in advocating for gender equity and equality at the policymaking levels, which can enhance the life chances of women participating in small-scale mining operations. It is essential to encourage women's participation in leadership roles in small-scale mining associates, cooperatives, and government bodies that have a bearing on the implementation of mining policies for these efforts and empower women to be part of decision-making and shift with each of the industries regarding leaving their experiences in the sector. There is a gift of transformational leaders who can inspire women followers in these operations in small-scale mining in Zimbabwe to operate at their best.

There is a need to promote strategic networks for women participating in small-scale mining operations through the establishment of mining associations. This enables the sharing and transfer of knowledge, resources, and skills and competencies. The creation of strategic networks is essential in enhancing the bargaining position of women participating in small-scale mining operations through promoting access to finance and markets. Women's mining associations create opportunities to foster partnerships with international organisations and mining cooperatives to provide capacity-building initiatives, access to international markets, and awareness of global best practices.

The creation of strategic networks has proven to be instrumental in the sharing of insights on the best practices and international trends in mining that women can leverage to

improve their earning capacity in the sector. Leveraging strategic networks provides an opportunity to collaborate, share experiences, and develop solutions that can enhance women's ability to navigate the complexities they encounter in the small-scale sector. Strategic networking provides opportunities to impact business education and knowledge, especially in financial management, which are some of the key issues essential for the success and sustainability of business ventures.

Maintaining a stable work and life balance has been a contentious issue for women in the small-scale mining sector. These beliefs and perspectives come from the realisation that enforcing industrial relations laws in a sector that disregards legal industrial relations stipulations, such as the observance of maternity leave and flexible working hours, can be challenging. However, advocacy initiatives can help ensure that women working in small-scale mining receive sufficient occupational health and safety equipment. It is imperative to put in place sound mechanisms to reduce instances of sexual and emotional harassment and gender-based violence in the workplace. The legislature must put in place stringent penalties for perpetrators and offenders of violence against women in the working environment, as is the case with domestic violence.

However, due to the low bargaining power of women who occupied the lower echelons in the sector, most of these abuses and instances of gender-based occupational segregation go unreported, as opposed to domestic violence cases. It therefore becomes problematic to come up with legislative arrangements to bring to book those who violate the rights of women in the sector. Challenges in maintaining a stable work and life balance give credence to the principles outlined by the glass cliffs theory, which stipulates that they are systemic hindrances that keep women at lower echelons in the corporate hierarchy in organisations. From this perspective, it is apparent that the inability to provide adequate work and life balance for women participating

in small-scale mining operations is a systemic tactic to keep them from assuming influential positions of responsibility.

5.5.2 Recommendations to the Ministry of Mines and Mining Development

Relatedly, additional research can explore the possibilities associated with applying technology in small-scale mining. This position arises from the recognised physically demanding nature of the small-scale mining activities that are not ideal for the biological makeup of women (Buss *et al.*, 2019). Future research can explore ways in which technology applications can enhance the sector's operational viability. In addition, future research can explore additional insights into the challenges women experience in balancing their work and personal lives. The existing literature has identified a lack of informational and technological literacy as a key stumbling block affecting the licensing compliance of women participating in small-scale mining operations.

Research aimed at equipping women with technological skills and competencies relevant to small-scale mining activities can enhance their differentiation and positioning in the sector. Given the evolving nature of technology and its impact on small-scale mining and business operations, it is imperative to provide women with information and digital literacy training to stay ahead of trends. Beyond the essence of technological diffusion and its effects on mining, future research must recognise that operations in small-scale mining are predominantly manual, with relatively limited technology and machinery compared with mainstream mining activities. Hence, while technological prowess gives women leverage in small-scale mining, it has yet to confer absolute advantages for their participation in the sector.

5.6 Conclusions

5.6.1 Barriers to women's progress in small-scale mining

The results of the study regarding the barriers that women experienced in small-scale mining in Zimbabwe underscore that the lack of ownership and control of immovable property rights is the key stumbling block towards the full participation of women in small-scale mining operations. This lack of immovable property rights is linked to the historical background of women in Zimbabwe, which is characterised by a patriarchal society where immovable property rights and inheritance fall along the lines of male heirs. Culturally, in Zimbabwe, the girl child is not expected to inherit any property, as they are not regarded as the heir to the estate. These shortcomings have strong and discriminating cultural connotations that affect the life chances of the girl child and later women in their endeavour to actively participate in the small-scale mining sector. The failure to acquire immovable property rights negatively affects the prospects of women from actively participating in small-scale mining since control of immovable property rights is used as a form of collateral security to get financial support from the banking sector. This nexus of power is tipped in favour of men.

Outcomes from this study reiterated that challenges regarding access to capital have affected the active involvement of women in small-scale mining operations. These obstacles are linked with the lack of collateral security among women contributing to their inability to influence the control of immovable property rights. This was found to negatively affect the entrepreneurial ventures of women regarding their involvement in mining activities. The constraints that women are facing regarding getting finance for their business ventures are notwithstanding the presence of initiatives to provide collateral-free loans to women. It might appear that the challenge has to do with access to finance, particularly regarding women, which

might be linked to limited instances of financial literacy into financial education, which capacity swimming to become aware of different sources of capital they can utilise to invest in this small mining activities.

This study specified that the existence of rigid gendered cultural norms supports the male dominant climate which surrounds the small-scale mining activities, adversely impacting the active participation of women in the small-scale mining activities. These rigid gendered cultural norms are linked to the culture and biological roles that women are expected to play, which do not entail being economically active or being participating directly in small-scale mining. The existence of these gender stereotypical prejudices against women was found to affect their business prospects in small-scale mining.

The outcomes of the study highlighted the lack of adequate technical skills and competencies and competencies and capabilities related to the activities that take place in the informal mining activities that affect the active participation of women. These skills and competencies gaps are related to the physical active activities that characterise these operations in small-scale mining, which might not be in line with the physiological makeup of women. As a result, women have been found to be occupying peripheral activities in the occupations that provide a supportive role to the men who are directly involved in the mineral ore extraction activities. The lack of sector-specific skills and competencies and the absence of sources of finance severely influenced the active participation of women in the informal mining activities in Zimbabwe.

Other key challenges that were noted include the inability to control access to mining tools and equipment coupled with not having minimal ownership mining claims and rights that can be used as the basis upon which such equipment can be provided. In addition to using

traditional methods of metal extraction, there is a lack of sound control systems in such an informal sector mining environment that negatively prejudices possible revenue generation options for women who are directly involved in small-scale mining in Zimbabwe. Ultimately, the study found that the lack of illegal cognition limits the active participation of women in small-scale mining operations. This lack of recognition incorporates the inability to control means of production and the inability to have immovable property rights, which is early on attributed. These constraints were found to affect the legal position of women with respect of operating separate legal entities in their own name. Challenges in getting legal recognition contributed substantially to the women participating in small-scale mining in Zimbabwe, given that prevailing policies are biased towards men.

5.6.2 Gender-based challenges experienced by females in mining

Outcomes of this study if highlighted that apart from the initiatives that have been put in place to empower women in relation to their active participation in the localized micro mining activities the absence of a comprehensive operation of framework appears to mitigate against their life chances in the sector. The informal structure of operations in the small-scale mining activities and the unequal distribution of authority further weakens the bargaining power of women participating in small-scale mining operations. It was highlighted that the prevalence of sexual misconduct in the sector in the active engagement of women participating in small-scale mining operations. these comments in the prolonged psychological challenges and anxiety towards the active participation of women in small-scale mining operations. The results of the study highlighted that the prevalence of violence against women is diminished the active participation of women in small-scale mining operations. leading them to be relegated to marginal roles that yield limited financial returns.

Current results of the study have indicated that the predominantly male culture in the sector creates a fertile environment for sexual exploitation of women. This is in addition to gender-based occupational segregation which has adverse impacts on women. Their limited participation of women in policymaking positions which influences their life chances in the sector is negatively contributed towards the gender-based barriers they experience in these operations in small-scale mining. Mobile phone the dangerous nature of activities that take place in the sector and the prevalence of occupational hazards and weak enforcement of safety standards negatively affect the active participation of women in small-scale mining operations.

In addition, the prevalence of earnings disparities in the sector between when men and women significantly affect the active participation of women. As highlighted earlier on, women were found to mostly be occupying peripheral duties in the sector while real activities which are tied with high financial returns were undertaken by men. Nevertheless, the disparities in earnings were related to the biological composition of women which might make it challenging for them to persevere in challenging operating conditions which characterize operations in small-scale mining.

This study revealed that women were participating in small-scale mining come across challenges in managing their work life balance. These challenges emanate from the culturally assigned roles of women as secondary income earners who are not viewed as breadwinners by employers as a result, they must contend with balancing the need to cover for the family and to be participating in income generating activities such as operations in small-scale mining. This imbalance of responsibilities has not been made easier by the apparently dangerous operating conditions that expose women to both physical and mental health challenges. Moreover, the apparent absence of proper support systems and processes in small-scale mining have perpetuated the imbalance between work and life affecting women. Some of these lack of

policy instruments includes policies on maternity leave which might negatively discriminate against women depriving them of opportunities to earn income. The work life in balance that women experience in the sector is linked with cultural legacy that hinders women from actively participating in economic activities.

5.6.3 Coping Mechanisms

Having taken into account the systemic challenges that women experience in the sector, it was imperative to explore mechanisms that could empower women to cope with these challenges, enabling them to become economically empowered and emancipated, and to actively participate in the sector. Key outcomes regarding the key strategies that can be enforced to improve the life chances of women participating in small-scale mining operations, and incorporate strategic networking amongst women to address the existence of gender disparities in the industry. The relevance of strategic networking was underscored by this, providing empowerment and emancipation to other women; they gain insight into the experiences and viewpoints of women who have successfully navigated the challenges of class ceilings. The efficacy of strategic networking lies in dismantling existing prejudices against women and providing financial and cultural support that helps women navigate the challenges of operating in an atmosphere predominantly male.

The results of the study indicated that strategic networking enables the free flow of ideas among women, boosting their confidence and enabling efficient decision-making. It provides options for developing leadership skills and competencies and competencies among women through empowerment, and optimises women's ability to navigate complex situations. It was highlighted that the absence of strategic networking opportunities clearly affects women's career progress, limiting their access to knowledge and growth prospects in the sector.

The research highlighted the importance of leadership skills and competencies in influencing the likelihood of women's success in the sector. It was highlighted that adopting a democratic leadership style, characterised by consultation, active engagement, and delegation, provided opportunities to share ideas and raise awareness of the contributions women can make in small-scale mining.

Other key leadership styles identified include transformational and situational leadership, which can enhance the life chances of women in positions of authority in small-scale mining. Leveraging transformational leadership dimensions that incorporate individualised consideration helps shape mentorship and empathy, strengthening skills and competencies and unity of purpose, which are instrumental in motivating women's endeavours to achieve in an industrial context predominantly male. Using the motivation dimension is instrumental in fostering optimism, clarity of vision, and active participation by women in decision-making processes in the small-scale mining sector. Individualised influence presents a role model to elicit enthusiasm and embody values. Intellectual stimulation is instrumental in promoting creativity, goal congruence and innovation. These are instrumental in inspiring women to accept challenges that come with their endeavour to participate in the small-scale mining industry.

The results of the study indicated that apart from the significance of leadership in influencing the empowerment of women and their participation in the sector, there is a deficiency of reputable female leaders identified in small-scale mining with the capability of providing comprehensive social support systems and motivation to other women who might be interested in pursuing operations in small-scale mining. It is imperative to have mentorship, which is critical for disseminating information, skills and competencies, and experiences to

equip women with the relevant capabilities to navigate the complexities they encounter in small-scale mining.

In addition, the results of the study underscore the importance of female role models in inspiring women to address gender inequalities in the industry. The essence of female role models is that they provide mentorship and strategic guidance, offering women a valuable opportunity to succeed in a sector predominantly male. In addition, the results of the study proposed the enforcement of statutory laws as a mechanism to foster a salubrious working environment for women's involvement in the industry. This involves implementing targeted discriminatory statutory laws to address gender-based inequalities.

The study reiterated the need to amend existing laws so that policies can be enacted to abolish the requirement for women to provide collateral security to obtain financial support. Sound advocacy initiatives are imperative for women's action within pressure groups targeting the legislature. Advocating for favourable statutory laws that recognises women's independence can be a milestone in promoting their economic emancipation and in fighting systemic cultural prejudices that hinder their active participation in small-scale mining. Statutory laws are essential in establishing an equitable environment for addressing the culture of discrimination against women.

The implementation of anti-discriminatory laws can help mitigate gender-based inequities and ensure women receive greater concessions, such as the elimination of collateral requirements for mining-related loans. The structure of the labour market is evolving, with an increasing number of women entering the active labour force, necessitating the promotion of parity in occupational health and safety and equitable opportunities for men and women. The legislature must devise gender-sensitive policies that prioritise reducing the need for women to

provide collateral to obtain financing from the formal banking sector. Statutory laws are essential for establishing an equitable operating environment and addressing the culture of discrimination against women.

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APPENDICES

Appendix A: Introductory Letter

Dear Respondent

I am requesting your permission to participate in an interview for my study entitled "Gender and Mining: An Analysis of the Barriers Encountered by Women in the Zimbabwean Small-Scale Mining Sector." Your insights and experiences are crucial to the success of this research, and I would greatly appreciate your participation. This study aims to explore and understand the challenges and obstacles women face in the small-scale mining sector in Zimbabwe and to shed light on how gender dynamics impact their work and opportunities in this industry.

Your input will be valuable in understanding the issues at hand, and I assure you that your anonymity and confidentiality will be strictly maintained throughout the process. Please consider participating in this vital research. I am willing to accommodate your schedule and provide any additional information you may require.

Thank you for your time and consideration.

Sincerely,

Rudo Sarah Muzamani

Appendix B: Interview schedule

Section A: Demographics

1. In which age group do you fall?

- | | | | |
|--------------------|--------------------------|--------------------|--------------------------|
| Less than 25 years | <input type="checkbox"/> | 25 to 30 years | <input type="checkbox"/> |
| 31 to 35 years | <input type="checkbox"/> | 36 to 40 years | <input type="checkbox"/> |
| 41 to 45 years | <input type="checkbox"/> | 46 to 50 years | <input type="checkbox"/> |
| 51 to 55 years | <input type="checkbox"/> | more than 55 years | <input type="checkbox"/> |

2. How long have you been working with women in small-scale mining?

- | | | | |
|-------------------|--------------------------|--------------------|--------------------------|
| Less than 1 year | <input type="checkbox"/> | 1 to 5 years | <input type="checkbox"/> |
| 6 to 10 years | <input type="checkbox"/> | 11 to 15 years | <input type="checkbox"/> |
| 16 to 20 years | <input type="checkbox"/> | 21 to 25 years | <input type="checkbox"/> |
| 17 26 to 30 years | <input type="checkbox"/> | More than 30 years | <input type="checkbox"/> |

3. In what capacity have you been working with women in small-scale mining?

- | | | | |
|------------------------|--------------------------|-------------------|--------------------------|
| Small-scale mine owner | <input type="checkbox"/> | small-scale miner | <input type="checkbox"/> |
|------------------------|--------------------------|-------------------|--------------------------|

4. What is your highest level of educational qualification?

- | | | | |
|-------------------|--------------------------|---------------------|--------------------------|
| Primary education | <input type="checkbox"/> | Secondary education | <input type="checkbox"/> |
| Diploma | <input type="checkbox"/> | Bachelor's Degree | <input type="checkbox"/> |
| Masters' degree | <input type="checkbox"/> | | |

Section B: Research Specific information

Using the scale below, kindly indicate your opinions on the following statements.

5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

Gender imbalances in small-scale mining	5	4	3	2	1	
5. The process of obtaining immovable property rights for small-scale mining operations in your community is difficult for women						
6. Limited access to finance has a negative impact on the participation of women in the small-scale mining sector						
7. Gender stereotypes affect the participation of women in the small-scale mining sector						

8. Limited technical skills affect the participation of women in the small-scale mining sector						
9. Access to mining equipment and tools influence the participation of women in the small-scale mining sector						
10. A lack of legal recognition deters the active participation of women in the small-scale mining sector.						
Challenges experienced by women in small-scale mining	5	4	3	2	1	
11. The prevalence of sexual harassment in the small-scale mining sector discourages women participation.						
12. The male-dominated environment that surrounds small-scale mining is not ideal for active participation by women						
13. Job segregation discourages the active participation of women in the small-scale mining sector.						
14. Wage gaps differences between man and women working in the small-scale mining sector potentially affect the active participation of women.						
15. Maintaining a stable work-life balance determines the active participation of women in the small-scale mining sector.						
16. Cultural beliefs deter the active participation of women in the small-scale mining sector						

Section C: Coping strategies used by women in small-scale mining

17. How important do you think strategic networking is for women in the small-scale mining sector to cope with gender imbalances?
18. What role do you think having strong female role models plays in helping women in the industry cope with gender imbalances?
19. What are some leadership styles that can help address and cope with gender imbalances in the small-scale mining sector?
20. How do you think legislation and government policies can be used as coping strategies to address gender imbalances in the small-scale mining industry?
21. Can you share any examples of successful coping strategies that you have used to address gender imbalances in the small-scale mining sector?

Appendix C: Research ethics application form



REAF_DS - Version 3.3 AP



UNICAF UNIVERSITY RESEARCH ETHICS APPLICATION FORM DOCTORAL STUDIES	UREC USE ONLY: Application No: Date Received:
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Student's Name: Rudo Sarah Muzamani

Student's E-mail Address: rudomuzamani@gmail.com

Student's ID #: R2106D12375813

Supervisor's Name: Dr Fanice Junge Nafula

University Campus/Program: Unicaf University Zambia: DBA Doctorate of Business Administration

Research Project Title:
An analysis of the barriers encountered by women in the Zimbabwean small-scale mining sector.

1. Please state the timelines involved in the proposed research project:

Estimated Start Date: 04-Dec-2023 Estimated End Date: 31-Jan-2025

2. External Research Funding (if applicable):

2.a. Do you have any external funding for your research?

YES NO

If YES, please answer questions 2b and 2c.

2.b. List any external (third party) sources of funding you plan to utilise for your project. You need to include full details on the source of funds (e.g. state, private or individual sponsor), any prior / existing or future relationships between the funding body / sponsor and any of the principal investigator(s) or co-investigator(s) or student researcher(s), status and timeline of the application and any conditions attached.

2.c. If there are any perceived ethical issues or potential conflicts of interest arising from applying for and/or receiving external funding for the proposed research then these need to be fully disclosed below and also further elaborated on, in the relevant sections on ethical considerations later on in this form.

3. The research project

3.a. Project Summary:

In this section fully describe the purpose and underlying rationale for the proposed research project. Ensure that you pose the research questions to be examined, state the hypotheses, and discuss the expected results of your research and their potential.

It is important in your description to use plain language so it can be understood by all members of the UREC, especially those who are not necessarily experts in the particular discipline. To that effect ensure that you fully explain/define any technical terms or discipline-specific terminology (use the space provided in the box).

The study is inspired by the underrepresentation of women's participation at different levels within the small-scale mining sector in the Mashonaland, Central, and Manicaland Provinces of Zimbabwe. The study is earmarked to analyse the barriers that are curtailing the participation of women in the small-scale mining sector by focusing on the gender imbalances in the sector, the challenges experienced by women in the small-scale mining sector, and the coping mechanisms they can employ to mitigate these challenges. Given the subjective nature of the research based on the personal accounts of women in the small-scale mining sector, the study will employ a qualitative methodological approach to gather data from women within their natural small-scale mining environments. This approach will enable the researcher to observe events and activities that take place at selected small-scale mining areas. Data collection will therefore be concerned with the application of in-depth face-to-face interviews with those involved in small-scale mining activities. The use of interviews provides an opportunity for the researcher to create a rapport with women directly involved in various small-scale mining activities. This enables the researcher to probe further into the conditions that women are exposed to in the small-scale mining sector, with particular emphasis placed on the barriers they face and the coping mechanisms they use. Focus group discussions will be targeted at female mine owners. These will be reached through the use of an online focus group discussion approach that will enable the researcher to discuss issues affecting the operations of women in the small-scale mining sector in real time. To ensure that the study develops a detailed assessment of the challenges facing women in the small-scale mining sector, it will include women at different levels in the small-scale mining sector, including mine owners, sponsors, and general female labourers. The study is likely to culminate in the development of a theoretical position regarding the systematic challenges faced by women in the small-scale mining sector. This theoretical position is likely to incorporate key insights that reflect sectoral gender imbalances, systematic gender-based barriers, and an analysis of relevant coping mechanisms peculiar to the unique circumstances faced by women in the small-scale mining sector in the Mashonaland, Central, and Manicaland Provinces of Zimbabwe.

3.b. Significance of the Proposed Research Study and Potential Benefits:

Outline the potential significance and/or benefits of the research (use the space provided in the box).

This research stands to make practical contributions to women's empowerment and lobby groups, given that out of the US\$150 million in loanable funds that were made available, only US\$20 million was allocated to women miners. Research results can inform policymakers in the identification of potential mechanisms to support women in small-scale mining to improve their uptake of loanable funds that enhance their operational viability in the small-scale mining sector. In addition, the results of the study show that emancipating women in the small-scale mining sector to form coalitions can improve their business prospects in the small-scale mining sector in Zimbabwe. From a theoretical point of view, insights from the study stand to consolidate the applicability and relevance of the glass ceiling theory as the dominant theory that explains the subjugation of women in different socio-economic spheres. The research results will articulate whether the glass ceiling theory is adequate to explain the systematic challenges that are experienced by women in the small-scale mining sector in Zimbabwe. Ultimately, the study stands to make a contribution to the body of knowledge and complements current civic and governmental efforts to empower and emancipate women's participation in different socio-cultural and economic sectors of life. In turn, such awareness can influence a policy shift with respect to the emphasis that is assigned to supporting entrepreneurial activities that ar

4. Project execution:

4.a. The following study is an:

- experimental study (primary research)
- desktop study (secondary research)
- desktop study using existing databases Involving Information of human/animal subjects
- Other

If you have chosen 'Other' please Explain:

4.b. Methods. The following study will involve:

- a Quantitative methodology
 a Qualitative methodology
 a mixed methods approach

If you have chosen mixed methods please state below whether you are going to proceed with triangulation or not.

- YES NO

4.c. Please state below which tools you are going to use:

A Select the tools to be used in your study	B Select how the tools selected in column A will be administered (select one or more)	C Select what types of questions will be included in the tools previously selected in column A (select one or more)
Interviews <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone)	<input checked="" type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input checked="" type="checkbox"/> Includes section related to demographics
Focus Groups <input checked="" type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input checked="" type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone)	<input checked="" type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input checked="" type="checkbox"/> Includes section related to demographics
Questionnaire <input type="checkbox"/>	<input type="checkbox"/> Face-to-face self-administered questionnaire <input type="checkbox"/> Online, i.e., via phone or any other platform. The researcher reads the questions to the participants <input type="checkbox"/> Online asynchronous self-administered questionnaire (i.e., via email)	<input type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input type="checkbox"/> Includes section related to demographics

A Select the tools to be used in your study	B Select how the tools selected in column A will be administered (select one or more)	C Select what types of questions will be included in the tools previously selected in column A (select one or more)
Experiments <input type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone) <input type="checkbox"/> Asynchronously via any online platform	<input type="checkbox"/> Open-ended questions <input type="checkbox"/> Close-ended questions <input type="checkbox"/> Includes section related to demographics
Tests <input type="checkbox"/>	<input type="checkbox"/> Face-to-face <input type="checkbox"/> Online with camera (synchronous live discussion with camera) <input type="checkbox"/> Audio only (synchronous live discussion without camera, i.e., via phone) <input type="checkbox"/> Asynchronously via any online platform	Provide a brief description of the test in the box 'Other' below.
Other		

5. Participants:

5 a. Does the Project involve the recruitment and participation of additional persons other than the researcher(s) themselves?

- YES If YES, please complete all following sections.
- NO If NO, please directly proceed to Question 7.

5 b. Relevant Details of the Participants of the Proposed Research

State the number of participants you plan to recruit, and explain in the box below how the total number was calculated.

Number of participants

Being qualitative research, the sample size is determined by the operationalization of the saturation point ideology. This implies that interviews will be conducted until a point where no new information can be collected before undertaking an additional interview. The sample size also considers the number of participants in focus group discussions that will average around 10 in each of the four proposed focus group discussions.

Describe important characteristics such as: demographics (e.g. age, gender, location, affiliation, level of fitness, intellectual ability etc). It is also important that you specify any inclusion and exclusion criteria that will be applied (e.g. eligibility criteria for participants).

Age range From To

Gender Female
 Male

Eligibility Criteria:

- Inclusion criteria
- Exclusion criteria

Disabilities/Disorders: You should only include the participants who can provide informed consent for themselves. Individuals who have a mental disability and are not in a position to provide their own consent should not participate in the study. Please provide information for any other disabilities/disorders the participants may have:

Other relevant information (use the space provided in the box):

5 c. Participation & Research setting:

Clearly describe which group of participants (described in 5b) is completing/participating in the material(s)/tool(s) described in 4c above (use the space provided in the box)

There are three main categories of participants in this study. The first group is composed of women who are small-scale mine owners. These are candidates for focus group discussions using a WhatsApp online platform. The second category of respondents is made up of officials representing organisations that deal with women in terms of the provision of financial support, women empowerment and materials and implements used in small-scale mining activities. The third group of respondents is composed of women mine workers who perform several tasks within the small-scale mining sector. These will be reached through the use of face-to-face interviews, considering the likely low levels of literacy amongst this specific group of participants, which warrants the need to explore concepts to ensure that they are understood to enhance the credibility of the study.

5 d. Recruitment Process for Human Research Participants:

Clearly describe how the potential participants will be identified, approached and recruited (use the space provided in the box).

The first category of women small-scale mine owners will be identified through personal referrals since the researcher is directly involved in the sale of various mining equipment to the mining sector in general. This provides an initial starting point for the identification of women as small-scale mine owners. Other potential female small-scale mine owner participants will be recruited through the operationalization of the snowball sampling approach. Interview participants will be identified through a convenience sampling approach. Upon identifying these participants, they will be requested to participate in the study, focusing on the challenges they face in the small-scale mining sector. The researcher will explain the aims and objectives of undertaking the research as well as articulate the rights of prospective participants with respect to their participation in the study. Voluntary participation will be emphasised for prospective participants.

5 e. Research Participants Informed Consent.

Select below which categories of participants will participate in the study. Complete the relevant Informed Consent form and submit it along with the REAF form.

Yes	No	Categories of participants	Form to be completed
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Typically Developing population(s) above the maturity age *	Informed Consent Form
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Typically Developing population(s) under the maturity age *	Guardian Informed Consent Form

* Maturity age is defined by national regulations in laws of the country in which the research is being conducted.

5 f. Relationship between the principal investigator and participants.

Is there any relationship between the principal investigator (student), co-investigators(s), (supervisor) and participant(s)? For example, if you are conducting research in a school environment on students in your classroom (e.g. instructor-student).

YES NO

If YES, specify (use the space provided in the box).

Some of the women small-scale miners are custodians to the researcher, since the researcher is a sales manager at Appropriate Technology Africa in Zimbabwe, a company that sells a variety of mining equipment across the mining industry in Zimbabwe. Though the researcher has a relationship with potential participants, the researcher has no control or influence over participants.

6. Potential Risks of the Proposed Research Study.

6 a. i. Are there any potential risks, psychological harm and/or ethical issues associated with the proposed research study, other than risks pertaining to everyday life events?

YES NO

If YES, specify below and answer the question 6 a.ii.

6 a.ii Provide information on what measures will be taken in order to exclude or minimise risks described in 6.a.i.

6 b. Choose the appropriate option

		Yes	No
i.	Will you obtain a written informed consent form from all participants?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii.	Does the research involve, as participants, people whose ability to give free and informed consent is in question?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii.	Does this research involve participants who are children under maturity age? If you answered YES to question iii, complete all following questions. If you answered NO to question iii, do not answer Questions iv, v, vi and proceed to Questions vii, viii, ix and x.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv.	Will the research tools be implemented in a professional educational setting in the presence of other adults (i.e. classroom in the presence of a teacher)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v.	Will informed consent be obtained from the legal guardians (i.e. parents) of children?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vi.	Will verbal assent be obtained from children?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
vii.	Will all data be treated as confidential? If NO, explain why confidentiality of the collected data is not appropriate for this proposed research project, providing details of how all participants will be informed of the fact that any data which they will provide will not be confidential.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
viii.	Will all participants/data collected be anonymous? If NO, explain why and describe the procedures to be used to ensure the anonymity of participants and/or confidentiality of the collected data both during the conduct of the research and in the subsequent release of its findings.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Yes	No
ix. Have you ensured that personal data and research data collected from participants will be securely stored for five years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
x. Does this research involve the deception of participants? If YES, describe the nature and extent of the deception involved. Explain how and when the deception will be revealed, and who will administer this debrief to the participants:	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6 c. I. Are there any other ethical issues associated with the proposed research study that are not already adequately covered in the preceding sections?

Yes No

If YES, specify (maximum 150 words).

6.c.II Provide information on what measures will be taken in order to exclude or minimise ethical issues described in 6.c.I.

6 d. Indicate the Risk Rating.

High Low



7. Further Approvals

All researchers are advised to check the regulations pertaining to research and General Data Protection Regulation (GDPR) of the country in which the research will take place as each country may have different restrictions on conducting research. Are there any other approvals required (i.e., from a ministry or public agency in the country, in addition to ethics clearance from UREC) in order to carry out the proposed research study?

YES NO If YES, specify.

8. Application Checklist

Mark ✓ if the study involves any of the following:

- Children and young people under 18 years of age, vulnerable populations such as children with special educational needs (SEN), racial or ethnic minorities, socioeconomically disadvantaged persons, pregnant women, elderly, malnourished people, and ill people.
- Research that foresees risks and disadvantages that would affect any participant of the study such as anxiety, stress, pain or physical discomfort, harm risk (which is more than is expected from everyday life) or any other act that participants might believe is detrimental to their wellbeing and/or has the potential to / will infringe on their human rights / fundamental rights.
- Risk to the well-being and personal safety of the researcher.
- Administration of any substance (food / drink / chemicals / pharmaceuticals / supplements / chemical agent or vaccines or other substances (including vitamins or food substances) to human participants.
- Results that may have an adverse impact on the natural or built environment.

9. Further documents

Check that the following documents are attached to your application:

		ATTACHED	NOT APPLICABLE
1	Recruitment advertisement (if any)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Informed Consent Form / Guardian Informed Consent Form	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Research Tool(s)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Gatekeeper Letter	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	Any other approvals required in order to carry out the proposed research study, e.g., institutional permission (e.g. school principal or company director) or approval from a local ethics or professional regulatory body.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

10. Final Declaration by Applicants:

- (a) I declare that this application is submitted on the basis that the information it contains is confidential and will only be used by Unicaf University for the explicit purpose of ethical review and monitoring of the conduct of the research proposed project as described in the preceding pages.
- (b) I understand that this information will not be used for any other purpose without my prior consent, excluding use intended to satisfy reporting requirements to relevant regulatory bodies.
- (c) The information in this form, together with any accompanying information, is complete and correct to the best of my knowledge and belief and I take full responsibility for it.
- (d) I undertake to abide by the highest possible international ethical standards governing the Code of Practice for Research Involving Human Participants, as published by the UN WHO Research Ethics Review Committee (ERC) on <http://www.who.int/ethics/research/en/> and to which Unicaf University aspires to adhere.
- (e) In addition to respect any and all relevant professional bodies' codes of conduct and/or ethical guidelines, where applicable, while in pursuit of this research project.



I agree with all points listed under Question 10

Student's Name: Rudo Sarah Muzamani

Supervisor's Name: Dr Fanice Junge Nafula

Date of Application: 11-Jan-2024

Important Note:

Save your completed form (we suggest you also print a copy for your records) and then submit it to your UU Dissertation/project supervisor (tutor). In the case of student projects, the responsibility lies with the Faculty Dissertation/Project Supervisor. If this is a student application, then it should be submitted via the relevant link in the VLE. Please submit only electronically filled in copies; do not hand fill and submit scanned paper copies of this application.

Appendix D: UNICAF Approval



UREC Decision, Version 2.0

Unicaf University Research Ethics Committee Decision

Student's Name: Rudo Sarah Muzamani
Student's ID #: R2106D12375813
Supervisor's Name: Dr Fanice Junge Nafula
Program of Study: UU-DBA-900-3-ZM
OfferID / GroupID: O59846G61318
Dissertation stage: DS3
Research Project Title: An analysis of the barriers encountered by women in the Zimbabwean small-scale mining sector

Ethical conditions for approval: No comments.

Methodological recommendations:

Decision*: A. Approved without revision or comments
Date: 31/05/2024

All Doctoral students are advised to check the regulations pertaining to research and General Data Protection Regulation (GDPR) of the country in which the research will take place as each country may have different restrictions on conducting research.

- i. Approval from a local Research Ethics Committee (REC) or professional regulatory body such as Institutional Review Board (IRB)**
- ii. Approval from Ministry or public agency**

*Provisional approval provided at the Dissertation Stage 1, whereas the final approval is provided at the Dissertation stage 3. The student is allowed to proceed to data collection following the final approval.

Appendix E: Debriefing of Participants



UU_IC - Version 2.1



Informed Consent Form

Part 1: Debriefing of Participants

Student's Name: Rudo Sarah Muzamani

Student's E-mail Address: rudomuzamani@gmail.com

Student ID #: R2106D12375813

Supervisor's Name: Dr Fanice Junge Nafula

University Campus: Unicaf University Zambia (UUZ)

Program of Study: Doctorate in Business Administration

Research Project Title: An analysis of the barriers encountered by women in the Zimbabwean small-scale mining sector

Date: 04-Jan-2024

Provide a short description (purpose, aim and significance) of the research project, and explain why and how you have chosen this person to participate in this research (maximum 150 words).

The research will look into the hurdles that restrict women from working in the small-scale mining sector in Zimbabwe's Mashonaland, Central, and Manicaland provinces. It will concentrate on gender disparities, women's challenges, and coping techniques. The findings will help policymakers establish measures to help women in small-scale mining gain access to loanable capital and improve their operational sustainability. The research will add to the corpus of knowledge and influence policy shifts in favour of entrepreneurial activities. You have been chosen as a participant based on the knowledge and familiarity that you possess as a woman with participating in the small-scale mining sector. Your understanding of the small-scale mining sector can help shape our understanding of the gender imbalance barriers and coping mechanisms necessary to reposition the contribution that women can make in this sector of the economy.

The above named student is committed to ensuring participant's voluntarily participation in the research project and guaranteeing there are no potential risks and/or harms to the participants.

Participants have the right to withdraw at any stage (prior or post the completion) of the research without any consequences and without providing any explanation. In these cases, data collected will be deleted.

All data and information collected will be coded and will not be accessible to anyone outside this research. Data described and included in dissemination activities will only refer to coded information ensuring beyond the bounds of possibility participant identification.

I, Rudo Sarah Muzamani, ensure that all information stated above is true and that all conditions have been met.

Student's Signature: Rudo Sarah Muzamani

Appendix F: Gatekeeper Letter: Zimbabwe Association of Women in Mining



UU_GL - Version 2.0



Gatekeeper letter

Institution / Organization : Zimbabwe Association of Women in Mining

Address:

Date: 15-Jul-2024

Subject: Request to hold key informant interviews

Dear...

My name is Rudo Sarah Muzamani, I am studying for Doctorate in Business Administration with the UNICAF University in Zambia. I am requesting your permission to participate in an interview for a study entitled "Gender and Mining: An Analysis of the Barriers Encountered by Women in the Zimbabwean Small-Scale Mining Sector." Your insights and experiences are crucial to the success of this research, and I would greatly appreciate your participation. This study aims to explore and understand the challenges and obstacles women face in the small-scale mining sector in Zimbabwe and to shed light on how gender dynamics impact their work and opportunities in this industry.

The key informant interviews are set to be conducted between July and August and are expected to last not more than 30 minutes.

Your input will be valuable in understanding the issues at hand, and I assure you that your anonymity and confidentiality will be strictly maintained throughout the process. Please consider participating in this vital research. I am willing to accommodate your schedule and provide any additional information you may require.

Thank you for your time and consideration.

Yours Sincerely,

Rudo Sarah Muzamani

Student's Name: Rudo Sarah Muzamani

Student's E-mail: rudomuzamani@gmail.com

Student's Address and Telephone: 1914 Bushy Road Mainway Meadows Harare. +263773255047

Supervisor's Title and Name: Dr Fanice Junge Nafula

Supervisor's Position: Lecturer

Supervisor's E-mail: f.nafula@faculty.unicaf.org

Appendix G: Gatekeeper Letter: Ministry of Mines and Mining Development



UU_GL - Version 2.0



Gatekeeper letter

Institution / Organization : Ministry of Mines and Mining Development

Address:

Date: 15-Jul-2024

Subject: Request to hold key informant interviews

Dear ...

My name is Rudo Sarah Muzamani, I am studying for Doctorate in Business Administration with the UNICAF University in Zambia. I am requesting your permission to participate in an interview for a study entitled "Gender and Mining: An Analysis of the Barriers Encountered by Women in the Zimbabwean Small-Scale Mining Sector." Your insights and experiences are crucial to the success of this research, and I would greatly appreciate your participation. This study aims to explore and understand the challenges and obstacles women face in the small-scale mining sector in Zimbabwe and to shed light on how gender dynamics impact their work and opportunities in this industry.

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Your input will be valuable in understanding the issues at hand, and I assure you that your anonymity and confidentiality will be strictly maintained throughout the process. Please consider participating in this vital research. I am willing to accommodate your schedule and provide any additional information you may require.

Thank you for your time and consideration.

Yours Sincerely,

Rudo Sarah Muzamani

Student's Name: Rudo Sarah Muzamani

Student's E-mail: rudomuzamani@gmail.com

Student's Address and Telephone: 1914 Bushy Road Mainway Meadows Harare. +263773255047

Supervisor's Title and Name: Dr Fanice Junge Nafula

Supervisor's Position: Lecturer

Supervisor's E-mail: f.nafula@faculty.unicaf.org

Appendix H: Ministry of Women Affairs and Community Development



UU_GL - Version 2.0



Gatekeeper letter

Institution / Organization : Ministry of Women Affairs, Community

Address:

Date: 15-Jul-2024

Subject: Request to hold key informant interviews

Dear

My name is Rudo Sarah Muzamani, I am studying for Doctorate in Business Administration with the UNICAF University in Zambia. I am requesting your permission to participate in an interview for a study entitled "Gender and Mining: An Analysis of the Barriers Encountered by Women in the Zimbabwean Small-Scale Mining Sector." Your insights and experiences are crucial to the success of this research, and I would greatly appreciate your participation. This study aims to explore and understand the challenges and obstacles women face in the small-scale mining sector in Zimbabwe and to shed light on how gender dynamics impact their work and opportunities in this industry.

The key informant interviews are set to be conducted between July and August and are expected to last not more than 30 minutes.

Your input will be valuable in understanding the issues at hand, and I assure you that your anonymity and confidentiality will be strictly maintained throughout the process. Please consider participating in this vital research. I am willing to accommodate your schedule and provide any additional information you may require.

Thank you for your time and consideration.

Yours Sincerely,

Rudo Sarah Muzamani

Student's Name: Rudo Sarah Muzamani

Student's E-mail: rudomuzamani@gmail.com

Student's Address and Telephone: 1914 Bushy Road Mainway Meadows Harare. +263773255047

Supervisor's Title and Name: Dr Fanice Junge Nafula

Supervisor's Position: Lecturer

Supervisor's E-mail: f.nafula@faculty.unicaf.org

Appendix I: Zimbabwe Environmental Law Association



UU_GL - Version 2.0



Gatekeeper letter

Institution / Organization : Zimbabwe Environmental Law Association

Address:

Date: 15-Jul-2024

Subject: Request to hold key informant interviews

Dear...

My name is Rudo Sarah Muzamani, I am studying for Doctorate in Business Administration with the UNICAF University in Zambia. I am requesting your permission to participate in an interview for a study entitled "Gender and Mining: An Analysis of the Barriers Encountered by Women in the Zimbabwean Small-Scale Mining Sector." Your insights and experiences are crucial to the success of this research, and I would greatly appreciate your participation. This study aims to explore and understand the challenges and obstacles women face in the small-scale mining sector in Zimbabwe and to shed light on how gender dynamics impact their work and opportunities in this industry.

The key informant interviews are set to be conducted between July and August and are expected to last not more than 30 minutes.

Your input will be valuable in understanding the issues at hand, and I assure you that your anonymity and confidentiality will be strictly maintained throughout the process. Please consider participating in this vital research. I am willing to accommodate your schedule and provide any additional information you may require.

Thank you for your time and consideration.

Yours Sincerely,

Rudo Sarah Muzamani

Student's Name: Rudo Sarah Muzamani

Student's E-mail: rudomuzamani@gmail.com

Student's Address and Telephone: 1914 Bushy Road Mainway Meadows Harare. +263773255047

Supervisor's Title and Name: Dr Fanice Junge Nafula

Supervisor's Position: Lecturer

Supervisor's E-mail: f.nafula@faculty.unicaf.org