

Barriers to career advancement of women in mining: A qualitative analysis

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In recent years, various initiatives, protocols and legislation have been developed globally to promote gender equality and address existing discrimination against women. South Africa is no exception to this trend. In the global mining industry, equal opportunity and mining legislation introduced by various countries, including South Africa, have opened up former bastions, such as mining, to women.

Since the introduction of the Mineral and Petroleum Resources Development Act 28 of 2002 and the accompanying Broad-Based Socio-Economic Empowerment Charter, in 2004, the number of women in the mining industry has increased significantly. However, the "gender issue" still remains contentious and very problematic in the industry and women are still subjected to various challenges.

This article aims to reveal the barriers women encounter in the industry. This study adopted a qualitative research design. Data were collected by means of semi-structured individual and group interviews. The research findings show that women are subjected to social, physiological, structural and employment barriers. Therefore, it is of paramount importance that the relevant government departments, top and senior management in the mining industry, as well as human resource managers and employment relations practitioners embrace and support a clear-cut vision of gender diversity in the industry.

Keywords: barriers, career development, mining, women, South Africa

1 Orientation

In recent years, various initiatives, protocols and laws have been developed globally to promote gender equality in society and the workplace and to redress the deep-rooted discrimination against women which is a carry-over from the past. Among others, the Convention on the Elimination of All Forms of Discrimination against Women (adopted in 1979 by the UN General Assembly) and the Beijing Platform for Action (adopted at the Fourth United Nations World Conference on Women held in Beijing in 1995) aimed to end discrimination against women in all forms and to promote equality between women and men at the political, societal and economic levels (Lowen 2010; UN 2009). Furthermore, Sustainable Development Goal (SDG) 5 (previously known as Millennium Development Goal 3) explicitly requires the global promotion of gender equity and the empowerment of women (UN 2011; 2015). SDG 5 states that "gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world" (UN 2015).

In the global mining industry, equal opportunity legislation introduced by various countries (such as Canada and Australia) opened up former bastions, such as mining, to women (Mercier 2011; Minerals Council of Australia 2011:1). Women in Mining (WIM) (UK), in cooperation with Pricewaterhouse Coopers (PwC) and with support from Anglo American, BHP Billiton and Rio Tinto, investigated the top 500 publicly traded mining companies in the context of gender diversity. Reports were released in 2013, 2014 and 2015. According to the 2014 report, the findings show that women comprise between 5 and 10% of the total mining workforce globally, and are sparsely represented in boardrooms and executive offices, with only a few women (7.2%) holding directorships and chief executive officer (CEO) positions (seven CEOs in the world's top 500 listed mining companies are women) (PwC n.d.).

In South Africa, the Constitution of the Republic of South Africa, 1996, the Employment Equity Act 55 of 1998, the Promotion of Equality and Prevention of Unfair Discrimination Act 4 of 2000 and the Broad-Based Black Economic Empowerment Act 53 of 2003 all aimed to address inequalities and discrimination resulting from the legacy of apartheid (RSA 1996a; 1998b; 2000; 2003). South African mining legislature also supports female representation in mining. Until 1994, mining as an occupation in South Africa was traditionally reserved for men and women were legislatively barred from employment in underground operations (Ranchod 2001:22). Women were mainly employed in administrative and supportive positions (Singer 2002). Men also dominated small-scale mining (Hermanus 2007:2). However, the Mine Health and Safety Act 29 of 1996 removed restrictions prohibiting women from working on mines, including in underground operations (Ranchod 2001:22). Furthermore, the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) (RSA 2002), implemented in May 2004, and the accompanying Broad-Based Socio-Economic Empowerment Charter (BBBEE Mining Charter) (RSA 2004), published in August 2004, require mining companies to “substantially and meaningfully expand opportunities for historically disadvantaged persons, including women, to enter the mining and minerals industry and to benefit from the exploitation of the nation’s mineral resources” (RSA 2002). The 2004 BBBEE Mining Charter required 10% female participation in the mining industry within five years, the deadline being 2009 (RSA 2004:Section 4.2).

In 2009, the Department of Mineral Resources (DMR) conducted a thorough assessment to determine the progress of transformation of the mining industry in terms of the objectives of the Charter. The findings indicated a number of shortcomings. Only 26% of mining companies were found to be complying with the requirement of 10% female participation in mining; the average rate of female participation in the mining industry was 6%. Most of the women were employed in supportive functions and fewer than 1% were in core management positions, which were largely filled by white women (DMR 2009:9). Amendments were made to the 2004 BBBEE Mining Charter to overcome these inadequacies. Among other requirements, the amended 2010 BBBEE Mining Charter set new employment equity targets, to be reached by the end of 2015. The targets specified a 40% representation of historically disadvantaged persons, which include women, at all levels, including executive management (board)/senior management (Exco), middle management, junior management and women possessing core and critical skills (RSA 2010a:Section 2.4). In 2014, a second assessment was done by the DMR to measure levels of compliance with the amended 2010 BBBEE Mining Charter. The findings revealed that there has been a noticeable improvement in levels of compliance; however, the mining industry is still not fully transformed. Although the overall representation of women in the mining industry has increased to 10.5%, there is still a long way to go before women are fully represented at all levels in the mining industry (DMR 2015:28).

Against this background, the South African government reviewed the amended 2010 BBBEE Mining Charter and published the draft reviewed BBBEE Charter for the South African Mining and Minerals Industry, 2016, on 15 April 2016 for public comment (RSA 2016). The draft reviewed BBBEE Mining Charter aimed to “substantially and meaningfully expand opportunities for black people”, including black women (RSA 2016:6-7).

Although the participation of women in the mining industry has increased since the introduction of the MPRDA and the BBBEE Mining Charter in 2004, the “gender issue” still remains contentious and very problematic in the industry. On the one hand, management are grappling with issues that include structural problems involved in accommodating women, the difficulty of employing suitable candidates in core positions and retaining female talent, diversity issues, breaking down stereotypes, sexual harassment complaints, pregnancy issues and the consequences of failing to comply with the requirements of the Mining Charter (Botha 2013; Fourie 2009). On the other hand, women are still subjected to various barriers in the industry, which are alluded to in the literature review as well as the empirical findings and discussion sections of this article.

2 Purpose

In the light of the foregoing background and orientation, this article aims, firstly, to advance theoretical explanations for women’s subordination in the workplace, secondly, to provide a global perspective on barriers facing women in mining and, thirdly, to reveal the barriers women are facing in the South African mining industry. Lastly, practical and effective recommendations are given to address these barriers in order to successfully ensure and increase the participation of women in the mining industry.

3 Literature review

3.1 Theoretical explanations for women’s subordination in the workplace

Although women’s participation in the labour force has increased over the past 30 years, mainly due to expanding economic opportunities and equal employment opportunity legislation, women are still being subjected to certain forms of discrimination in the workplace. The following theories aim to explain

women's subordination in the workplace: human capital theory, the dual labour market theory, Catherine Hakim's preference theory and feminist theories.

Human capital theory suggests that gender stratification is a result of the unequal resources that women and men bring to the labour market (Popenoe, Cunningham & Boulton 1998:261). The theory argues that women have less "human capital" (training, qualifications and experience) to offer and therefore they are valued less by employers and earn less than men (Hakim 2004:12; Haralambos & Holborn 2008:125; Popenoe et al 1998:261).

The dual labour market theory splits the labour market into two segments: the primary labour market and the secondary labour market. The primary labour market is characterised by "high wages, good working conditions, employment stability, chances of advancement, equity and due process in the administration of work rules" and the secondary labour market by "low job security, poor working conditions and low wages" (Doeringer & Piore 1971, cited in Berntson, Sverke & Marklund 2006:227). British sociologists Barron and Norris (1976, cited in Haralambos & Holborn 2008:126) postulate that women are more likely to have jobs in the secondary labour market, as they are viewed by employers as easily replaceable, as having less interest in gaining additional skills and as less concerned than men about their pay packets.

Catherine Hakim's preference theory sets out to explain the choices women make between paid work and work in the family. It recognises the diversity of women's lifestyle preferences or "choices" (Hakim 2004:13). Preference theory argues that structural circumstances have produced new options and opportunities for women in the 21st century: the contraceptive revolution (from about 1965), the equal opportunity revolution, the expansion of white collar occupations, the creation of jobs for secondary earners and the increasing importance of attitudes, values and personal preferences in the lifestyle choices of modern societies (Hakim 2004:14; Watson 2012:252). Preference theory suggests that women of all social classes and at all levels choose three different lifestyles once choices are open to them (Hakim 2002:7; Watson 2012:252). Adaptive women (60% of women), the largest group, want to enjoy the best of both worlds and prefer to combine employment and family work. Work-centred women (20% of women) are in the minority and are focused on competitive activities in the public sphere such as careers, sport and politics. Family life is fitted around their work. As a majority of men are work-centred, preference theory predicts that men will retain their dominance because only a few women are prepared to choose the work-centred lifestyle. Home-centred women (20% of women) are also a minority and prefer to give priority to home and family life after marriage (Hakim 2002:7).

Feminist theories aim to provide explanations for the way women continue to be socially disadvantaged by men (Lorber 2010:3). Although various feminist theories exist, they all agree that women and men should have equal opportunities in all spheres of life (Barkan 2012:170). Liberal feminism argues that gender differences are not rooted in biology, and therefore women and men are not different and should not be treated differently. They believe that women should have the same legal rights, education and work opportunities as men (Lorber 2010:25). Marxist feminism (during the 1970s) argued that gender inequality stems from the economic structure and material aspects of life (Lorber 2010:46). They believe that women are exploited because their work in the home is not recognised as work, but has a caring and nurturing function (Haralambos & Holborn 2008:102). Socialist feminism (during the 1980s) expanded on the ideas of Marxist feminism. According to socialist feminism, gender equality is a result of the intertwined effects of social class, gender and racial ethnic status (Lorber 2010:71). Radical feminism blamed the patriarchy ideology (male domination) for men's oppression of women (Barkan 2012:170). According to this belief, men gain control of women by means of sexual and emotional exploitation (Lorber 2010:121). Multi-racial/multi-ethnic feminism argues that gender inequality stems from the intersection of racial/ethnic, social class and gender discrimination and continued patterns of economic and educational privilege and disadvantage (Lorber 2010:197). The proponents of this paradigm believe that women of colour face a triple burden; they are oppressed because of their gender, race and class (Barkan 2012:170).

From the above it is clear that no single theory can explain women's subordination in the workplace. The theories discussed all attempt to provide explanations and contain some elements of truth, but are also subject to limitations.

3.2 Barriers facing women in mining: A global perspective

It is clear from the introduction that women are involved in mining globally, although still in small numbers. A thorough literature review conducted on the involvement of women in mining in North America, Australia, China, Papua New Guinea, Africa and South Africa has revealed that women still face various barriers in the industry, which can be classified as follows:

- A masculine workplace culture, including a high tolerance of behaviours such as discrimination, sexual harassment and bullying (Bench Marks Foundation 2013, cited in Kolver 2013; Botha 2013; Fourie 2009; Keck & Powell 2006; Macintyre 2011; MTS 2011; Rawoot 2014; The Guild 2014;

- WIMSA 2014; WIM Canada 2010; WIM (UK) 2015).
- Difficulties in balancing work life and family life (Botha 2013; Keck & Powell 2006; Macintyre 2011; MTS 2011; WIMSA 2015; WIM Canada 2010).
 - Non-flexible working hours and shift work (Botha 2013; Keck & Powell 2006; Moyo 2010; WIMSA 2014; WIM Canada 2010).
 - Inadequate infrastructure, including changing and ablution facilities (Botha 2013; MTS 2011; WIMSA 2014; Zungu 2012:8), childcare facilities (Botha 2013; Keck & Powell 2006; WIM Canada 2010) and housing (Botha 2013).
 - Physical constraints related to work in a mine (Benya 2009; Botha 2013; Fourie 2009; Keck & Powell 2006; Malan 2010; MTS 2011; WIM Canada 2010; Zungu 2011).
 - A lack of clear and transparent advancement opportunities, including mentoring and role models (Botha 2013; DMR 2015; Martin & Barnard 2013; WIMSA 2014; WIMSA 2015; WIM Canada 2010).
 - Personal protective equipment (PPE) designed for men and therefore posing health and safety risks (Botha 2013; MTS 2011; Zungu 2011).

4 Research methodology

This study adopted a qualitative research design. Qualitative research aims to study human actions from the insider's perspective (Babbie & Mouton 2011:53). The purpose of qualitative research is seldom to arrive at statistically valid conclusions (although this is possible), but rather to understand, gain insight into and create explanations (theory) (Ghauri & Gronhaug 2002:120). The research was conducted within a naturalistic sphere, guided by the standards and principles of a relativist orientation, a constructivist ontology and an interpretivist epistemology. The meta-theoretical paradigm of phenomenology was chosen to frame the study, as it deals with the way people make sense of their world and construct their everyday life (Sarantakos 2013:40).

4.1 Research settings and participants

The research was conducted at the following three mines: a copper mine (underground), a platinum mine (underground) and a phosphate mine (open-cast). The mines were selected using convenience sampling, a non-probability sampling technique. Convenience sampling refers to "sampling by selecting those cases that are easiest to obtain for the sample" (Welman, Kruger & Mitchell 2010:396).

The target population for this research was women working in core mining positions at the three mines. Purposive or judgemental sampling was used to select participants. Purposive (judgemental) sampling is a type of non-probability sampling technique in which researchers purposely choose subjects who, in their opinion, are relevant to the project (Sarantakos 2013:177). In total, 11 individual and 10 group interviews were conducted. To enhance the validity and reliability of the research, participants were selected from various categories of employment and mining disciplines.

4.2 Data collection

Qualitative data were collected by means of semi-structured individual and group interviews; an interview guide was used. Data collected were audio-recorded and written notes were also taken.

4.3 Research process

Permission was requested from mine management to conduct the research at the three mines. After permission had been granted, the researcher scheduled a formal appointment to explain the nature and extent of the research. At each of the three mines a "women in mining" representative was allocated to the researcher to provide the necessary assistance and support during the research, such as selecting appropriate participants for the individual and group interviews, scheduling interviews and organising the underground field trip as well as visits to surface mining operations. The following ethical considerations were taken into account while conducting the research: voluntary participation, informed consent, privacy, anonymity and confidentiality, as recommended by Babbie and Mouton (2011:520).

4.4 Data analysis

Data were analysed by employing conceptual (thematic) analysis. In conceptual analysis a concept is chosen for examination and the number of times it occurs in the text is recorded. The following eight category coding steps suggested by Palmquist (1993, cited in Babbie & Mouton 2011:492) were used: deciding on the level of analysis, deciding on how many concepts to code for, deciding whether to code for the existence or frequency of a concept, deciding how to distinguish between concepts, developing rules for the coding of texts, deciding what to do with the data that are irrelevant, coding the data and analysing the results.

4.5 Methods employed to ensure the reliability and validity of the research

According to Sarantakos (2013:104), "reliability refers to the capacity of measurement to produce consistent results". A method is considered reliable if the results of a study can be reproduced whenever it is repeated, irrespective of the researcher, the research conditions or the respondents (Sarantakos 2013:104).

Babbie and Mouton (2011:122) define validity as referring to "the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration". The following types of validity are considered in qualitative research: descriptive (the degree to which the actual description holds truth), interpretative (how good the interpretation is), theoretical (the adequacy of theory or explanation) and generalisability (the extent to which the findings can be generalised to other settings) (Ghuri & Gronhaug 2002:139).

Triangulation is regarded as one of the best ways to enhance the validity and reliability of qualitative research (Babbie & Mouton 2011: 275). Triangulation refers to the use of multiple research tools within the same research design (Sarantakos 2013:159). Therefore, researchers can triangulate according to paradigms, methodologies, methods, researchers, and so forth (Babbie & Mouton 2011:275). This research was triangulated by means of the following:

- A literature review and empirical study were conducted.
- Various data-collection methods were used within the qualitative research design: group discussions, semi-structured interviews and informal observations.
- Several key persons (for example doctors, employment equity managers, members of the women in mining forum) and women employed in management positions as well as in the core business of mining were interviewed to obtain different perspectives.
- Different research settings (mines) formed part of the research; underground and surface operations were visited and experienced.
- Two WIM conferences were attended by the researcher and provided an in-depth insight into the variables impacting on women working in the core business of mining.

5 Research findings

This section contains a summary of key challenges experienced by women employed in core mining positions. After scrutinising the interview data, four main categories (social, physiological, structural and employment barriers) with supporting themes and subthemes were developed (see Table 1).

The barriers indicated in Table 1 are further discussed under the four main categories: social, physiological, structural and employment barriers.

5.1 Social barriers

Four main themes were derived from the category "Social barriers", namely work/life balance, acceptance in the workplace, support systems and isolation.

5.1.1 Work/life balance

From the research findings, it was evident that women have difficulty in finding a balance between their work life and their home life. Unique challenges were revealed in terms of working hours, physical impact of mine work and marital issues.

Working hours. In general, working in the core business of mining requires shift work and working after hours. Mining is a continuous process and works on a cycle that needs to be completed within a 24-hour period. The 24-hour cycle is normally divided into three eight-hour shifts: morning, afternoon and night. Employees, such as electricians and engineers, are also required to be available after hours in case of breakdowns and emergencies. It became clear that the majority of the women are affected by shift work and working after hours – married women slightly more so than unmarried women. Every shift cycle presents its own unique challenges to the family. The main problem encountered by the participants was balancing their work roles with their family roles and responsibilities, especially taking care of their children.

Physical impact of mine work. The participants indicated that the hard physical work definitely has an impact on their family life; they are often too tired to fulfil their family responsibilities as well as their marital responsibilities.

Marital issues. The mining workplace is a male-dominated environment and although companies are pressured by legislation to increase their female workforce, the numbers of female employees working in the core business of mining are still in the minority (DMR 2015:28). This also has a distinct impact on the family and more specifically on marriages. Some husbands find it difficult to accept that their wives are working side by side with a large number of men. Women indicated that they often find it difficult to

Table 1
Summary of key challenges experienced by women employed in core mining positions

Category	Theme	Subtheme	Supporting quotes
Social barriers	Work/life balance	Working hours	<i>I've got the child, one. It's also a bit difficult because you don't spend time with her. Like now, she went to school and when I get home she is sleeping. In the morning, she goes to school, so I'll only see her when I'm off. And you have to get a stay-in nanny and it's also difficult to trust someone to spend time with your child.</i> <i>Every second week I must be on standby during night shift. I get call-outs approximately three times a week. I must then go underground. It does impact on my family life.</i>
		Physical impact of mine work	<i>Since I'm working in a physical environment I get very tired after work. I don't have time for my kids. I'm working over the weekends, no time for my husband. I just don't have time for my family. My personal life after work, it's just work even at home.</i>
		Marital issues	<i>At first, my husband, he was fighting with me for working at the mine, but after that he saw I'm for myself at the mine. I'm not here for the men. But you don't discuss this and that at home, about the men at work, with your husband. When I get at home I just shut my mouth.</i>
	Acceptance in the workplace	Gender stereotyping	<i>Most of the males think women are there for men, not for the job. Because they think that mining is a place for a man only, not women.</i>
		Negative attitudes	<i>They make bad comments. They will say "Just look at that woman she nominated herself". Sometimes they say "Do this" and then you feel that this work is hard, you can't do it. Then they laugh at you. They tell you "50/50, you said you wanted to come and work here, so let's do it". So even if you feel no, this is too much you just drag yourself to show them that you can do that.</i>
	Support systems	Women in mining forum	<i>I've never attended it, because most of the times when they convene a meeting, I am working night shift and it is very difficult for me to wake up and come to that, but what I've heard is that they don't give women chance to give their complaints, they bring a person from outside to motivate women.</i>
		Female representatives	<i>In this shaft we have the problem that we have the safety officer, but we don't have any women who represent us in there. So whatever issues we have as women, like if I'm pregnant, I cannot go to a male person and explain my situation to him.</i>
		Complaints-handling procedure	<i>They are often afraid to air their opinions, they fear to be dismissed.</i> <i>When lodging complaints, women are not taken seriously.</i>
	Isolation		<i>The mining company must employ more women. Women will not be that alone and will not feel so uncomfortable in the presence of males.</i>
	Physiological barriers	Physical capability	Strength
Endurance			<i>Sometimes I find that I have to do the job very fast, which is when it impacts on my health, because it is a heavy job and I am a woman. I'm getting too much tired and some people say if you get tired like this you might damage some of your body parts, because it is [a] heavy job.</i>
Vibration			<i>Women are not strong [like] men, especially when operating those vibrating dump trucks. It's not good for women.</i>
Structural barriers	Infrastructure facilities	Change houses and ablution facilities	<i>We share the toilets with the men. Sometimes they write women's or men's but men always go to women's toilets. When you knock you get the man in the toilet. There is no order. The toilets are not clean. The change rooms are poor. You go there, you get the water, tissues, papers, toilets are blocked. There are five showers, but only two are working. And we are so many. They employ a lot of ladies, but they don't improve the facilities.</i> <i>We need toilets in the field for women who are working on surface mining, like during night shift.</i>
		Childcare facilities	<i>Childcare facilities will definitely help and will be convenient. It will save time for the company as well as for the mothers. Women will know that their children are safe. The facilities must be outside the premises of the mine.</i>
		Transport facilities	<i>The concern is that the company transport collect and drop off at a given stop. Sometimes ladies must walk to the collection or drop-off place on their own at night, which make them feel not safe.</i>
		Housing	<i>The company must provide housing for women who are working shifts.</i>
Employment barriers	Policies	Transparency	<i>Women do not have sufficient knowledge of the content and operational procedures of policies. Policies must be communicated to employees of the mine, on a regular basis. Everybody does not have access to e-mails.</i>
		Government guidelines	<i>Employment equity – job reservation especially for whites still exists. Even skills development, only the whites benefit. All policies must be revisited so as to comply with government guidelines.</i>
		Implementation and operationalisation	<i>I have a problem with the pregnancy policy. When I was pregnant they said they could not accommodate me at surface. They sent me home without payment and tell me I can come back after the child is born. But the policy says you must get a space on surface and your full pay to manage your needs.</i> <i>Skills-development policies are not transparent.</i> <i>Sexual harassment policy is not exercised.</i>
	Benefits	Training opportunities	<i>Want to be taken on courses. Want to visit other mines to see how they operate and learn from them and want to implement at the mining company.</i>
		Study assistance (leave and bursaries)	<i>To get a bursary at the mine is very difficult. Most of the people that are studying, they are financing themselves and when you go write an exam, they only give you a day off, exam leave, only for the day you are writing the exam.</i>

continued/

		Housing	<i>There are only hostels for men. So they are trying to make a family unit now, those old blocks, they change it to be new blocks so that they can fit all of us in there. They are still busy. We need transport and housing.</i>
		Day shift work (women with newborn babies)	<i>When a woman has a newborn baby she should work day shift only until the baby is a year old.</i>
		PPE designed for women	<i>Shirts are designed with men in mind. The buttons are too far from each other, causing the shirt to open up. The mine can definitely do better in terms of designing PPE for women.</i>
		Transport allowance	<i>Transport allowance as in car subsidy because when I qualify I will be expected to work standbys and overtime during the night</i>
		Crèche facility	<i>Ja, it will assist, when you go to work with a child you just leave him at the childcare. You know it is the safest for your child. It must be nearby the working places. When there is a problem with your child you can get there.</i>
Advancement opportunities	Training opportunities	<i>I am studying privately. I went around the shafts, knocking door to door, to seek assistance. I went to HR and they were like "No, we can't take you to school ..." So I went and I enrolled, I paid my money. I realised that I will need 30 days' study leave because that is the only way I could go and study. They said, "No, you can't do that". Ja, they don't consider women for training.</i>	
	Mentoring systems	<i>An effective mentoring system must be in place. More exposure to mentors is required.</i>	
	Career guidance	<i>Want management to tell me exactly where I'm going to with my career in the mining company. I want the following support from the mining company to develop my career: I want to be sent on regular training, want to receive financial support for training, would like to have a career-development plan.</i>	
	Financial support	<i>I want to go to school. I want the mine to support me with money to go school. If I pass I want to come back and work in this company again.</i>	
Health and safety	PPE	<i>Shirts are not designed with women in mind and the gloves are too big. It's a problem to get the correct size shoes, especially small sizes.</i>	
	Heavy vibrating equipment and machines	<i>To lift heavy material and to sit for eight hours on a platform that vibrates are really challenging</i>	
	Dust	<i>Dust is an issue in my area of work, it affects our eyes, ears and lungs.</i>	
	Night shift	<i>I feel it's not safe for women to work night shift, driving at night to and from work. Security must be provided for women working at night shift at every section.</i>	
Equality	Pregnancy	<i>I told them I couldn't work the way I used to work, because I get some pains when I am working. They gave me light duty. I was sweeping the floor and dusting. I continued working in shifts.</i>	
	Training and development	<i>They prefer to send men for skills development. Like for instance, there was this apprenticeship. They didn't give one to a single woman. They took 10 guys, without a woman there. It's difficult for me to progress to the next level.</i>	
	Employment and promotions	<i>Women are not equally treated in terms of employment and promotion. When women are trained, they still struggle to get promotions. Remains in the previous position with management stating, not enough experience.</i>	
Discrimination	Racism	<i>No white women are employed underground.</i>	
	Women's capability to perform mine work	<i>Men don't trust women for operation. Even if you do something good, they don't say anything.</i>	
	Glass ceiling	<i>People don't think that women are able to fulfil management positions. Women are employed in supervisory positions, but not a single woman in management positions.</i>	
	Quota appointments	<i>We are facing discrimination. When we apply for jobs, they don't want us actually. We are just there for the statistics, because the Department of Labour is behind them now. They don't develop us. They only want women to work in the offices, but for production, they don't really want us.</i>	
Sexual harassment	Recognition	<i>When a woman is given a position of power she is only there to balance the employment equity ratio and she is stripped of all the powers that the position comes with. In short, she is just a face.</i>	
	Verbal harassment	<i>Sexual harassment is there. It is happening almost every day. We are almost used to the language, but there are times when you feel like you are fed-up with this ...</i>	
	Physical conduct	<i>In the cage, they will push us like this and you can't even breathe and the man is [behind] you, you can feel his whole body pressing against you. Then they say like "What are you doing here at the mine?", "My woman is at home, you are here at the mine".</i>	
	Quid pro quo harassment	<i>Some supervisors/management promise to promote them/give them light duties if they perform sexual intercourse.</i>	

cope with and handle the pressure and challenges of their work, on the one hand, and to try to "please" their husbands, on the other hand.

5.1.2 Acceptance in the workplace

Since the introduction of the MPRDA and the accompanying Mining Charter, women's participation in the mining industry has increased; however, in some instances full acceptance by their male colleagues remains a challenge. The interviews reveal that resistance against women in the mining workplace still exists, even if to a lesser degree. Gender stereotyping and negative attitudes by male co-workers were identified as the main barriers.

Gender stereotyping. According to the participants, stereotypes such as "mining is not a place for women" and "women do not belong at the mine" are still encountered.

Negative attitudes. Although the interviews showed that women are more freely accepted by their male co-workers these days, they still encounter negative attitudes from some of them. Women are often subjected to name calling and humiliating remarks by male co-workers.

5.1.3 Support systems

The research revealed the lack of the necessary support systems for women working in the core business of mining. The following themes were identified: women in mining forum, female representatives and complaints-handling procedure.

Women in mining forum. Although the research revealed that there is a women in mining forum and it is functioning at all three mines included in the study, women find it difficult to attend meetings because of shift work and family responsibilities after work. A need was expressed for the women in mining forum to be more visible and to be promoted.

Female representatives. The research showed a need for an approachable and reliable female representative at each shaft who can take care of female employees' needs and complaints. Women find it difficult to discuss personal issues with male managers and supervisors.

Complaints-handling procedure. The research participants voiced a need for an effective complaints-handling procedure. Women often feel neglected in the workplace; they are not heard and their complaints are not taken seriously.

5.1.4 Isolation

Mining is production-driven and depends largely on reaching production targets; mining teams therefore have to see that they achieve the highest possible productivity and consist mainly of men. In many cases one or two women may be working with 10 to 15 men in a team. Women indicated that they often feel isolated, uncomfortable and unsafe in the presence of a large number of men.

5.2 Physiological barriers

The employment of women in the core business of mining requires women to be placed in positions equivalent to those held by men (Burtenshaw 2005). It was evident from the research that women are employed in all sections at the mines, underground as well as on the surface, and hold positions as engineers, geologists, electricians, artisans, fitters, boilermakers and operators of heavy machinery. They are also involved in technical and mechanical mining operations. Although the female participants indicated that they have the physical capability to do their jobs well, they admitted that the work is tough and not easy to perform, especially underground. The research participants reported challenges with regard to strength, endurance and vibration.

Strength. Women reported that they lack physical strength when performing certain work activities, such as lifting heavy objects, opening valves and operating heavy machinery. Although female employees are employed as rock drill and winch operators, the female participants reported that these pieces of equipment are too difficult for women to operate, because they are too heavy.

Endurance. The research participants indicated that they often do not have the stamina and endurance to complete certain tasks; they tire easily.

Vibration. The participants admitted that women are no longer allowed to operate the load haul dump machine because of the vibration caused by the machine and the negative impact it has on women's health. However, it was discovered that the vibration caused by rubber dozers also has a serious impact on women's health, affecting their menstrual cycle.

5.3 Structural barriers

Because the mining industry previously excluded women, facilities were developed to accommodate men only. As a result of new mining legislation that requires a 10% female representation, mining companies have needed to upgrade and improve their infrastructure facilities in order to accommodate women. Some mining companies have progressed faster than others in providing facilities that cater for the specific needs of women; in other companies certain limitations and deficiencies are still found. Concerns were raised regarding the following facilities: changing and ablution facilities, childcare facilities, transport facilities and housing.

Changing and ablution facilities. Although the mining companies have built and upgraded changing and ablution facilities to accommodate women, a lack of adequate facilities was reported, specifically with regard to underground facilities. Concerns were raised regarding size, open showers, allowance for feminine needs, equipment that addresses the special needs of women, hygiene, shared facilities with men and unsafe placement of facilities.

Childcare facilities. It was evident from the research that one of the mines (the phosphate mine) included in the study provides a 24-hour childcare facility, while the other two mines do not offer childcare facilities of any kind. While the research was being conducted these two mines were investigating the option of providing childcare facilities. Different viewpoints and opinions regarding childcare facilities were voiced at the interviews. On the one hand, the female participants said emphatically that childcare facilities would assist employees and be convenient, especially for shift workers, when breastfeeding and for single mothers who cannot afford a private carer. On the other hand, some participants were sceptical about the idea of a childcare facility and the way it would function. They reported concerns regarding women working underground, time allowed to breastfeed, availability of transport to and from the facility and the placement of the facility.

Transport facilities. The participants at the copper and phosphate mines confirmed that transport facilities (to and from the mine) are available and that they are satisfied with the transport provided. The only concern raised by the female participants at the copper mine was that they do not feel safe when waiting at bus stops at night. The female participants at the platinum mine indicated that transport facilities are limited and are not provided from all locations. Not all employees live close to the mine, and some have to travel long distances, up to 30 to 60 km, to get to work every day. For some employees it is a continuous struggle to find transport to get to work on time.

Housing. Interviews conducted with the female participants at the platinum mine revealed an urgent need for housing facilities. The majority of the employees at the copper mine are locally sourced and have proper standard family houses. Since the establishment of the mine, they have never lived in hostels. Family units have been built. They consist of a kitchen and a number of rooms and are adequate for the needs of families. As with the copper mine, the majority of the employees at the phosphate mine live close by. Therefore, limited housing is provided at a minimal rent. The mining company pays a housing allowance to employees and employees are therefore responsible for their own accommodation.

5.4 Employment barriers

The following themes were identified under the category "Employment barriers": policies, benefits, advancement opportunities, health and safety, equality, discrimination and sexual harassment.

5.4.1 Policies

Integrating women into the mining environment requires mining companies to introduce policies and procedures that are gender-sensitive and cater for the specific needs of women, such as an employment equity policy, a pregnancy/maternity policy and a sexual harassment policy. These policies should be in line with South African legislation. The research findings revealed concerns with regard to mining companies' policies in terms of the following issues: transparency, government guidelines, and implementation and operationalisation.

Transparency. A need for transparency was strongly voiced. The participants indicated that policy documents should be available to all employees of the mines. A serious need for workshops and continuous training on policies was detected.

Government guidelines. It was indicated that all policies should be revisited to ensure that they comply with government guidelines.

Implementation and operationalisation. Concerns were raised regarding the implementation and operationalisation of policies. Racism was pointed out as one of the main concerns. According to the participants, job reservation, especially for the white ethnic group, still exists. Furthermore, the participants voiced the opinion that the skills-development policy is passive and inclined to favour the white minority.

5.4.2 Benefits

Employee benefits refer to items in the total package offered to employees, over and above their salary, to increase their wealth or well-being at some cost to the employer (Nel, Werner, Poisat, Sono, Du Plessis & Ngalo 2011:249). A distinction is drawn between mandatory benefits (regulated by government) and voluntary benefits (offered to employees voluntarily). The interviews pointed to a need for the following additional benefits to be provided to women:

- More training opportunities.
- Study assistance in the form of leave and bursaries.
- Housing for all employees and not for officials only.
- Day shift work for women with newborn babies until the baby is one year old.
- PPE designed for women.

- Transport allowance, as women working in core mining activities are often required to work overtime at night.
- Shift allowance to enable women to work shifts, which will provide assistance to women in terms of transport and childcare.
- A 24-hour crèche facility (as provided by one of the mines included in the study).

5.4.3 Advancement opportunities

The research findings revealed uncertainties regarding advancement opportunities and specifically the career pathways to follow in order to progress within the companies. Challenges in terms of the following were identified: training opportunities, mentoring systems, career guidance and financial support.

Training opportunities. The research participants expressed a need for more opportunities to obtain formal qualifications. A need was also detected for clear and effective guidance in terms of employees' training needs.

Mentoring systems. A lack of effective mentoring systems was indicated. The participants specified that more exposure to mentors would assist with career development.

Career guidance. A need for career guidance was highlighted, not only for professional women, but also for general mine workers. Such guidance should include the following: career-development programmes and opportunities, transparent career paths and clear lines of communication.

Financial support. Although some participants indicated that mining companies do provide financial support for training, others expressed a serious need for support, such as bursaries, to enable them to obtain formal qualifications.

5.4.4 Health and safety

In most countries, mining is regarded as the most hazardous occupation there is because such a large number of people are exposed to risk (ILO 2016). The research findings revealed health and safety risks for women employed in core mining activities in terms of the following: PPE, heavy vibrating equipment and machines, dust, night shift and pregnancy.

PPE. Although great progress had been made regarding the provision of PPE that is designed with women in mind, deficiencies and limitations are still prevalent. Concerns were raised regarding overalls, shoes and gloves designed for men that do not secure a perfect and comfortable fit, posing a health risk.

Heavy vibrating equipment and machinery. The female participants indicated that the operation of heavy vibrating equipment and machinery, such as locomotives, winding engines, rubber dozers and dump trucks, is not good for women, even if they are not pregnant. Equipment of this kind tends to affect their menstrual cycle and can contribute to the risk of miscarriage during pregnancy.

Dust. The female participants raised concerns regarding dust, indicating that it affects their lungs, eyes, ears and skin (giving them a rash).

Night shift. Some female participants revealed personal safety concerns regarding working the night shift with a large number of men. As already indicated, it is often found that only one or two women are part of a work team. It was suggested that there is a need to enhance the security in each section/shaft and to light up areas that are dark during the night.

Pregnancy. The interviews revealed that different views exist on female employees' experiences regarding the treatment they received from the moment they disclosed their pregnancies. Some of the participants indicated that they were employed in alternative positions that require light duty and if employed underground, they were moved to work at the surface. Others were not redeployed in positions requiring light duty; they had to ask to be moved.

5.4.5 Equality

Equality is high on the agenda of the democratic regime of South Africa. Government has promulgated various Acts to remove discriminative practices of the past and to regulate equality in society as well as in the workplace. Despite government's endeavours, several forms of inequality still exist. The research findings revealed concerns regarding training and development, employment and promotions, as well as racism.

Training and development. The participants felt that skills and career-development opportunities tend to favour male employees, because there is a perception that mining is still a man's environment. The female participants at the platinum mine voiced serious concerns regarding equal development opportunities. According to them, some women are progressing faster than others in the mining

company. Some participants also said that the mining company tends to employ external people instead of developing their own personnel.

Employment and promotions. The participants reported that they do not feel that they are being treated equally in terms of employment and promotions. They were of the opinion that preference was being given to male employees in terms of consideration for employment or promotions. According to them, the main reason for this is the perception that still exists that “mining is not a place for a woman”.

Racism. The black participants at the platinum mine claimed that black women are often appointed in “tough mining jobs”, while white women are accommodated in positions requiring light duty or given jobs at the surface.

5.4.6 Discrimination

Some female participants stated that they are still subject to severe discrimination; concerns were reported in terms of women’s ability to perform work on a mine, the glass ceiling, quota appointments and recognition.

Women’s ability to perform work on a mine. The perception still exists that women cannot do what men can do in the mining workplace. Women are often subjected to humiliation by male co-workers in the form of degrading remarks and comments about their capabilities.

Glass ceiling. The research findings revealed that women are often appointed in supervisory roles, but still have difficulty in progressing to top management positions. It was evident that male employees do not readily take orders from women in leadership positions. Women feel that their ability to lead and manage is underestimated.

Quota appointments. The female participants reported that they often feel unwanted at the mining companies and that they are appointed in positions simply to satisfy legislative requirements and not because of their abilities.

Recognition. A serious need for recognition was expressed; female employees want to be taken seriously in the mining workplace. A need was indicated for approval of women’s innovative ideas and for involving women in decision-making processes.

5.4 Sexual harassment

Although the participants at all three mines confirmed that sexual harassment is seen as a serious offence and that their employers engage in regular awareness campaigns and offer regular training and education on the subject, sexual harassment remains an issue and incidents do occur. Issues were raised regarding verbal harassment, physical conduct and quid pro quo harassment.

Verbal harassment. It was indicated that verbal sexual harassment occurs on a regular basis. Verbal forms of sexual harassment include unwelcome innuendoes, suggestions and hints, sexual advances, comments with sexual overtones, sex-related jokes or insults or unwelcome graphic comments about a person’s body made in his or her presence or directed towards him or her, unwelcome and inappropriate enquiries about a person’s sex life, and unwelcome whistling directed at a person or group of persons (Grobler, Wörnich, Carrell, Elbert & Hatfield 2006:96; Pons & Deale 2010:16). The female participants reported that they are called names and that they are exposed to unwelcome verbal comments, especially when they are being transported in packed cages. It was reported that working the night shift contributes to the occurrence of sexual harassment incidents.

Physical conduct. Women working underground are often exposed to physical conduct while being transported from the surface to the workplace underground and vice versa. The cages in which workers are transported are normally packed to maximum capacity. Physical contact is inevitable; employees are obliged to press against each other. Men often take advantage of these conditions.

Quid pro quo harassment. Quid pro quo harassment occurs where an owner, employer, supervisor, member of management or co-employee undertakes or attempts to influence the processes of promotion, training, discipline, dismissal, salary increments or other benefits accruing to an employee or job applicant in exchange for favours (Grobler et al 2006:96; Pons & Deale 2010:16). It was indicated that some female co-workers “fall in love” with their supervisors for the sake of easy promotions.

6 Discussion

It became evident from the research findings that women working in the core business of mining are subjected to various challenges and experience several barriers in the traditional “male-dominated” workplace. These barriers are discussed under the four main categories: social, physiological, structural and employment barriers.

6.1 Social barriers

Female employees experienced social barriers in terms of balancing their work and home lives, acceptance in the workplace, adequate support systems and isolation.

Although the mining industry has opened up many employment opportunities for women, mine work has a definite impact on family life and women have difficulty in striking a balance between work and home life. This research finding is confirmed by national and international studies, as indicated in the literature review. In most societies, the primary responsibility for raising and caring for children still rests with women (Giddens 2013:275; Jacobs & Gerson 2004:71; World Bank 2012:19). Therefore, women entering the workplace are often caught in a “double bind” (Popenoe et al 1998:258), meaning that they have to do two jobs at once. After returning from work women have to do a “second shift” at home, where they have to take care of their home and the physical and psychological needs of their families (Popenoe et al 1998:258). Women’s dual involvement in home and paid work and the demands thereof could lead to stress, role conflict and role overload (Robbins, Judge, Odendaal & Roodt 2009:222). Organisations can play a meaningful role in supporting employees and helping them to balance their work and home lives by introducing work/life balance strategies such as flexible working arrangements, entitlements to paid or unpaid leave and assistance with the care of children (for example offering childcare facilities or a paid allowance) (Jacobs & Gerson 2004:85; Lorber 2010:35). Organisations that do not help their employees to achieve a work/life balance will find it increasingly difficult to attract and retain the most capable and motivated employees (Robbins et al 2009:16).

The research findings showed that there is still a long way to go before women will be fully accepted in the mining workplace. This view is confirmed by the literature review, which indicates that a masculine workplace culture is still prevalent in the mining industry. Mining companies should create a workplace culture that is inclusive and embraces diversity. Senior leaders and managers could play a meaningful role by supporting a clearly articulated vision for gender diversity and appointing women in non-traditional roles. Building awareness and providing training on stereotypes and unconscious bias are of the utmost importance (Australian Human Rights Commission 2013).

The research findings also revealed a need for adequate support systems for women working in the core business of mining. It was also found that women often feel isolated in the workplace. Job design factors can increase stress levels and could result in physical and mental health problems, low morale and productivity (Heslop 2007, cited in Werner, Bagraim, Cunningham, Potgieter & Viedge 2016:269). The implementation of an employee assistance programme offering a broad range of services that could adversely affect employee well-being and job performance could provide a supportive working environment for employees (Nel et al 2014:183). Career counselling could also be implemented to support women in dealing with issues in the workplace (Stead & Watson 2010:120). Supportive working conditions and support from colleagues could result in high levels of employee job satisfaction (Robbins et al 2009:83). It is also of the utmost importance that managers consider appointing more than one woman on a work team to prevent isolation and the accompanying negative results.

6.2 Physiological barriers

The research revealed that although women indicated that they have the physical capability to do their jobs well, the work is not easy and they experience challenges with regard to strength, endurance and vibration. Challenges regarding the physical impact of mine work have been widely confirmed by national and international studies, as indicated in the literature review. Schutte (2011:11) emphasises that work in the mining sector is considered one of the most physically demanding occupations. Women often find it difficult to perform certain work activities and tasks owing to the physical differences that exist between women and men (Wynn 2001:33). Because they have a lower capacity for physical work and less physical strength, women may experience undue physiological strain when performing prolonged and strenuous physically demanding tasks (Ashworth, Molapo, Molefe, Schutte & Zitha 2004:34). Gender differences in terms of size and body build, physical work capacity (aerobic capacity), physical strength and heat tolerance should be considered when appointing women to positions that require physical strength and stamina. Badenhorst (2009:59) emphasises that an employee should not be appointed to a position or expected to perform tasks for which he or she is not medically fit or does not have the physical and functional capabilities.

6.3 Structural barriers

The research findings showed structural barriers in terms of changing and ablution facilities, childcare facilities, transport facilities and housing. This finding is in line with the findings of the literature review pertaining to ablution facilities, childcare facilities and housing. For the successful employment of women in core mining positions, mining companies have to be sensitive to the specific needs of women and should provide proper ablution and changing facilities that cater for the needs of women

(Badenhorst 2009:61; MTS 2011:16). With regard to childcare facilities, Jacobs and Gerson (2004:85), Richardson and Robinson (2008:181) and De Klerk and Mostert (2010:10) suggest that work/life balance strategies such as offering childcare facilities or a paid allowance could help employees to balance their work and home lives.

The research findings showed a need for adequate housing. In general, mining communities are characterised by poor housing conditions and a large part of the population lives in tin shacks (poorly constructed corrugated sheds) (Cronjé & Chenga 2007:31), informal settlements, villages or low-cost government housing, or have bought their own homes (Chinguno 2013:1). The findings of the Mining Charter impact assessment conducted by the DMR in 2009 also revealed the appalling unhygienic living conditions and inadequate facilities to which hostel dwellers are subjected (DMR 2009:11-13). According to the 2010 revised Mining Charter, mining companies have been obliged to implement specific measures to improve the standard of housing and living conditions for mine workers (RSA 2010a:4). Since 2010, reasonable progress had been made with the creation of decent housing and living conditions for mine workers. The Mining Charter impact assessment conducted by the DMR in 2015 showed that, overall, 55% of the mining right holders met the target for improving the living conditions of mineworkers by either reducing the occupancy rate to one person per room or converting hostels into family units (DMR 2015:19).

6.4 Employment barriers

Employment barriers were reported in terms of policies, benefits, advancement opportunities, health and safety, equality, discrimination and sexual harassment.

Regarding mining companies' policies, a lack of transparency, non-compliance with government guidelines and issues regarding implementation and operationalisation were reported. Policies and procedures are regarded as the elements that provide direction and regulate the activities of an organisation and its members (Venter, Levy, Conradie & Holtzhausen 2009:20). Policies and procedures further coordinate and regulate the labour relationship (Bendix 2005:299) and reduce the possibility for misunderstandings between the employer and employee (Nel et al 2011:212). Updating policies helps to eliminate discrimination in the workplace (Nel et al 2011:212). Policies should be in writing and should be communicated to all employees in order to be maximally effective (Grobler et al 2006:14).

The research findings revealed inadequate and non-transparent advancement opportunities, with specific reference to training opportunities, mentoring systems, career guidance and financial support. Insufficient development opportunities and career guidance for women employed in the core business of mining have also been reported in various studies, as indicated in the literature review. Training and development are important for both employers and employees. Effective training and development could enhance productivity, personal satisfaction and job enrichment (Nel, Kirsten, Swanepoel, Erasmus & Poisat 2012: 380). Training and development of employees are enforced by the Employment Equity Act 55 of 1998 and the Skills Development Act 97 of 1998 (RSA 1998b; 1998c). Furthermore, human resource development is also a prerequisite of the revised Mining Charter and mining companies are encouraged to educate and develop their personnel. Mining companies are obliged by legislation to submit a Social and Labour Plan (SLP) to the DMR as a prerequisite for the granting of mining or production rights. The SLP stipulates that mining companies should, among other things, provide for a bursary and internship plan, mentorship plan and a career path plan to develop employees (RSA 2010b:13). All these plans should include an indication of targets, time frames and budgets (RSA 2010b:13).

Health and safety challenges were reported in relation to inadequate PPE, heavy vibrating equipment and machines, dust, night shifts and pregnancy. The Mine Health and Safety Act 29 of 1996 enforces and promotes the health and safety of persons employed in the mining sector (RSA 1996b). Furthermore, pregnant employees are protected under South African legislation, including section 9(3) of the Constitution of South Africa, section 6 of the Employment Equity Act, and sections 25 and 26 of the Basic Conditions of Employment Act. The Code of Good Practice on the Protection of Employees during Pregnancy and after the Birth of a Child also provides guidelines to employers on how to protect pregnant and post-pregnant employees (RSA 1998a). A risk-assessment flow should also be implemented to ensure that pregnant and/or breastfeeding female employees are not exposed to significant risk in the workplace (Badenhorst 2009:60). Ill-fitting PPE can affect the way in which women are able to perform their jobs and the way women are protected. Therefore, PPE needs to be developed with women in mind and hence manufacturers play a fundamental role in the provision of correctly fitting PPE (Badenhorst 2009:62).

Concerns were also reported regarding equality (training and development, employment and promotions, and racism) and discrimination (women's ability to perform mine work, the glass ceiling, quota appointments and recognition). It is therefore of the utmost importance that mining companies adhere to the requirements of the Constitution of the Republic of South Africa, the Labour Relations Act

and accompanying affirmative legislation to foster a work environment free from discrimination, including racism, unequal payment, unequal awarding of bonuses and promotions, unequal development opportunities and sexual favouritism (Botha 2013). Stead and Watson (2010:120) believe that what is needed to effectively eradicate discrimination in the workplace is not only legislation but also a fundamental change in attitude towards women and employment. In the absence of this, women will continue to suffer discrimination in the workplace.

The research findings stressed sexual harassment concerns in terms of verbal harassment, physical conduct and quid pro quo harassment. The occurrence of sexual harassment in the mining industry is widely confirmed by various studies, as indicated in the literature review. Sexual harassment tends to occur in every kind of work setting, but some settings are more prone to sexual harassment than others. Women working in workplaces with a high male: female ratio, such as the mining industry, are particularly vulnerable to sexual harassment (Haralambos & Holborn 2008:128; Martin 1989, cited in Anderson & Taylor 2006:503; Wharton 2006: 188). Sexual harassment is a mechanism often used by men to maintain their dominance in the workplace. Some men engage in this activity to show their interest and affection; others practise sexual harassment as a response to their perception of unfair treatment or as a demonstration of their anger (McKinney 1992, cited in Anderson & Taylor 2006:503). The following steps could be taken against sexual harassment in the workplace (Grobler et al 2006:14; Nel et al 2014:184; Noe, Hollenbeck, Gerhart & Wright 2008:126):

- Employers should develop a policy statement that emphasises zero tolerance of sexual harassment.
- The policy should explain the procedure for reporting incidents.
- Details of the policy should be communicated to all employees via training.
- Sexual harassment complaints must be thoroughly investigated.
- Prompt disciplinary action should be taken against anyone guilty of sexual harassment and the victims should be protected.

7 Conclusion

Globally, it is evident that participation in the mining industry by women is being promoted through the introduction of various equal opportunity initiatives, protocols and legislation. In South Africa, women's participation in the industry is enforced by government by imposing specific quotas. It is apparent from the research that although the participation of women in the South African mining industry has increased, they are still subject to various social, physiological, structural and employment barriers. It is therefore of paramount importance that all stakeholders, the relevant state departments (such as the Department of Mineral Resources and the Mine Health and Safety Council [MHSC]), top and senior leaders of the mining industry as well as human resource managers and employment relations practitioners embrace and support a noticeably pronounced vision for gender diversity in the industry. It is also important to take note of the findings of research conducted on women employed in the core business of the mining industry and then develop strategies and plans to effectively address these challenges to ensure that women can be successfully and sustainably deployed in the industry. This should give women the opportunity to take their rightful place in the mining industry instead of being regarded as legislative beneficiaries or social guinea pigs.

8 Recommendations

On the basis of the findings of the research the following recommendations are made:

Ongoing research should be conducted by relevant state departments (for example the DMR and MHSC), mining houses, mining companies, women in mining organisations and academics to increase awareness of the challenges and barriers that women still experience in the mining industry.

Managements of mining companies should develop and implement strategies and plans to effectively address women's challenges. Effective and transparent monitoring mechanisms should be in place to evaluate and assess the viability of these strategies and plans and to measure progress in this regard.

Mining companies should also develop and implement diversity strategies in order to create a work environment in which all employees, regardless of their differences, could be respected and their contributions valued. The appointment of chief diversity officers can play a meaningful role in creating a suitable workplace culture that is deemed fair to both genders and strengthens group dynamics and levels of trust between employees. The benefits of a diverse organisation should be promoted.

The necessary support systems (women in mining support groups, female representatives, mentors, work/life balance strategies, and so forth) for women employed in the core business of mining should be created, promoted and sustained. Continued research should be conducted to determine the needs of female employees and strategies should be developed to effectively and sustainably address these needs.

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