



Progress in implementing the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) provisions for the employment of women in mining

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Synopsis

The South African democratically-elected government instituted policies and legislation that are intended to bring about change and transformation in the country and have drastically affected different industries, among others, the mining industry. The Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) and the Broad-based Socio-economic Empowerment Charter (Mining Charter) were introduced in order to redress previous inequalities and to promote women's employment in the mining industry.

This research evaluates the practical implementation of the MPRDA and the Mining Charter with specific reference to women in underground mining. A quantitative research paradigm was used. Data were collected through a process of a face-to-face interview surveys utilizing a structured questionnaire. The research setting was limited to the platinum-mining industry in the area of Rustenburg in the North West Province. The study population consisted of 195 available women working underground at the mine.

It is clear from the findings that mining companies are facing major challenges in their attempt to incorporate women in underground mining activities. Company policies regarding these issues must be firmly in place; however, the challenge lies in the translation of these policies into practice. In this regard, managers will have to play a leading role in the successful phasing in of women into the underground mining arena.

Keywords

broad-based socio-economic empowerment charter, gender equality, Mineral and Petroleum Resources Development Act 28 of 2002, women in mining.

Introduction

Historically, in the South African mining industry, race and gender determined the composition of the employee base, which ultimately resulted in a male-dominated industry. Women were legislatively prohibited from employment in the South African mining industry. Together with exclusion factors such as attitudes and stereotype opinions, this has led to the current state of low representation of women in the mining sector. The situation seems to be changing due to the introduction of equality, as well as mine-specific, laws that lead to a noticeable increase in the number of women involved in mining.

With the expanding economy and better acceptance of women in traditionally male-dominated workplaces, women need to take

their place in the workplace of choice. Women need to be able to participate in jobs and industries that were previously reserved for men, as females comprise approximately 52.2% of the total population in South Africa¹. The Minerals and Petroleum Resources Development Act 28 of 2002 (MPRDA), promulgated on 1 May 2004, has as a broad objective the rectification of previous inequalities and disadvantages in the mining sector². The Act requires, among other issues, that the mining industry workforce includes 10 per cent women. This target was due by 1 May 2009, and has therefore created many opportunities for women to access a career that has always evaded them. Furthermore, the Mines Health and Safety Act 29 of 1996 (MHSA) removed the restrictions for women to work underground³.

With the transformation of the mining industry, birth was also given to the Broad-based Socio-economic Empowerment Charter (Mining Charter), which was developed jointly by the then Department of Minerals and Energy (DME)^a, the industry, communities where mining takes place, as well as the trade union sector in October 2002⁴ (Sonjica, 2006, p. 6). The objective of the Mining Charter is to create better opportunities and benefits for women, as well as for other 'disadvantaged' groups, such as black people and the disabled, being referred to as Historically Disadvantaged South Africans (HDSAs)⁵ (South Africa, 2004, p. 9). Government also introduced measures to assess the progress made by mining

^aCurrently the two departments are split into Mining and Energy – the new mining department is referred to as the Department of Mineral Resources (DMR)

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companies in respect of a number of key areas as they relate to socio-economic goals, known as the Mining Scorecard. The nine elements of the Mining Scorecard⁵ are listed below:

- Human resource development
- Employment equity
- Migrant labour
- Mine community and rural development
- Housing and living conditions
- Procurement
- Ownership and joint ventures
- Reporting.

Each element has a number of sub-requirements.

Mining companies were given five years, which fell due in April 2009, to comply with the targets as set out in the Mining Scorecard, or run the risk of losing their mining licences in the case of non-compliance. The Department of Mineral Resources (DMR) conducted a thorough impact assessment in 2009 to determine the progress made in terms of the objectives of the Mining Charter. It was clear from the review process that little had been achieved regarding the transformation of the mining sector. This is confirmed by recent findings of the Commission of Employment Equity¹, which indicated that after ten years of affirmative action being adopted as policy, progress on diversification of management and core-skilled workers remains minimal. This culminated in the amendment of the Broad-based Socio-economic Empowerment Charter for the South African Mining and Minerals Industry, launched in September 2010, with the main objective of further redressing historic inequalities in the mining sector.

Although well intentioned, mining companies face tremendous challenges in achieving a 10 percent representation of women. Furthermore, the inclusion of women in the workforce, and specifically in underground operations, requires exceptional managerial interventions. Numerous barriers are still in existence concerning underground employment of women, as will be put forth in this article.

Research objectives

The broad objective of this study was to evaluate the progress in implementing the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA) provisions for the employment of women in mining. Furthermore, to investigate the effects of the Mineral and Petroleum Resources Development Act (Act 28 of 2002) on, and the associated challenges with, the practical implementation of women in mining relating to underground operations. This research endeavours to provide practical guidance to the mining industry in South Africa with regard to the deployment of women in the mining industry.

The specific objectives of this study were to:

- Identify the main contributory factors that prevent women from entering the underground environment of the mining industry
- Evaluate socio-economic issues accompanying the deployment of women in the underground environment of the mining industry
- Determine managerial interventions that could be taken regarding the deployment of women in the underground environment.

Research methodology

A quantitative research paradigm was used. According to Welman *et al.*⁶, the purpose of quantitative research is to evaluate objective data consisting of numbers. Quantitative researchers use a process of analysis that is based on complex structured methods to prove or disprove hypotheses⁶.

Research method

The research setting was limited to a platinum mine in the geographic area of Rustenburg in the North West Province. The research method used in this study comprised the face-to-face interview survey. The interview survey is used to collect data by reading the questions in the questionnaires to the respondents and recording the verbal responses on the answer sheet⁷. This method was chosen as it provides more reliable results when working in the mining environment, because the respondents are mostly illiterate or semi-schooled⁸. The interview surveys were conducted at different operating sites of the platinum mine.

Sampling

The study population consisted of available women (195) working at the mine. No sample was drawn. The response rate and the success rate of unspoiled participant responses were maximized through the process of a one-on-one interview with all the participants. Table 1 reflects the characteristics of the respondents.

Data collection method

Data collection was through a process of three survey interviewers administering a structured questionnaire. The survey interviews were conducted at the mine's premises and the duration per interview was approximately 20 minutes. In addition, supporting short notes on the responses to the answers were taken.

Three human resource officers were inducted on the content of the questionnaire as well as the role of the survey interviewer. It was the intention to gain information from various operations and not a specific site only. The use of a survey interviewer has several advantages. According to Babbie⁷, interview surveys typically attain higher response rates than mail surveys: respondents seem more reluctant to turn down an interviewer than to throw away a mailed questionnaire. Due to the sensitivity of the topic and to avoid the misunderstanding of the questions, the interviewer was able to explain the questions to the participants.

The face-to-face interviews were scheduled at the start of the respondents' working shifts to ensure the best possible response. The responses could have been influenced by exhaustion of the respondents after their underground shift, although no evidence from the data analysis supported this theory.

Data analysis

Data analysis was done with the support and assistance of the Statistical Consultation Services at North-West University. The information obtained from the questionnaires was analysed according to applicable statistical methods.

Table 1
Biographical details of participants

Item	Category	Number of participants
Occupation	Miner	7
Winch driver		30
Engineer helper		15
Production official helper		10
Production equipment helper		58
Locomotive driver		20
Battery attendant		10
Clerks		45
Total		195
Experience underground	Less than 6 months	11
Between 6 and 12 months		69
Between 1 and 2 years		58
Between 3 and 5 years		57
Total		195
Education level	Primary education	13
Secondary education		132
Tertiary education		45
Post-graduate		5
Total		195
Race	White	5
Black		190
Total		195

Findings

The findings are presented in line with the objectives stated in the Introduction.

Factors preventing women from entering the underground environment

The findings related to factors preventing women from entering the underground environment are presented below.

Male colleagues' acceptance of females underground

As indicated in Figure 1, the majority of women (79 per cent) indicated that their co-workers do not accept them. Only 14 per cent of the women indicated that their co-workers do accept them.

Language

Fifty-one per cent of the respondents believed communication between co-workers is relatively poor, 31 per cent indicated that the language of co-workers is acceptable and understandable to a great extent, and only 18 per cent indicated that language in the workplace is not a major concern.

Sexual harassment and sexual favouritism

It was clear from the responses by the participants that they experienced problems with sexual harassment by their co-workers. Furthermore, 40 per cent of participants indicated that sexual favouritism is a common practice by co-workers (see Figure 2). The most alarming issue in terms of participant feedback regarding sexual favours is that 48 per cent of participants indicated that their direct supervisors are aware of it, and they actually also practice sexual favouritism (see Figure 2).

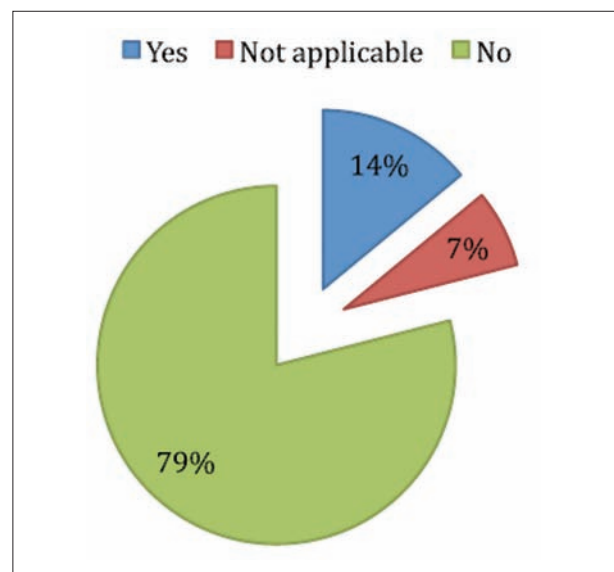


Figure 1—Participants' perceptions of the attitude of their male colleagues to acceptance of females underground

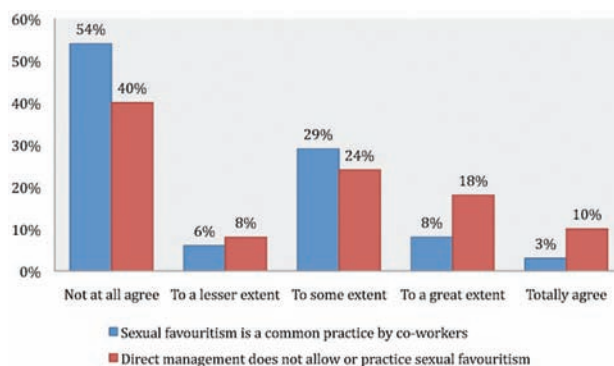


Figure 2—Perception of sexual favouritism in the workplace

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Specific physical traits required by women working underground

Women working underground implies that women are placed into positions equivalent to men and are doing the same manual labour associated with mining. The mining industry does require to a large degree that employees perform physical tasks, whether lifting or carrying of heavy equipment or the need to perform maintenance tasks. Respondents were evaluated for specific job categories, such as locomotive drivers, winch drivers, conveyor-belt operators, and using heavy as well as vibrating equipment, to determine whether the women regard these specific tasks as too physical. In all instances, the response was that, on average, 54 per cent of respondents indicated that women can perform these tasks.

The selection of employable candidates does require that these individuals are heat tolerant and have some degree of physical strength. The majority of the respondents (64 per cent) indicated that they do have the physical ability to perform their daily tasks, 25 per cent mentioned that they have, to some extent, the physical ability, and only 11 per cent felt that they do not have the physical ability to perform their daily tasks (see Figure 3).

Underground conditions are often associated with high temperatures. A slight majority of respondents (52 per cent) indicated that temperature is not regarded as a barrier for women to enter the underground environment; however, a significant 48 per cent felt that temperature is indeed a barrier for women to enter the underground environment in the specific mine.

Infrastructure requirements

This section evaluated the specific infrastructure requirements for the introduction of women into the underground mining environment. One third of the participants (34 per cent) indicated that the underground environment, although traditionally a male environment, has been converted to cater for the basic needs of women (see Figure 4). The majority (66 per cent) of the participants, however, indicated that much still needs to be done to cater for all the basic needs required by women working underground.

The mining industry, being a previously male-dominated industry, has been designed with men as the targeted labour force and, as such, all equipment and clothing are designed accordingly. Despite this, it was noted that 96 per cent of the research subjects indicated their acceptance of the protective clothing being supplied.

Health and safety

This analysis covers physical safety hazards as well as perceptions of the candidates in relation to the underground mining environment. It is clear from the literature study that work in the underground environment is often in confined spaces and it is often associated with small, narrow reef extraction. Although respondents regarded confined spaces as a health risk and indicated them as an obstacle to entering the actual stoping environment, 84 per cent of respondents indicated positively that they do believe that the underground workplace is safe. Only 13 per cent of respondents indicated

that they do not feel safe at the workplace. The DMR in the North West region recently embarked on serious actions to improve mine safety in the form of issuing Section 54 orders, which force the shutdown of the mining operations when workplaces are found to be sub-standard, hence the major focus by operations studied in this project is to maintain a high standard of compliance of the underground workplaces.

Socio-economic issues accompanying the deployment of women in the underground environment

The findings related to socio-economic issues accompanying the deployment of women in the underground environment are presented below.

Opportunities

It was indicated by 84 per cent of the participants that they have opportunities to work in different spheres of employment within the company. It was also stated by 39 per cent of the participants that the mine offers sufficient opportunities for women to develop themselves. Thirty-five per cent indicated that the mine provides, to some extent, career development opportunities, and only 24 per cent felt that the mine does not provide development opportunities. The participants responded positively regarding the evaluation to determine whether women are given the same opportunities as their male colleagues regarding opportunities for advancement. The advancement of women will be a direct

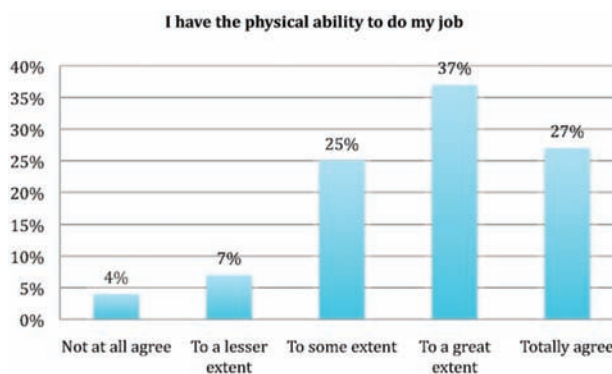


Figure 3—Perception of the physical ability of women to perform underground mining jobs

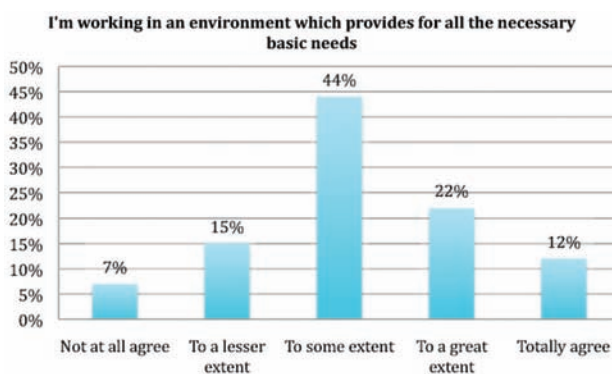


Figure 4—Perception that the basic needs of women are being met

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consequence of the degree of training and, on this basis, it was established that 94 per cent of the participants felt that sufficient training programmes are in place to ensure that women are fast-tracked to gain access to the various job categories being offered by the mine. The participants believe that they do have sufficient experience to perform their current tasks successfully; this could also be due to the type of tasks being performed underground, which are repetitive, routine-type tasks.

Working hours

The mining industry functions predominantly on a two-shift basis. Most of the participants working underground voiced the opinion that the working hours as such are not a concern, but indicated rather that the starting time of such shifts, i.e. approximately 04:00, is a concern to the women. They find it difficult to assist in the household context, e.g. preparing children for school. Sixty per cent of the candidates indicated that they encounter obstacles in performing specific family responsibilities. Considering night-shift employment, 24 per cent of the respondents indicated a concern with working night shift, not purely on the basis of safety, but also considering family responsibilities.

Remuneration and recognition

The perceptions of the participants were tested to understand if they believe that they earn the same monetary value for a specific job category as their male colleagues. The questioning also tested whether the women's direct supervisors were exercising informal recognition. As indicated in Figure 5, it is clear that the majority (74 per cent) of the participants suggested that they perceive recognition as unfair and not applied consistently. The majority (74 per cent) of the women were of the opinion that most men are recruited on a higher basic salary.

Reasons why women select the mining industry as a career

The main driving force for selecting the mining industry as a career was poverty, as reflected by 61 per cent of the participants (see Figure 6). The unemployment rate in South Africa tends to be more than 30 per cent, and therefore it is clear why women will endeavour to enter the mining industry. From the evaluation of the responses, it is clear that women enter the mining environment in the hope that underground employment will be a temporary arrangement, as 68 per cent of the respondents indicated that they do not see their current work status as a permanent arrangement.

Managerial interventions that could be taken regarding the deployment of women in the underground environment

The findings related to managerial interventions that could be taken regarding the deployment of women in the underground environment are presented below.

Sexual harassment policy

A concern is that 55 per cent of participants did not know

that the specific mine at which they worked has a sexual harassment policy in place (see Figure 7). This result should, however, be seen within the context of the participants interviewed: 41 per cent had limited work experience (one to twelve months of actual employment at the mine). From a management viewpoint, it can be considered successful that 44 per cent had a clear knowledge of the existence of such a policy. This indicates that the awareness drives at these operations do indeed create value and that the implementation of strategy regarding training and communication had a positive spin-off.

Employment equity policy

The majority of the participants (72 per cent) indicated that they knew that the mine has an employment equity policy in place (see Figure 7). The main driving force here is the knowledge of the communities surrounding the operations regarding employment equity legislation, which informs potential employees that the company should have an employment equity policy in place; hence the newly-recruited participants recognized that such a policy should be available. Some of the participants said that the employment equity plan is unclear and does not cater for specific detail. However, the document was not examined as part of this study.

Pregnancy policy

Based on the results analysed, the indications are that 58 per cent of the participants are aware that the mine does have a



Figure 5—Perception of informal and formal recognition

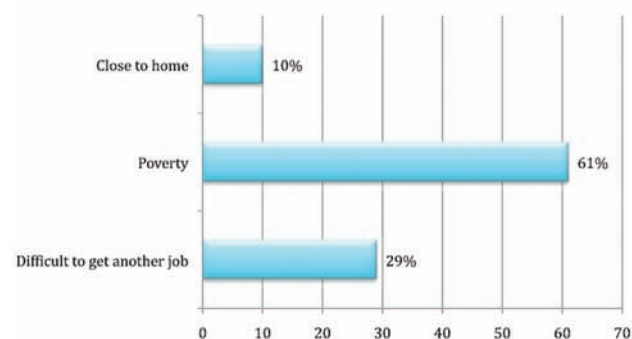


Figure 6—Reasons for women selecting the mining industry as a career

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pregnancy policy in place (see Figure 7). The participants highlighted that current practice at the mine with regard to maternity leave is a major frustration to pregnant women and it negatively affects their households in several ways. The participants with the required knowledge of the pregnancy policy indicated that the frustration for women working underground is twofold:

- Firstly, they do not have the same employment benefits as their female counterparts employed on surface. Because underground is defined as a hazardous environment, women who become pregnant must at the earliest knowledge of such pregnancy, report it to management. Pregnant women are restricted from going underground and must be considered for alternative employment on surface: if such alternative arrangements cannot be made, women will be sent on maternity leave.
- Secondly, according to South African legislation, pregnant women will receive only four months' leave payment; the remainder of the pregnancy period will be without salary payments, and this creates tremendous stress on such households.

Discussion

The underground mining environment has unique challenges, even employees without female employees. The legislation enforcing quotas of women creates increased demands on management to manage these polarities. On the one hand, management had to comply with the requirements of the new mining legislation in order to keep their licences to operate and, on the other hand, the underground environment is considered hazardous and underground work is one of the most physically demanding occupations⁹.

The discussion will be presented in line with the objectives stated in the Introduction as well as the Findings.

Factors preventing women from entering the underground environment

It is clear from the research that the majority of women perceive that they are not accepted by their male co-workers. This could be an indication that the viewpoints of males towards women working in the mining industry remain

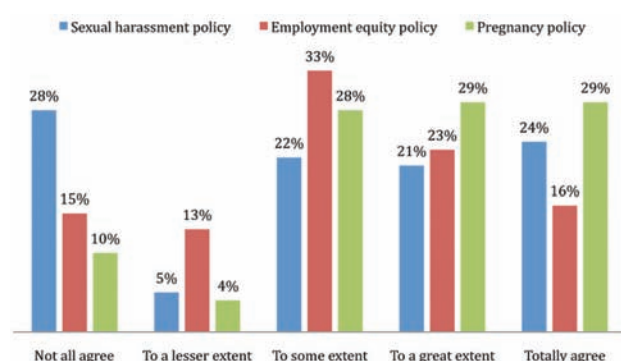


Figure 7—Perception of the knowledge of the existence of company policies

stereotyped by an attitude that women do not belong underground. This attitude is representative of the mining environment and is not a new phenomenon for mine management: it will remain part of the mining industry for some time into the future.

Communication seems to be a specific barrier in the mining industry. It was established that language did influence the effective functionality within the team and the participants indicated that the language used by co-workers was either not acceptable because of the excessive use of vulgar language or that there was lack of clear understanding because the team was made up of different cultures. The current accepted norm by the majority of males working in the underground environment is that they prefer communicating in 'Fanakalo', which is a traditional dialect consisting of isiZulu and isiXhosa. Because the mining environment was traditionally male-dominated, women are not used to the 'Fanakalo' dialect and this contributes towards communication problems in the workplace. From a mine management perspective, the issue of language will be addressed within the next decade, as most of the newly-recruited employees will need a minimum school classification of grade 12 and will therefore have a working command of English.

The mining industry faces serious challenges related to the harassment of women, specifically those entering underground workings. Coburn¹⁰ indicates that sexual harassment is not challenge confined to specific industries, because it exists in all industries. He emphasises that sexual harassment occurs more regularly in areas where females enter traditionally male-dominated workplaces. Women are being abused in various areas, including physical and verbal abuse, sexual harassment, sexually inappropriate comments, physical contact, and initiation rites¹¹.

Sexual favouritism refers to practices in the workplace where staff in authority positions reward employees in exchange for sex and have denied employees from promotion, salary increases, etc. who do not submit themselves to sexual advances¹². Sexual harassment and the practice of sexual favouritism are a major concern to management. Numerous training and education programmes are currently running at most mines to educate men and women on this specific issue. Nel *et al.*¹³ suggest that employers have to educate their employees on this very contentious issue.

The underground environment can be defined as dark and damp, as well as with increasing temperature with greater depth^{14,15}. It is an environment in which employees are often required to work alone, in confined spaces, and without any communication technology. They are also required to work in self-directed teams with little direction from senior supervisors^{14,15}.

Working conditions are difficult and sometimes very hazardous. Singer¹⁵ states that the workload required is often gruelling and physically demanding. On a daily basis for extended periods of time, underground employees are required to perform physical tasks. According to Schutte *et al.*¹⁶, physiological issues must be taken into consideration when employing females: 'Women are not physically identical to men; specifically for mining, the differences in physiological make-up must be accommodated. These are not insurmountable, but they must be managed.'

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The challenges faced in employing women in the underground mining environment are also directly linked to women's heat tolerance and, as such, the initial selection screening methodology at all mining operations includes physically testing women for underground heat tolerance. It was confirmed that, despite legislation and various other initiatives, female miners are not given any privileges with respect to selection criteria. Singer¹⁵ highlighted that female underground employees must pass the same meticulous induction and other screening tests as male employees. It was also clear from the research findings that the majority of the respondents feel that they do have the physical ability to perform their daily tasks. However, pre-employment selection criteria, as well as the unique challenges of the underground workplace, place tremendous challenges on management to find suitable women who can be placed into all underground mining occupations.

Adequately equipped physical facilities are another major challenge related to the introduction of women into the underground mining environment. Initially, the lack of physical facilities made it difficult to accommodate women underground at the mine. Ranchod³ stipulated that certain basic physical facilities have to be considered when mining companies employ women. Ablution facilities and change rooms specifically designed and equipped for women and unisex toilet facilities, which must have basic functions such as flush units with chemical basins and water points in the underground environment, are essential physical facilities.

Mining companies also need to accommodate women in terms of female-friendly protective clothing. Men are equipped with one-piece overalls. Research conducted by IFC-Lonmin¹⁷ revealed that women often prefer two-piece overalls. These two-piece overalls must be designed to comply with underground mining clothing regulations.

The South African mining industry remains faced with numerous safety challenges. McGwin *et al.*¹⁸, referring to statistical data released by the DME, stated that more than one hundred miners are killed every year in the South African mining industry. They also indicated that the mining industry has the highest fatality rate per occupation and industry. It is evident, and confirmed by different studies^{19,20}, that numerous dangers and hazards exist within the underground workings of a mine and, as such, most critics are highly opposed to women being introduced into the country's most dangerous employment sector. Considering the above, women have the potential to contribute positively and to make the workplace a more tolerable and less risky environment. Singer¹⁵ referred to women's behaviour as being more careful in unsafe conditions. Wilkinson¹⁹ embraced women's attitudes towards safety and concluded that women, in general, will not hesitate to consult if conditions are unsafe, whereas their male colleagues, placed in the same unsafe environment, will not report deviations because they are afraid of being seen as weak and cowardly.

As indicated above, the Mining Charter and other relevant legislation is enforcing changes in the South African mining sector, which requires that women must be introduced into South Africa's underground mining environment. These requirements are accompanied by enormous challenges and

demands, and place great pressure on the mining industry to continuously improve on safety targets with an added angle: the safety of women in the mining industry.

Socio-economic issues accompanying the deployment of women in the underground environment

The perception of the participants is that the industry does offer sufficient variations in terms of different job categories. The participants responded positively regarding the evaluation to determine whether women are given the same opportunities for advancement as their male colleagues. The participants also believe that they do have sufficient experience to perform their current tasks successfully.

Most of the participants working underground voiced the opinion that the working hours as such are not a concern, but the starting times of shifts are a concern to women, in that they find it difficult to assist in the household context, because of the morning shift starting time (approximately 04:00). Although mine management does consider these issues raised by the women, it is clear that the mining cycle remains a process and it has its limitations in that such a cycle needs to be completed within a 24-hour period. Management consistently reviews new technology to speed up such processes.

Basic conditions of employment include remuneration, and the perceptions of the participants were tested to ascertain if they believe that they earn the same monetary value for a specific job category as their male colleagues do. The questioning also tested whether the women's direct supervisors were exercising informal recognition. The majority of the women indicated that they felt that most men are recruited on a higher basic salary. This is in line with most of the on-mine climate surveys that have previously been conducted. Mine management consistently runs industry salary comparatives to ensure that all employees are rewarded competitively compared to other mining houses in the area.

The unemployment rate in South Africa tends to be more than 30 percent and therefore it is clear why women will endeavour to enter the mining industry at all risk. From the research findings, it is clear that women enter the mining environment with the belief that underground employment will be a temporary arrangement. If this is representative, it can be assumed that women utilize employment as a springboard for alternative employment on surface.

Although the percentage of women working in the mining industry is increasing because of the requirements of the Mining Charter, attaining a skilled female workforce is one of the major challenges facing the mining industry. Campbell²¹ cites the following issues as contributory factors that prevent women from remaining in the mining industry: the social environment underground; fear; sexual harassment and/or sexual intimidation or assault; the inability to cope with the physical challenges of working underground; and, even if they can cope, finding the physical working environment just too unpleasant. Barnard Mokwena, Executive Vice President of Lonmin¹⁷, stated that mines need to continue cultural transformation at the workplace, as well

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as make the mining profession attractive to women. Furthermore, he mentions that mines should invest in universities, target female students, and ensure that a larger pool of women graduates is created over time.

Managerial interventions that could be taken regarding the deployment of women in the underground environment

The findings above are scrutinized with respect to managerial interventions that could be taken regarding the deployment of women in the underground environment.

Various court cases have declared sexual harassment a serious workplace problem¹³. Whittock²² indicates that existing studies refer to numerous harassment manifestations, such as threats, demands and even bodily contact, in underground working environments. Women are also often abused in the form of verbal harassment by their male counterparts who use unacceptable language. In order to successfully address sexual harassment in the workplace, Nel *et al.*¹³ suggest that employers must:

- have a clear, comprehensive policy on sexual harassment
- investigate harassment complaints, and
- educate the workforce in all aspects of sexual harassment.

According to Bendix²³, employers are obliged to display information on the Employment Equity Act in a place where it can be read by employees. They must, in addition, place the most recent Employment Equity report and copies of a compliance order, an arbitration award, or Labour Court decision relating to the Act, in a prominent place accessible to all employees. Copies of the Employment Equity plan have to be made available to employees for consultation and discussion. It can be reported that the employment equity plan of the mine is part of a centralized management-union forum. The employment equity policy utilized at the mine indicates specific numbers and timeframes per job grading required to achieve milestones and the document is displayed at all shafts at the mine.

The Constitution of the Republic of South Africa Act 108 of 1996²⁴ clearly bans unfair discrimination, whether direct or indirect, on a number of grounds, including gender and pregnancy. The Basic Conditions of Employment Act 75 of 1997²⁵ explicitly forbids employers to make, or allow, a pregnant or nursing employee to do work that is hazardous to her health or the health of her child. The Labour Relations Act 66 of 1995²⁶ classifies unfair discrimination on the grounds of pregnancy as automatically unfair. Pregnancy remains a major challenge for management. On the one hand, women are often afraid to disclose their pregnancy status for fear of not being able to continue working and, if they have only recently joined the company, they also fear that it would disqualify them from receiving maternity benefits. On the other hand, management is required to find alternative placement for pregnant women¹⁷. It is essential for mining companies to have an acceptable pregnancy and maternity policy in place and to create awareness and understanding of the policy among women.

Recommendations

Against the background of the empirical research in this study, as well as supported and substantiated by relevant literature, recommendations are given in line with the three main conceptual reference points.

Factors preventing women from entering the underground environment

- Women are not accepted by their male co-workers. This could be an indication that the perceptions of men towards women working in the mining industry remain stereotyped. Organizations should implement education programmes, and regular surveys should be conducted to evaluate progress made
- Communication is a specific barrier, as most of the underground communication is being conducted in Fanakalo, which has an exclusion factor with regard to women. This gap will have to be managed by specific management interventions, such as 'English in the workplace' campaigns. This obstacle will also be addressed with the recruitment policies that allow the employer to employ only candidates with grade 12 education levels
- Sexual harassment in a previously male-dominated environment remains a major challenge. Organizations will have to implement policies and education programmes to address this
- Underground conditions are directly linked to high temperatures and confined working spaces. The mining company must introduce a pre-screening employment criterion in their induction programme in order to select suitable women to be employed underground
- The mining industry does require, to a large degree, that the employees perform physical tasks, whether lifting or carrying of heavy equipment or performing maintenance tasks. The mining industry will have to adopt basic employment selection criteria, such as physical ability/strength testing, as a minimum requirement
- Physical facilities regarding specific infrastructure requirements for the introduction of women into the underground mining environment make it difficult to accommodate women underground. Basic amenities, such as toilets, showers, and change rooms, are minimum requirements and mining companies must ensure that strategy regarding infrastructure is properly planned and implemented so that it is coordinated with the initial employment of females. This must be managed as a high-level strategy for all operations to ensure standardization.

Socio-economic issues accompanying the deployment of women in the underground environment

- Working hours lead to family responsibility challenges due to constraints placed on women regarding starting times of shift workers. Mine management should evaluate the placement of females and accommodate them as far as reasonable and possible

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- ▶ The majority of the participants indicated that they perceive recognition as unfair with respect to gender and not applied consistently, and indicated that they felt that most men are recruited on a higher basic salary. Promoting gender equality will have to remain part of the mine's commitment to human rights and the empowerment of women. Women candidates must be promoted to senior management levels within the organization by virtue of their ability, and this will consequently promote equal opportunities for all. The fast tracking of women candidates needs to be managed on a high level by a specialized recruiting department and will require the appointment of mentors to assist women in the various specialized disciplines, such as engineering
- ▶ The health and safety of mineworkers must always be a high priority of mine management and they must strive to continuously improve on safety targets—with the added angle of the safety of women in the mining industry. The appointment of women in the organizational structures will require the implementation of health and safety issues specifically pertaining to women, for example, the availability of the correct sizes of safety equipment
- ▶ Unemployment and poverty are the main driving force for women selecting the mining industry as a career. Mine management will have to implement attraction and retention initiatives to encourage women to participate in mining in order to facilitate meeting the legislated targets for female employment.

Managerial interventions that could be taken regarding the deployment of women in the underground environment

- ▶ Knowledge of in-house policies is required to ensure that women understand all procedures and therefore ensure better compliance regarding successful employment. Organizations should include this in their induction training programmes; regular briefs to emphasise changes or to re-energize understanding are also recommended
- ▶ An acceptable code of practice for pregnancy in the workplace will have to be developed that will be acceptable to both underground at-risk employees and surface women employees.

Conclusions

This research considered the challenges faced by mining companies with regard to the inclusion of women in the underground mining environment. The 2004 Mining Charter required mining companies to employ 10 per cent women in the underground mining environment. This target was supposed to have been reached by May 2009. Mining companies run the risk of losing their mining licences in the case of non-compliance. The Department of Mineral Resources (DMR) conducted a thorough impact assessment in 2009 to determine the progress made in terms of the objectives of the Mining Charter. It was clear from the review process that little had been achieved regarding the transformation of the mining sector. By 2009, only 26 percent of

mining companies had complied with the 10 percent women (inclusive of white women) participation in mining. The average rate of women participation is 6 percent, the bulk of whom are represented in support functions, with less than 1 percent in core management positions, a large proportion of which represents a preserve for white women²⁷.

Managers, leaders, and individuals will have to be held accountable for the successful phasing in of women into the mining arena. A proactive approach requires embracing the legislation and ensuring that effective planning, selection, and placement criteria form part of a high-level strategic management philosophy with regard to the phasing in of women to the underground mining environment. The immediate gain for the mining industry will be to ensure that mining companies maintain their new-order mining licences, but, ultimately, changing the face of the industry to be more representative. The South African mining industry must be developed into a sector in which women will also reap the benefits of democratic change by empowerment.

It can be concluded that a coordinated and continued action plan is required to integrate women into the underground mining environment. Mining houses will have to monitor all employment occupations to track compliance to the required ten per cent women in all categories, to ensure equal representation.

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