Mine workers' experiences related to substance use in a zero tolerance policy context

By

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This Project is dedicated to:

My Entire Family with lots of love

My ever praying mom (Mrs Majorie Ngcobo)

My Special Sister Dr NL Bhengu

My Spiritual Parents (Bishop MJ & Ps HL Mapaila)

Prof MJ Visser

Prof LH Human

• All the Glory and Honour go to God Almighty for His strength and amazing Grace throughout the process.

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Summary

High prevalence of substance use is reported among mine workers. This contributes to accidents, injuries as well as fatalities which has enormous effect on both the employers and workers. For that reason, the mining industry is regulated by the government with acts, policies and guidelines related to safety. Non-compliance to safety regulations attract heavy penalties. The mining industry therefore employs a zero tolerance policy on substance use. Despite this policy previous research reported high levels of substance use. There is a lack of research about the perspectives of mine workers regarding the use of substances. Following earlier work with mineworkers, the researcher was intrigued and eager to understand mineworkers' opinions on this subject and regarding policies in their workplace.

The study was conducted within a qualitative research framework. Twenty semi-structured interviews were done with black male mineworkers from the mines around eMalahleni (Mpumalanga) who were referred to SANCA following disciplinary hearings regarding substance use. The interviews were conducted in different African languages preferred by participants. This allowed for rich data as they expressed themselves freely using appropriate idioms to express opinions crisply. With the participants' permission, the conversations were tape recorded for transcription. The Interpretative Phenomenological Analysis (IPA) was used to analyse the data. Themes were generated to describe the mineworkers' experiences and the meanings they attach to substance use and mining policies. These themes were ordered and classified in a systematic way.

The results provided an understanding of the participants' *reasons* for use of substances. Substance use is seen as part of traditions and of mining culture. The urge for use is exacerbated by high levels of stress caused by the dangerous working environment and the living conditions in mining hostels. The research highlighted the complexity as well as the conflict arising from dissonance between safety policies and mineworkers' behaviour. It also confirmed that, although they are in place in the mining industry, policies still need to be enforced firmly.

Results confirmed that disciplinary outcomes and decisions bear serious implications for workers and their families. The resultant stress may even contribute to further substance use as a way to cope. This underlines the need for early firm enforcement of policies to stem use timeously. To enhance safety by curtailing risky behaviour, continuous education on policies is essential.

TABLE OF CONTENTS

CHAPTER 1

BACKGROUND

1.1 Context

This research focuses on substance use of mineworkers from different mines around eMalahleni, in Mpumalanga Province. The study aims to explore and understand the mineworkers' motivation to use psychoactive substances such as alcohol and cannabis despite the zero tolerance context of their workplace. The mineworkers who formed part of this study were referred to the South African National Council for Alcohol and Drug Use (SANCA) by their employers due to substance use. SANCA provides services to people with substance use problems from every colour, age, gender and socio-economic status. People referred to SANCA consists of employees from every sector of the economy including government departments and the private sector which includes the mining industry.

1.1.1 The Zero Tolerance Policy of the Mining Industry

South Africa has a well regulated mining industry harvesting a diverse wealth of minerals. The mining industry provides employment to hundreds of thousands of Southern Africans as well as many international experts and workers. Mining is a potentially dangerous endeavour, which requires persistent high levels of concentration and alertness from employees. To comply with strict safety regulations as outlined in The Occupational Health and Safety Act No 29 of 1996 (Jutas' Statutes of South Africa 2010/2011) every employer is required to have policies related to safety and substance use within the work environment. The Occupational Health and Safety Act renders employers responsible for the health, safety and welfare of their employees. The mining industry thus adopted a policy of *zero*

8

tolerance for substance use in the work place. The zero tolerance policy specifies that employees are not supposed to be under the influence of any psychoactive substances within the premises of the workplace**.**

The reason for strict policies is that substance use among mine workers reduces productivity, increases accidents, injuries, illness and absenteeism and places increased pressure on healthcare services, which poses a serious problem in the mining industry (Ajani, 2010; Matseke, Peltzer & Ramlagan, 2010). Random screening for psychoactive substances among mine workers is done regularly. Disciplinary hearings follow the discovery of substance use. Workers who test positive for substance use are suspended from work until treatment is sought and completed (Carpenter, 2007). On completion of treatment workers must undergo and pass final testing to earn a certificate as proof to the employers that they are substance-free.

Mineworkers from eMalahleni and the surrounding areas are referred to SANCA should they test positive for alcohol or cannabis use. At this stage it is difficult for the employer to determine whether a mine worker uses the substance regularly or only occasionally. The mines refer their employees for substance use assessment and treatment following the outcome of the disciplinary hearing at work. Most of these employees undergo disciplinary hearings as a result of absenteeism, testing positive for alcohol or cannabis when entering or working on the premises or when substance use is evident from an annual medical assessment. Other substance related offences are also challenged.

SANCA has to retest the employees and provide substance use counselling. Mineworkers may therefore differ from other clients at SANCA, in that they may not be dependent on substances as yet. SANCA has to establish psycho-educational programmes to limit the use and use of substances on mining premises. To assist SANCA in the development of programmes, a thorough understanding of mineworkers' substance use, their reasons for using substances and their perception of the mine's policies are necessary.

1.1.2 Motivation of the research

At the time of this study the researcher, was working as a counsellor at SANCA in eMalahleni. Her work entailed offering education on substances and effects of substance use to employees referred from different sectors, including the mining industry. The mine workers use substances despite the potential risk of disciplinary action which can include

dismissal, suspension and the loss of income. Her interest was captured by the wealth of stories told during the psycho-education workshops. It was worrying to realize that some workers were in denial of their serious substance use or displayed poor insight into the effects of the substance use on their lives and workplace. Alcohol and cannabis were used by these mineworkers to cope with stressful conditions in their work place. There was also evidence of the lack of acceptance of industry policies on substance use. Capturing and studying the stories of mineworkers could lead to a better understanding of their viewpoints and ultimately to a strategy which can assist them to conform to essential safety policies, possibly through relevant psychologically based education.

The researcher became aware of not only the seriousness, but also the scale of the problem. Despite strict policies, the rate of substance use reported among mine workers is alarming. A study conducted to investigate alcohol and cannabis use among mine workers in Bloemfontein estimated a 25% prevalence of the use of just those two substances (Ajani, 2010). Cannabis is reported to be the most widely used illicit substance on the mines (Matseke et al., 2010).

Previous research related to substance use in the mining industry concentrated on the prevalence and consequences of the use and not on the psychological roots of the problem. Apparently little or no attention was given to the subjective experiences and motivation driving substance use or to the existing perceptions of mineworkers regarding the relevant industry policies. This study attempts to bridge this gap by studying the motivation of mineworkers to use substances as well as their perceptions of the relevant policies of the mines.

1.2   Research Question

The aim of this research is to understand mineworkers' reasons to use substances in the workplace despite restrictive policies and to explore their perceptions of the substance use policies in the mining industry. The question that begs an answer is: 'What are the mineworkers' experiences related to substance use in a zero tolerance policy context?'

1.3   Goal of the research

The research aims to understand the experiences and motivation of mineworkers to use and use substances such as alcohol and cannabis and to determine how they perceive the

zero tolerance policy in the mining industry. The understanding of mineworkers' alcohol and cannabis behaviour can be instrumental in the development of effective prevention or treatment of substance use in the mining industry.

1.4 Research Paradigm

This study, conducted within the framework of qualitative research, employs interpretive phenomenological analysis (IPA) (Osborn & Smith, 2008). This is an original study exploring the mine workers' subjective experiences and motivations for substance use as well as their understanding of the policies in a zero tolerance context in their workplace.

1.4.1 Qualitative Research

Qualitative research was employed to allow the researcher to explore the subjective experiences of mine workers. Qualitative research locates the observer in the world of the participant and uses interpretive practices to transform and make the participant's world visible. In qualitative research the researcher assumes an interpretative and naturalistic approach in which he/she conducts the study. The researcher therefore studies a phenomenon in a natural setting, attempting to make sense of, or interpret, phenomena according to the meanings that the researcher and participants bring to the situation (Denzin & Lincoln, 2011; Durrheim, Painter & Terre Blanche, 2006).

Qualitative research is used to understand everyday human experience in all its complexity. It conforms to the notions that reality is socially constructed. According to Denzin and Lincoln (2011), the word qualitative emphasizes the 'quality of entities, the process of meanings'. The reason for choosing this design is based on its ability to use the naturally occurring data to find the participants' meanings. The design is sensitive to the context within which the phenomenon occurs. The contextual sensitivity of qualitative research allows the researcher to look at how the phenomenon under investigation is actually understood. It means the researcher has to be sensitive to the context of research and expose herself to the situation in order to understand the life world of the participants. She must search for the complex relationship between what people do and the contexts in which they live (Wicks & Whiteford, 2006).

1.4.2 Interpretive Phenomenology

The phenomenological aspect of IPA focuses on exploring the individual's perceptions and how he or she experiences the phenomenon in question (Connelly, 2007). The interpretive

11

tradition assumes that an individual's personal experiences are real and should be taken seriously. These experiences can be understood by interacting and listening to what individuals have to disclose. Therefore, first-hand versions of personal encounters play pivotal role in providing rich and detailed descriptions within the interpretive research. IPA pursues to search and allow individuals' experiences to be heard in order for them to be understood (Denzin & Lincoln, 2011).

The researcher attempts to understand the personal experience as well as, the nature and quality of the fact under investigation. The two aspects of interpretation appears to be captured within the word 'understanding' including: understanding in the sense of identifying or empathizing and understanding while trying to make sense of it (Denzin & Lincoln, 2011). The theoretical commitment of interpretive phenomenology to the person assumes a sequence of connections between people's talk and their thinking and emotional state. IPA acknowledges that at times people struggle to express what they are thinking and what their emotional state is like. In these situations there may be a reason why they do not wish to disclose (Osborn & Smith, 2008).

1.4.3 Process Overview

Data was collected by means of in-depth semi-structured individual interviews. The interviews were audio recorded using codes to ensure privacy and confidentiality of the information. Each interview was transcribed and analysed. Various themes emerged from the data. These themes extolled the participant's realities and contributed meaningfully to the understanding of the mineworkers and their motivation to use substances. It also highlighted their experiences with zero tolerance policies. The full discussion of the method is found in chapter 3.

1.5 Terminology

As the terms defined below are widely used in this dissertation, some clarification is in order:

o   *Substance use* means that a person uses one or many psychoactive substances without giving rise to health or behavioural problems that might cause harm to himself or others. The user is still in control of the substance he uses and there is no concern regarding his functioning. It refers to the consumption of low or infrequent doses of alcohol and other

drugs, sometimes called experimental, casual, or social use, such that damaging consequences may be rare or minor (Oliver, 2008).

o *Harmful use of substances* refers to a pattern of psychoactive substance use that is causing damage to health. The damage may be physical (e.g. hepatitis following injection of drugs) or mental (e.g. depressive episodes secondary to heavy alcohol intake). Harmful use commonly, but not invariably, has adverse social consequences; social consequences in themselves, however, are not sufficient to justify a diagnosis of harmful use (Kaplan, Sadock & Sadock, 2007).

o *Psychoactive substances* are the substances that, when taken in or administered into one's system, affect mental processes, e.g. cognition or affect. It is a substance that alters a person's perceptions, mood, physical functions and using them exposes a person to risks and health hazards and can have social consequences to his/her life.

o *Occupational stress* refers to the harmful responses that occur when the psychological and/or physiological requirements of the job, do not match the competencies or needs of the worker. It is a reaction workers when they perceive the demands of work as intimidating and are their beyond their ability to cope (Edwards, Milanzi & Schutte, 2012.

o *Coping strategies,* coping generally refers to *adaptive* or constructive coping strategies, i.e. the strategies reduce stress levels. However, some coping strategies can be considered *maladaptive* or negative coping strategies.

o *External locus of control* means that a person generally believes that his success or failures result from external factors beyond his/her control, such as luck, fate, circumstance, injustice, bias, or teachers who are unfair, prejudiced, or unskilled.

o *Perception refers to* the ability to see, hear, or become aware of something through the senses. It is the way in which something is regarded, understood, or interpreted.

o *Intoxication* is the condition of being drunk as the result of drinking alcoholic beverages and/or use of narcotics. It is a state in which a person's normal capacity to act or reason is inhibited by alcohol or drugs.

o *Alcohol use disorder is* a pattern of alcohol use that involves problems controlling your drinking, being preoccupied with alcohol, continuing to use alcohol even when it causes problems, having to drink more to get the same effect, or having withdrawal.

1.6   OUTLINE OF THE STUDY

The structure of the study is outlined as follows:

Chapter 1 served as the introduction where the context, research paradigm, motivation as well as the structure of the research study was provided.

In Chapter 2 the literature review on substance use in the mining industry will be discussed, focusing on alcohol and cannabis use. The important aspects in this chapter include the regulations in the South African mining industry, prevalence of substance use /use in the mining industry, factors that influence substance use, effects of substance use in the mining industry and perceptions towards workplace policies. The chapter is concluded with a summary.

Chapter 3 describes the methodology used to conduct the study. Interpretive Phenomenological Analysis is employed. The research design including recruiting participants, data collection and data analysis, is discussed.

In Chapter 4 the interpretation of the results is given. The themes identified in the data analysis, depicting the experiences of the mineworkers, are described. The experiences are explored in relation to the aim of the study and the phenomenological paradigm.

Chapter 5 contains the discussion and conclusions of the study including recommendations about the treatment of the mineworkers with alcohol and cannabis dependence or any other substance related problems. The strengths as well as limitations of the study are highlighted in this chapter.

We now turn to the chapter highlighting literature related to substance use in the mining industry.

CHAPTER 2

LITERATURE REVIEW

Introduction

The purpose of a literature review is to provide the background that will enable the researcher to answer the research question. In this instance the question is: 'What are the mineworkers experiences related to substance use in a zero tolerance policy context?' The aim of this research is to understand mineworkers' reasons to use substances in the workplace despite restrictive policies and to explore their perceptions of the substance use policies in the mining industry. The chapter starts with the discussion of the safety regulations in the mining industry and continues with the discussion on substance use as well as the perceptions of mineworkers.

2.1 Regulations in the South African Mining Industry

South Africa is known for its richness and resourcefulness harvesting a diverse wealth of minerals produced by the mining industry. In this country mining industry is well regulated. The legislation requires for management of substance use in the workplace (Albertyn, Bhoola, Harker- Burnhams & Mc Cann, 2011). The employers are obliged to ensure that substances and or alcohol do not affect employees while they are at work (The Employment Equity Act No. 55 of 1998). This is due to mining still remaining a high risk and inherently dangerous work environment. It is notorious of high rates of accidents and fatalities. The employers are compelled to respond to legal safety and health obligations to ensure safety and health standards and least on par with those of other Western countries. Thus providing a safe and healthy working environment for the workers. (Bamberger & Biron, 2006; Carpenter, 2007; Gyekye, 2010). To comply with strict safety regulations as outlined in The Occupational Health and Safety Act No 29 of 1996 (Jutas' Statutes of South Africa 2010/2011) every employer is required to have policies related to safety and substance use within the work environment. All the efforts are aimed at reducing the frequency and

15

seriousness of catastrophic events.   The Occupational Health and Safety Act renders employers responsible for the health, safety and welfare of their employees. There was an incidence in Kentucky (US) where there was a coal mine explosion. A bag of marijuana (cannabis) was found in the mine. This is one of the reasons, among others, that prompted the growing interest in substance-free mining environments among mine operators and the employers. They have an enormous obligation to protect their employees and their businesses from harmful substance use (Pit & Quarry, 2007). In South Africa, the act was adopted after fifty tree mineworkers died as a result of an explosion in the Middelbult Coal Mine in Secunda (Mpumalanga). This was coupled with the increasing high rates of accidents and fatalities during the 1990's. This tragic death of mineworkers prompted the government to take action regarding accidents in the mines (Hermanus, 2007).

The act aims to protect the health and safety of employees and other persons on the mining premises. Both employers and employees are required to identify hazards, eliminate and minimize risk to health and safety. Employers experience significant penalties should they fail to comply with health and safety obligations. Managers may personally be held liable for noncompliance.

Regulations and guidelines on workplace substance use contained in the mine health and safety act have obligations for both the employers and the employees (Albertyn et al., 2011**)** as follows:

Duties of the employee

- To comply with instructions, it is an offence not to comply

- To take reasonable care to protect own health and safety

- To take reasonable care to protect the health and safety of other persons who may be affected by any act or omission of any employee

- To use and take proper care of protective clothing and other health and safety facilities and equipment provided for the protection, health and safety of that employee or any other person

- To report promptly to the immediate supervisor any situation which the employee believes to be presenting a risk to health or safety of that employee or any other person

- To cooperate with any person to permit compliance with duties and responsibilities placed on that person in terms of act.

Duties of the employer

- provide for protection of the health and safety of employees and other persons at mines and, for that purpose:
- to ensure that every employee complies with the requirements of this Act;
- to institute the measures necessary to secure, maintain and enhance health and safety
- to provide persons appointed under subsections (2) and (4) with the means to comply with the requirements of this Act and with any instruction given by an inspector
- to consider an employee's training and capabilities in respect of health and safety before assigning a task to that employee
- to ensure that work is performed under the general supervision of a person trained to understand the hazards associated with the work and who has the authority to ensure that the precautionary measures laid down by the employers are implemented
- to promote a culture of health and safety

- to provide for the enforcement of health and safety measures

- to provide for appropriate systems of employee, employer and State participation in health and safety matters

- to establish representative tripartite institutions to review legislation, promote health and enhance properly targeted research

- to provide for effective monitoring systems and inspections, investigations and inquiries to improve health and safety

- to promote training and human resources development;

- to regulate employers' and employees' duties to identify hazards and eliminate, control and minimise the risk to health and safety

- to entrench the right to refuse to work in dangerous conditions

- to give effect to the public international law obligations of the Republic relating to mining health and safety

- to provide for matters connected therewith

The employer is only considered to have applied legal obligations in relation to health and safety when he has implemented a policy that addresses the risks associated with substance disorders in the workplace. The important aspects in the policy are discussed in the next session.

2.1.1 Substance zero-tolerance policy

Employers took a responsibility of creating, providing and maintaining a safe working environment by implementing a substance zero-tolerance policy as necessitated by the act. The zero tolerance policy specifies that employees are prohibited to be intoxicated or be in possession of any substance within the premises of the mine or workplace, while on duty. Random screening for illegal or psychoactive substances among mineworkers is done routinely. The discovery of substance use is followed by disciplinary hearings which may result in suspension from work until treatment is sought, should they test positive (Carpenter, 2007; Gyekye, 2010). The policy is consistently and fairly applied to all employees and serves as the foundation of a substance-free program. A substance-free workplace offers many benefits for employees as well as employers. These benefits include fewer accidents, fewer disciplinary actions, less absenteeism as well as greater awareness about alcohol

and other substances and health issues as well as substance-free families (Bruce & Cholakis, 2007; Pit & Quarry, 2007).

The key aspect to any policy is to implement adequate and fair rules and procedures. Their attitudes regarding the appropriateness of the policy rules are crucial. This necessitates a continuous process of training and education with an aim to enhance awareness to the mine workers (Gyekye, 2010).

2.1.2 Awareness (Education and training)

A policy clearly articulates that the employees have an obligation to take responsibility for their own safety and that of fellow workers. Employees can be cynical and suspicious about policies. However they, positively accept the policy that is primarily concerned with rehabilitation, adequate information and training (Bain, Brown & Freeman, 2008).   This information need to be communicated to the employees with an aim to educate mine workers and give them information about workplace policies. Education puts emphasis on health and safety implications associated with use of alcohol and other substances. It should accentuate the importance for compliance as well as the consequences of non-compliance. Education helps workers to identify signs and effects of substance use on job performance and their health in general.   It also emphasises the availability of treatment and other facilities that provide help, such as counselling and rehabilitation for alcoholism and substance use (Killian, 2008; Pit & Quarry, 2007).

 Education and training can also be helpful in enabling supervisors to identify and deal with substance related dangers in the workplace. The training of supervisors ensures that they understand their role in enforcing the substance-free workplace policy and know how to identify signs and effects of substance use on job performance (Pit & Quarry, 2007.)

Peer education is an important aspect to enhance the strategies. Fellow workers undertake interventions and employ a harm reduction approach. These interventions focus on safety and emphasize the impact of unsafe behaviour caused by alcohol and substance use on all workers. To reinforce safe and health working environment testing for substance use disorders has become obligatory (Pidd & Roche, 2008). In the next section the testing for substance use will be discussed.

2.1.3 Substance (drug) testing

Testing for alcohol and other substances in workplaces have increased in recent years as a result of productivity and occupational health and safety concerns. Philosophically, the subject comprises a touchy and convoluted industrial and humanitarian issue. It is a necessary and legal measure in curbing accidents and employers may therefore use testing devices to conclude whether employees are under the influence of substances or not. Employees should comply with a request from the employer to subject themselves to appropriate testing (Pidd & Roche, 2008).

Testing practices form part of the holistic approach to occupational health and safety. The substance testing policy in the mining industry is specifically designed for the needs of such a workplace. This policy aims at reducing the risk and ensuring the fitness of workers to perform mine duties. Substance testing can provide concrete evidence of substance use. This evidence can be used for intervention or disciplinary action. In case where testing is implemented, policy must clearly state who will be tested, which substances are tested for, when will tests be conducted and what are the consequences of positive test results (Pit & Quarry, 2007).

Alcohol and other substance testing should involve respectful treatment during testing. Personal privacy should be respected during testing and confidentiality of results should be maintained. It is important for the employer to ensure the consistency, fairness, unbiased and justified selection of employees for substance testing and to ensure that their rights and privacy are upheld during the administration of procedure like urine testing. Dismissal of workers without appropriate investigation, or where policies are unclear, can be ruled as unfair. The perceived fairness of testing practices and the types of tests used may impact the employees' willingness to accept testing and not to see it as an undue infringement of their privacy (Pit & Quarry, 2007). Employees deserve to be treated with dignity and with extreme sensitivity to avoid humiliation and embarrassment. Other strategies used in addressing substance use in the workplace include the employee assistance programs (EAPs) (Bamberger & Biron, 2007).

2.1.4 Employee Assistance Programs (EAPs)

EAPs offer formal workplace based services and intervention systems which are essential for many employees. These services and systems address a wide range of problems that may affect job performance, absenteeism, disturbances etc. The range of problems include harmful use alcohol and psychoactive substances, but also encompasses issues like psychological and family problems. EAPs aim to retain and rehabilitate troubled employees, not to end or disturb their careers, as is often believed. EAP teams will encourage employees to seek more specific professional help, where appropriate (Bamberger & Biron, 2007).

A more detailed report on the state of substance use in the mining industry will now be presented:

2.2 Prevalence and effects of substance use in the mining industry

Despite the regulations and policies in place South African mining industry is still engulfed and experience employees with harmful use of alcohol and other substances. Literature points to an increase in harmful use of substances among the employees in South Africa. Research done among farm workers and at a defence force clinic in South Africa revealed high patterns of harmful drinking. Another study found that, 9.3% of mine workers who participated were using alcohol on a daily basis (Albertyn et al., 2011). All forms of substance use, legal or illegal can affect the workplace. Workers who use illicit substances triple their own risk of accident involvement. Such workers present with poor concentration at work, unexplained disappearances from the worksite, errors in judgment, carelessness and mistakes, disregard for safety as well as needless risk taking. Such behaviour may bear life threatening consequences for mineworkers and their colleagues as a result of increased errors due to effects of substance use. The harmful use of substances in the mining industry often leads to incidences resulting in damage to property, serious injuries, endangering of life and occasionally loss of life (Boerengen-Lacerda & Zibe-Piegel, 2013).

Mining industry environment requires employees to exhibit high level of alertness, accuracy and quick reflexes as well as capability to perform complicated tasks. Intoxication with alcohol and other substances is a significant contributing factor to workplace injuries and deaths. If

workers are under the influence of psychoactive substances they are more likely to commit unsafe acts which can cause damage to their own life, others' lives as well as to the organization. The former United States Bureau of Mines confirmed that human error was the major causal and contributing factor to occupational injuries in the mines. They estimated that human error caused 93% of all injuries. The role of human behaviour is very important in relation to mine injuries (Bhattacherjee & Ghosh, 2007).

Harmful use of substance impacts on the safety performance. The impairment interferes with accuracy and efficiency of work. This creates serious problems for the employers, as they have an obligation according to the mining act to create and ensure a safe environment for all mine workers. Although there is a decrease in deaths and injuries, the industry has not yet achieved a zero rate and numbers are still high. In 2009 reports indicated a 55% decline in the number of lost lives, which was quite significant, but still 201 workers lost their lives in the workplace (Botes, Brink, Emmett, Hoe-Richardson, Oswell & Samuel, 2009). Substance use in the workplace presents a wide range of challenges for employers, employees and other associated constituencies. Employers witness employees presenting with increased absenteeism, being late for work**,** tardiness and poor quality work which results in reduced productivity (Bhattacherjee & Ghosh, 2007; Bruce & Chokalis, 2007; Killian, 2008).

In most cases these employees blame others for their shortcomings, complaining about problems at work or at home (Finch, Reagin & Slavit, 2009). The two substances that are mostly prevalent in the mining industry and are of interest in this study include alcohol and cannabis and they will be discussed in the next section.

2.2.1 Alcohol

Alcohol is a licit substance and it remains the most commonly used psychoactive substance in South Africa. According to historical and traditional use of alcohol in Sub-Saharan Africa, alcohol drinking used to take place at the end of the day's work as a way to unwind and relax or in ceremonies (Acuda, Obondo, Othieno, & Crome, 2011), South Africa is no exception. In South Africa alcohol is widely and readily available in most settings. Most of the people in different societies have experienced alcohol use in some way or the other. It is socially accepted and it facilitates social interactions and reduces powerful negative

22

emotional reactions. It is a substance of choice for many people. South Africans consume well over five billion litres of alcoholic beverages per year. The figure could be nearer to six billion, depending on one's estimation of the amount of sorghum beer consumed. High levels of harmful use of alcohol have been reported (Cronje, Reyneke & van Wyk, 2013). A study conducted to investigate alcohol and cannabis use among mineworkers in Bloemfontein confirmed the prevalence of substance use in the mining industry. The sample of the study was selected from seven mines around Bloemfontein. Different modes of testing substance use were used including breathalysers, urine tests and questionnaires to test for alcohol and cannabis respectively. The results suggested that 46.9% of workers from mines involved in the study use alcohol, while 15.3% were likely to have harmful use of alcohol (Ajani, 2010).

2.2.1.1 Effects of Alcohol Use

Alcohol is a depressant. It slows down the central nervous system including the brain. Early indications of harmful use of alcohol include intoxication. *Alcohol intoxication* is habitually believed to be a normal rite of passage to adulthood and it is not thought of as a mental disorder. Although intoxication is an occasional occurrence it may lead to Alcohol Use Disorder (DSM V, 2013). Alcohol intoxication can cause drowsiness, blurred eyes, violent behaviour, feelings of depression and in some cases hallucinations and delusions (Moleko, 2012). Intoxicated people may experience poor hand-eye coordination, poor concentration, and decreased ability for decision making, which could affect the individual's functionality. Alcohol disturbs and slows the response or reaction time to unexpected situations, immediate and delayed recall, hand steadiness, information processing and visual perception. This could lead to risk taking behaviour, accidents, falls, injury as well as pre mature death. Slow reactions could be risky in mines where work regularly entails machine operations and driving. Alcohol may cause poor muscle control, gut irritation, diarrhoea, nausea and disturbed sleep patterns (Almeida, Greece, Howland, Minsky, Roers & Rohsenow, 2007).

Escalating levels of harmful use of alcohol may induce increased *physiological tolerance* for alcohol in the body of the intoxicated person. One result of this adaptation of the body is that subsequent cessation of alcohol intake may lead to *withdrawal syndrome,* presented by tremors. This syndrome is marked by insomnia and feelings of anxiety. Alcohol use

23

increases the risk of disease, disability and premature death. An episode of heavy drinking usually results in common after effects including headaches, nausea, tiredness, shakiness and vomiting. Such health problems and diseases include Alcohol Use Disorder (DSM V, 2013), liver cirrhosis, cancers and injuries (Altieri, Baan, Bouvard, Coglianov, Grosse, Secretan & Straif, 2007; Parry, Rehm & Shield, 2013). As a result employers experience increasing demands for health care benefits with subsequent cost implications. Medical claims by substance using employees are higher than that of their counterparts. Mineworkers seem to have poor insight into the effects of alcohol on their general health and performance (Cronje, Reyneke & van Wyk 2013).

Irritability or sudden inexplicable mood swings usually follow in the mornings after a drinking incidence. Such behaviour may have a negative impact on relationships with colleagues. Poor relationships among mineworkers may be detrimental to communication and may thereby compromise the safety of the affected mineworkers and others. Mineworkers depend on one another for safety while on duty working as a team. A mineworker with impaired judgment or one who suffers blackouts may contribute to serious accidents and injuries and may present reduced performance (Hostetler & Sattar, 2007). Individuals who use alcohol tend to believe that drinking will not affect their behaviour at work and that no one will detect a difference in the way they perform their jobs. The trained observer will notice the gradual behavioural changes as the individual's job performance and efficiency will be deteriorating (Schultz & Schultz, 2010).

Alcohol use may also contribute to lower productivity. Alcohol-related reductions in job productivity may be due to workers attending work suffering a hangover or alcohol-related fatigue which can negatively affect performance. Productivity may also be reduced due to co-workers "covering" for workers who are unable to work effectively because of their alcohol use. Currently, little is known about the extent or nature of alcohol related reductions in "on-the-job" productivity (Pidd & Roche, 2008).

Alcohol misuse may escalate productivity-related costs (Bouchery, Brewer, Chaloupka, Gonzales, Roeber & Sacks, 2013). These costs are attributable to alcohol-related absenteeism and lost production and resources, alcohol related death, premature retirement as well as reduction in the available workforce. High-risk drinkers are up to 22 times more

likely to be absent from work due to their alcohol use compared to low-risk drinkers. However, workers who usually drink at low-risk levels, but on occasion drink at high-risk levels, account for approximately half the cost of alcohol-related absenteeism (Pidd & Roche, 2008).

2.2.2 Cannabis

Cannabis is the most commonly used illicit substance worldwide (Allen & Holder, 2014). A large amount of cannabis, (about 1500 ton per annum) is illegally consumed by South Africans themselves (Matseke et al., 2010). In the study conducted in Bloemfontein, the prevalence of cannabis use was evident too. It varied between 4.6% and 21.5% across the mines (Ajani, 2010). In South Africa and Africa at large, cannabis is often consumed to increase stamina in work contexts. It is also perceived to be pleasure boosting or a mode to alleviate boredom of repetitive activities. It is also known to reduce the pain of difficult work (Ambler, Carrier & Klantsching, 2014). Cannabis is inexpensive, easy to access and prosecution for its use is not frequently enforced. It is often perceived not to cause any health problems (Ajani, 2010).

It consists of flowering tops, leaves and stems of the plant cannabis sativa. The substance is not processed, it is used in its crude natural state. It can be used on its own or in combination with other substances. The smoke of cannabis contains more than 2000 chemicals and the one responsible for the "high" is delta-a-tetrahydrocannabis (THC). The THC receptors are widely distributed throughout the brain in the regions involved with motor functions, learning and memory where pleasure centres are connected. Cannabis is fat soluble which means that it is stored in the fat cells of the body. It is not easily eliminated from the body. It is retained in the brain, reproductive glands and other fat-containing tissues of the body for days, even weeks and the damage is enduring (Galanter, Herbert & Kleber, 2008).

2.2.2.1 Effects of Cannabis use

People smoke cannabis to produce a sense of well-being and decreased anxiety. The substance sedates the brain and alters mental processes. The lasting result of cannabis use is, reduced performance of the user in different spheres of life, including the workplace. Regular use of cannabis induces diminished ability to learn, concentrate and to remember. It induces impaired perceptual and motor coordination and impaired judgment. Reaction time is slowed and perception of time and distance is distorted. This can expose the

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mineworker to injury during events such as fires, rock falls and other emergencies. The impairment of psychomotor skills impedes the ability to operate machines or driving motor vehicles. Mood changes such as euphoria and anxiety are frequently related to the use of cannabis (Galanter, et al., 2008).

The most widely recognized effect of cannabis is a commonly known *burnout*, recognised by mental impairments and lack of motivation, purpose or will. Other effects of cannabis include confusion, impaired logic and reasoning as well as drowsiness. These conditions can last for six weeks or longer. The mineworker identified as using cannabis can be suspended from work until he or she can prove to be free from cannabis. While suspended their salaries are affected. The suspension has a great impact on the mineworkers and their families, as they fail to meet their financial obligations (Galanter et al., 2008). The harmful use of cannabis can produce dependence where the individual has difficulty to quit and maintain abstinence. It can also increase psychiatric and medical problems and impair psychosocial functioning (Ajani, 2010).

2.3 Reasons for substance use in the mining industry

Mining processes are frequently associated with strenuous working conditions and high levels of workplace stress. Workers cite various "reasons" for their use of substances in the mining industry. These reasons include stress resulting from demands and other work related factors, psychological, social as well as cultural factors (Bain, Brown & Freeman, 2008)

Workplace stress can be defined as the harmful physical and emotional responses that occur when the psychological and/or physiological requirements of the job, do not match the capabilities or needs of the worker. It is a reaction workers when they perceive the demands of work as threatening and exceeding their ability to cope (Edwards, Milanzi & Schutte, 2012; Bowen, Cattell, Edwards & Lingard, 2013; Cooper, Dewe & O'Driscoll, 2010). This is common among people with occupations like mining. Stress in the workplace originates from different contexts within which a worker finds himself including family, colleagues, supervisors, subordinates. Stressed workers may use substances, to feel

26

'normal' and ease the pain as well as winding down and relaxing (Gibson, 2008; Schultz & Schultz, 2010).

In the next section the reasons and potential stressors that lead to alcohol and cannabis use in the mining industry will be discussed.

2.3.1 Physical and psychosocial stressors

Physical environmental factors are usually omitted in the discussions about the occupational stress. This omission undermines the fact that physical environment factors can affect the worker physically, as well as psychosocially **(**Sisley, 2010). Mining in South Africa still remains the threatening and most hazardous occupation and high-risk work environment (Gyekye, 2010**).** Alarming rates of work related accidents, deaths and injuries are reported in this. The rates of these incidences are seven times higher than in general private industries (Boerngen-Lacerda & Zibe-Piegel, 2013). The fear of job loss contributes greatly to work stress, especially amongst employees at lower levels. Mine workers risk their lives by going deep underground in shafts susceptible to explosion risks and strata failure (IOM, 2010). Gasses in coal mines are both toxic and explosive, while coal itself is combustible in nature (that is, indeed why it is mined). The extraction processes and machine operations can readily cause combustion. The working space is often small and confined forcing workers to work in close proximity to risks including mechanical equipment. In most cases there are restricted exit points or blocked escape routes should there be any failure (Gagrani, Harris, Kirsch, Li, & Shi, 2014). Long hours working underground may be scary and cause a lot of stress for workers (Gyekye, 2010; ILO, 2012). Mineworkers can be struck by rocks during blasting and may be injured or die during this process. There is also a risk of falling rocks as a result of earth tremors. Drowning is a high possibility when space is flooded by leaks or ruptures of subterranean water bodies. During maintenance work high-reaching electrical equipment may touch overhead power-lines and expose workers to electric shock (Gagrani et al., 2014; Schultz & Schultz, 2010). Dirtiness, changes in job content, monotony and inequality in pay contribute to elevated stress for workers (Ajani, 2010).

2.3.2 Work overload

This is when the worker feels there is too much to be done. Southern Africa is known to be a well-resourced and rich region, with a diverse wealth of minerals. The mining industry had been one of the main driving forces in the history and development of the country's economy. South Africa is the third largest coal exporting country. There is always pressure to reach target, meet deadlines within specific time frames with increasing focus on production. Mine workers experience high performance pressures and time constrains with strict targets to meet within specified time frames (Hermans, 2007; Masia & Pienaar, 2011).

2.3.3 Lack of control over work conditions

In the mining workplace environment the common denominator for stress is the lack of control which makes it difficult to adapt to the stressful environment (Sisley, 2010). In this case workers experience their work content as one-sided and offers no opportunity for creativity, or problem solving, low opportunities for social interaction. Such workers feel their work does not allow them autonomy (ability to make own decisions about their job or specific tasks). They express a concern that they are not well appreciated and they are isolated in a remote environment (Murphy, 2007). Such effects may also depend on the worker's awareness, suspicion and fear of the exposure to life threatening hazards or to accident risk. In a study conducted among platinum mine workers in South Africa the results suggested that the majority of mineworkers feel that they have low levels of control over their work situation and this could predispose them to psychological stress (Edwards et al., 2012).

2.3.4 Lack of social support

Social and physical isolation, distant and uncommunicative superiors, interpersonal conflict as well as lack of social support are common in certain work environments (WHO, 2010).

Edwards et al., (2012) contends that 90% of the mine workers do not feel that there is a sense of social support in their workplace. Interpersonal conflict result from contrasting preferences, behaviours and attitudes of workers as well as problems caused by excessive time away from home. If not properly resolved, the workers experience permanent hostile consequence resulting in enormous working pressure. Such a context may be precedent to workplace stress thus encouraging substance use (Gibson, 2008)

2.3.5 Boredom and loneliness

The workers in the mining sector are mostly men who left their families in other areas to come to the mine to earn a living. The families of mine workers prefer to remain in their rural homesteads even if family accommodation is provided onsite or in communities near to mines (IOM, 2010). Mining sites are often located in isolated places with limited infrastructure. Many of them stay in single sex units in the mine hostels. They are often isolated and lonely. These men had left their homesteads where they were used to interact with their families and friends. At the mine they may then experience a lack of social interaction and support

The continuous stress of being away from home, the lack of recreational facilities as well as the social conditions in the hostels provides more opportunity or reason to drink and to use substances. This behaviour is predominant when miners are off-duty. Males often *drown* their emotional needs and problems by having a few drinks. This is especially so in the mining workplace where leaving the mine on excursions is not always possible. Many mine workers spend their time off work drinking or using other substances (Ambler et al., 2014).

2.3.6 Availability

In the mining industry workers are more likely to be exposed to alcohol and other substances than their counterparts in industry in general. It is a common factor that informal settlements will mushroom next to a mining environment. In such informal settlement informal alcohol outlets are rapidly established to provide entertainment for mine workers (IOM, 2010).

2.3.7 Impact of shift work and unpredictable working hours

Due to high demands and pressures for production to sustain the economy, most of the mines in South Africa are forced to work for 24 hours daily. This then necessitates the need for shift work. The shift-work system seems to pose a lot of challenges for the workers. There is a high probability of workers to be tired and sleepy at work. This may result from a difficulty sleeping during the day time when everyone else is awake and active. It may be an effect of a number of consecutive night shifts with no breaks in between. Workers may experience fatigue if they do not get sufficient sleep and rest. Unclear or changeable and

29

irregular working hours are common in the mining industry and this may end up in long hours of work for the workers. The duration of work and pattern of break periods, total shift length, the number of consecutive shifts as well as the starting time of the shift (Gibson, 2008).

2.3.8 Culture

While workplace culture is distinct from the culture of the community, there is a larger degree of overlap. The values, norms, beliefs and behaviours that workers learn from their communities and families influence the workplace safety values. Attending work "under the influence" or using substances at work has obvious implications for workplace safety and contravenes the policies (Pidd & Roche, 2008). In the African culture alcohol is used mostly during rituals, marriage ceremonies and clan or family festivities. During the rituals the intoxicating power of alcohol is often associated with the manifestation of the supernatural power of gods. Most cultural groups have used alcohol and other substances especially cannabis and have established codes of behaviour in their way of using such substances (Abbott & Chase, 2008). Cannabis is the oldest known psychoactive plant. It was, and still is, known to be used in ritual performances as well as medicinal preparations. Cannabis has always been known to improve the mood, alter perceptions as well as treating symptoms such as nausea, respiratory ailment, fever and pain (Pereverzev & Welcome, 2010).

In working environments like mining there is usually a prevailing workplace culture as well. In such an environment the mine workers establish their common social structures and norms which may create feelings of less accountability and responsibility. Workers spend many hours together which may develop into social relationship leading to shared leisure time after work. The sharing of leisure time activities off duty usually influence workplace culture. The participation in the off duty activities can lead to expansion of work-based use of substances. The norms and patterns of risky use of substances are often founded in these leisure activities (Pidd & Roche, 2008). In such cases mineworkers will always engage in drinking and using other psychoactive substances knowing there will be no community sanction for an individual's behaviour. These cultural practices and perceptions of power of substances increase the use of substances in contexts such as mines where workers engage in demanding, stressful and dangerous undertakings (IOM, 2010).

2.4 Coping with occupational stress

30

Coping with stress is the process by which a person consciously endeavours to dominate, minimize, or tolerate stressors and problems in life. Choosing a coping strategy differs among people and populations based on situational, sexual, personal, and cultural differences as well as the stressor involved. There are a number of ways by which people cope, most of these strategies can be classified into adaptive and maladaptive coping strategies (Pulla, 2013).

Mining is an intimidating working environment characterised by physically demanding operations and main focus on production. It is known for its stressful, inherently dangerous conditions (Gyekye, 2010). Due to work stresses in this industry workers do not cope effectively and have no endurance. They tend to adopt negative or maladaptive coping mechanisms in endeavours to alleviate their stress levels. In the mining work context workers are inclined to escape through substance use as well as sexual activities as a way of dealing stressful mine lifestyl**e** (IOM, 2010). Stressed workers may use alcohol, increase intake of caffeine or other psychoactive substances with an aim to enhance means of coping (Berger, Hernandez-Meier, Karnes & Sedivy, 2010) and these are negative or maladaptive ways to cope. *Maladaptive coping mechanisms* may assist in immediate symptomatic reduction without addressing the problem, but maintains and even contributes to the growth of the disorder (Carver & Connor-Smith, 2010). Maladaptive coping strategies can seem to be effective and successful at managing or abating stress, but the result is dysfunctional and non-productive. While they give the false impression of being a successful technique, maladaptive processes will fail as a long term coping. They provide a quick fix that interferes with the person's ability to break apart and unlearn the association between the stressor and the symptoms of stress. Such maladaptive strategies only exacerbate to serve and to maintain the disorder (Christoffel & Moncrief, 2010).

 Adaptive strategies successfully decrease the amount of stress perceived and experienced as well as provide constructive feedback for the user. Adaptive coping include seeking social support from others (*social coping*) and attempting to learn from the stressful experience (*meaning-focused coping*). Supportive social networks safeguard the effects of stressful circumstances. In stressful situations, a social network can provide a person with care and comfort, access to helpful resources, and advice about how to evaluate and manage problems. Social networks may involve engaging in hobbies, socializing with family and friends, seeking social support (from supervisors, co-workers, friends and others) (Pulla, 2013).

Maintaining good physical and mental health, practicing relaxation techniques, and employing humour in difficult situations are other types of positive coping strategies. Physical exercise has benefits to an individual's health as follows: improves mood, boosts energy, promotes better sleep, can be fun, helps one to unwind and connect with colleagues, friends and family (Bowen et al., 2014). Another adaptive strategy involves proactive coping. This is common among people who have a perception of being in control over their life circumstances. Those who believe they have control have internal locus of control while those who believe that fate, luck and other people control their lives, have external locus of control. Having an internal locus of control is associated with better physical and emotional health, thus less stress **(**Christoffel & Moncrief, 2012; Pulla, 2013).

Examples of maladaptive behaviour strategies include dissociation, desensitization, reckless behaviour, anxious avoidance and escape behaviour including an over consumption of alcohol, self-medication and use of psychoactive substances In this regard workers underestimate their own role and, substance use becomes a coping mechanism resulting in violation of safety rules (Gibson, 2008).

2.7 Perceptions towards workplace policies

2.7.1 Social climate in the mining environment

Bamberger and Biron (2006) contends that substance-related policies and programmes, based upon discipline and strict rule enforcement, run the risk of pushing substance-related problems underground. Such policies encourage employee cover-up behaviour. They continue with substance use and hope that they are not caught out. Another argument is that such disciplinary approaches may encourage employees to simply pretend that they have sought help and have resolved the problem, when they have actually not done that. The policy thus does not have the desired effect.

The effectiveness of the substance use policies at the mines depends on the buy-in of employees. If it is the perception of employees that workplace policies are contrary to their interests, it may result in lower productivity and resistant behaviour. Bain et al. (2008) found that perceptions of employees towards substance use policies differ within the workplace. The employees with long histories of substance use usually react more negatively towards restrictive policies.

The employees' perceptions of substance use policies are influenced by the way policies are being introduced and implemented. It is important to convey the appropriateness and fairness of policies *ab initio*.   Policies should be equitable and training of officials administering the policy and procedures, such as testing, should be done with due regard to the sensitivities of workers. Workers respond more positively to a clearly formulated policy which gives them adequate information, makes provision for training and focuses on rehabilitation and aims to help in reducing injuries and substance consumption. These are thus ways of introducing and applying apparently restrictive policies that will invite enhanced compliance from employees (Bain et al., 2008).

2.8 Summary

The literature discussed in this chapter identifies the prevalence of substance use in the mining industry in our country. South Africa prides herself with the diverse wealth of minerals and a regulated mining industry. Mines are places of employment for thousands of Southern Africans. However, the reports indicate high rates of substance use that continues to hamper productivity and place increased pressure on safety and health care services. The literature show how the stressful work conditions and social climate in the mining industry contribute to a problem of substance use.

The literature review outlined the substance use in the mining industry is mainly exacerbated by stress which mine workers experience as a result of working conditions in the workplace. When workers are not satisfied with the work conditions their behaviour is usually coupled with the refusal to comply with safety measures when they are not satisfied with the work conditions (Masia & Pienaar, 2011). Employer creates a policy as prescribed by the safety and health act in an effort to create a substance-free workplace. There appears to be a great need for the prevention of substance use in the mining industry and for aligning worker behaviour and mine policies.

The next chapter will focus on describing the research methodology and the research paradigm within which the study was conducted.

CHAPTER 3

METHODS

This chapter entails the discussion on the research paradigm and the research methods used in this study. The study was conducted within the phenomenological paradigm using Interpretative Phenomenological Analysis (IPA) as a research method. The chapter further provides details with regards to research design, participants, data collection methods and data analysis. Ethical considerations as well as the quality of the study are also discussed.

3.1 Qualitative Research

The researcher's curiosity was in the subjective accounts of mineworkers' reasons to use to use substances, and how they experienced the mining policies. For that reason, qualitative research became the most preferred approach. Qualitative research relies on the premises that it is primarily concerned with contextual information based on the detailed study of phenomenon as it occurs in a normal and natural manner. Qualitative research aims to understand, describe and explain beliefs, behaviours and meanings within a particular context in a social life (Neuman, 2000). Within the qualitative research, a researcher studies a phenomenon in an attempt to make sense of, or interpret it based on the participant's experience which is rooted in their socio-cultural context where the reality that is socially constructed. The process of interpretation provides a bridge between the world and people, between their objects and their representation of them. The researcher tries to interpret how the participants interpret, and make sense of their experience. Both the researcher and the participants construct the meaning with regards to the phenomenon studied. It is a process that continues as people's relation to the world keeps changing (Barnister, Burman, Taylor & Tindall, 2008).

The contextual sensitivity of qualitative research allows the researcher to look at how the phenomenon under investigation is subjectively put together and experienced by the participants (Denzin & Lincoln, 2011; Willig, 2013). The researcher is allowed access to an individual's attitudes and values. It helps the researcher to understand the depth and complexity of what people experience. (Silverman, 2009; Volker & Wu, 2009).

The qualitative researcher is part of the research process and it is impossible to remain 'outside of subject matter' while conducting research. The researcher's focus within this research was the authenticity and validity. The researcher was more concerned with attaining fair, honest and balanced accounts of the mineworkers' social life from their viewpoint as they lived it. In the process she was endeavouring to ensure that the findings were true and accurately reflected the situation and were supported by the evidence (Neuman, 2000).

Qualitative research constitutes a number of approaches. IPA was used in this study to explore the lived experience of the participants (mineworkers) as well as understanding how they make sense of their personal and social world (Smith, 2008).

35

In the next section IPA will be discussed as a research method.

3.2 Interpretive Phenomenological Analysis (IPA)

The study was conducted using IPA which is an approach to qualitative, experiential research and has its roots in psychology (Smith, 2008).

The researcher, realised that as the meaningful stories unfold there is an on-going process that involves language and the interpretation of language. The conversational process is particularly participatory, collaborative and rich. She realised that the words spoken during the interview dialogue do not necessarily convey information but they reflect the mineworkers' world. The use of language plays an important role in this regard as it discloses the inner infinity of the unsaid, while the interpretive approach maintains that people may attach different meanings to the same phenomenon (Connelly, 2007). Interpretative phenomenology holds the premise that human beings are not passive perceivers of an objective reality. They come to interpret and understand their world by formulating their own stories into a form that make sense to them.

The IPA intends to capture the quality and texture of individual experience and recognizes that such experience is never directly accessible. In the process the researcher was concerned with trying to understand what it is like from the mineworkers' point of view while asking critical questions from them. The Interpretative Phenomenological Analysis entails two corresponding obligations including *phenomenological and the interpretative. The phenomenological* aspect aims to understand and 'give voice' to the concerns of participants. It explores and describes circumstances as experienced by the people in their daily lives. It tries to be as near as possible to the phenomenon and the state in which it appears. Attaining the first hand descriptions of individuals' experience forms an integral part of phenomenology. Phenomenology is mainly interested in the association of the individual with the world he or she lives in (Flowers, Larkin & Smith, 200).

The *interpretative* allows the necessity to contextualize and 'make sense' of these contentions and anxieties from a psychological perspective (Clifton, Larkin & Watts, 2008). According to Giorgi and Giorgi (2008). It aims to explain subjective reasons and meanings that lie behind the social action of the individuals being researched, rather than in merely reflecting the experiences as lived. The interpretive tradition assumes that people's subjective experiences are real and should be taken seriously. They people's experiences

can be better understood by interacting with them and listening to what they tell us. Interpretive aspect thus put emphasis on first-hand accounts and tries to describe their essence detail (Denzin & Lincoln, 2011; Durrheim et al., 2006).

IPA therefore, acknowledges *the central role of the researcher* in making sense of the personal experiences of research participants. IPA attempts to unravel the meanings contained through interpretative engagement with texts and transcripts. It is an active process and employs in-depth quality analysis which entails a detailed case-by-case analysis of individual's transcripts with an aim to say something in detail about their perceptions (Smith, 2008). In this study the researcher stayed as close to the participants' lived experiences as possible with an aim to explore the mineworkers' accounts and how they made sense of their experiences.

IPA has a theoretical commitment to a person as a cognitive, linguistic, affective and physical being. The theoretical commitment of interpretive phenomenology assumes that there is a sequence of associations between people's talk, thinking and their emotional state (Denzin & Lincoln, 2011; Osborn & Smith, 2008). While IPA concentrates on the thoughts and perceptions, it allowed a researcher an effort to understand how the mineworkers think about the substance use policies in their workplace. Because individuals may have a difficulty to express what they think or feel, the researcher endeavoured to interpret the mineworkers' thoughts as well as their emotions from their stories (Flowers, Larkin & Smith, 2008).

3.3 The Role of a Researcher

Qualitative research and phenomenological studies acknowledge the on-going role of a researcher (Delport, de Vos, Fouche, & Strydom, 2005; Durrheim et al., 2006). As a qualitative researcher, the researcher used herself as a human instrument to collect data, transcribe the interviews and to do the analysis. During the time of the study the researcher was working at SANCA as a programme facilitator for employees who were referred by their employers. These employees were desperate for help, scared and losing hope to keep their jobs. Their experiences were real and practical. The researcher obtained the understanding of the mineworker's psychological world by engaging with the interpretation of their account. The analysis represented the mineworkers' view (phenomenological) and it was reliant on the researcher's impressions and stance (interpretative) (Willig (2013).

The researcher found herself caught up between the roles of a therapist and a researcher. It was difficult to view the mineworkers as research participants rather than clients who sought help. The therapist in her would always feel empathetic towards them.

While working within the IPA framework, the researcher assumed the reflexive attitude. Reflexivity implies reflecting or thinking critically, sincerely and frankly about research experience and process. During the whole process the researcher had to reflect on every step of the study. In this sense arbitrary impositions of meaning by the researcher were discouraged and eliminated, thus promoting validity of the research findings (Willig, 2013).

She was aware of potential aspects of self that could arise during the analysis, including biases and assumptions. Therefore, the participants recruited for this study were the newly admitted mineworkers who had not been allocated to a therapist before and had not yet attended a programme. She thus did not have any prior relationship with them.

The participants were African males who were greatly absorbed in their culture, most of them old and from rural homesteads. This prompted the researcher to assume high respect as well as sensitivity to their cultural stereotypes. While most of them felt safe and understood in talking to a female, others were careful not to devalue their manhood while talking to a woman. This was not a case with the younger ones; however the researcher had to engage them using their *language* at times by, for instance, calling cannabis *ganja* (one of its street names).

Reflexivity concedes that meanings acquired from the analysis of transcripts are influenced by the interpretation (Willig, 2013). While the researcher continually read and re-read, getting immersed into the mineworkers' stories she 'understood' why they were using the substances. On the other hand she kept thinking about the effects of substance use in their lives as well as their workplace. It was sad to realise that some of them were not aware of the negative effects of substances in their lives and their work situation. She constantly worried about why the mineworkers were not aware of the value of mine safety policies, as these policies were meant to protect them from accidents and injuries as well as illnesses.

As the researcher continually worked with the transcripts, she was consumed with a sense of appreciation for these men. She thought they had sacrificed a lot for their families and for the economy of the country to work in such dangerous and risky workplaces as mines.

It seemed as if the research process gave the mineworkers a platform to voice their own views, perceptions and feelings about their work experiences. They seemed to have found a place to talk and be heard or understood. For this reason the researcher had to ensure that she represented their experiences truthfully and respectfully.

In order to maintain her role as a researcher, while continuously reflecting and checking that her experiences did not influence the results, she kept reminding herself of the role she played in the process. She was under constant supervision of a promoter to avoid role confusion.

In the following section the methods used in conducting the research are outlined.

3.4 Participants

Purposive sampling was used in accordance with Neuman's (2000) contention that it is a suitable type for selecting individuals into a study, where a researcher has a specific purpose in mind, to access a deeper understanding of the participant's experiences. The study focused on mineworkers who had experienced difficulties with regards to substance use in the workplace. The study focused specifically on males because it was mainly males who were referred due to substance use (Giorgi, 2008; Cresswell, 2009).

The senior social worker in charge of admissions at SANCA informed the mineworkers about the study and asked them if they wished to participate. Those who were interested were referred to the researcher to answer their questions. A period of four weeks was allocated for the recruitment in order to allow the participants sufficient time to decide if they are willing to participate in the study. During this process the main goal was to build a good relationship and ensure a safe environment for the participants allowing them to tell their stories freely and in a relaxed mood.

From the mineworkers who volunteered for the study, participants were selected that met the following criteria:

African males who were:

- mineworkers ranging from 23 to 60 years of age
- working in the mining industry for more than one year
- referred to SANCA from different mines around eMalahleni
- referred for further assessment and /or professional help regarding their difficulties with substances following outcome of disciplinary hearing or routine medical tests
- either using alcohol or cannabis

Twenty male participants were recruited for the study. Fourteen of these men were older ranging from 37 to 59 years of age while six of them were younger ranging from 23 to 33 years of age. Most of these mineworkers were staying in the mine hostels. Some of the younger ones stayed in rented accommodation in Witbank town. The reasons for their referral varied. Most of them were referred following the outcome of a disciplinary hearing at work while others have failed the annual medical assessment.

For the purpose of clarity, a document detailing the aims and activities of the study was drafted and provided to the participants to inform them about the study. This document was translated into the English, Zulu, Ndebele, SeSwati as well as Sotho and SePedi. This was done to prevent potential misunderstanding about the project. The participants had to sign the informed consent document to confirm their voluntary participation before the collection of data. In the next section the data collection process is discussed.

3.5 Data Collection Process

The researcher obtained written permission from the director of SANCA to conduct the research.

3.5.1 Data Collection Method

IPA's contention is that participants attempt to understand their worlds while the researcher attempts to understand the participants. Therefore, it combines *empathetic hermeneutics* and *questioning hermeneutics.* The empathic hermeneutics aims to understand the world and lived experiences of the participants while the questioning hermeneutics entails critical analysis of answers to extrapolate information regarding the phenomenon being researched (Osborn & Smith, 2008).

Semi-structured interviewing was chosen as the best method of data collection for this study. Interviews are conversations that allow the researcher to get to know people in a more

intimate and informal manner so that the researcher can gain a full understanding of how they generally think and feel. Semi-structured interviews were used in order to allow the mineworkers to share their own unique life stories and to allow flexibility in terms of questions asked (Coyle & Lyons, 2007). The participants were able to narrate their stories in the direction that the interview was taking and, they could introduce issues of which the researcher was not previously aware. The researcher had the freedom to follow up on the new stories that emerged in the interview and the participants were able to elaborate. This type of interviewing allows openness to changes of sequence and questioning in order to follow up on the answers given and stories told by the participants (Kvale, 2007).

3.5.2 Interview Schedule

The interview schedule was prepared prior to the interview and was used as a guide to make sure all areas of interest in the research are covered. The researcher was, however, not confined to the questions on the schedule, which allowed her freedom to probe other matters of interest arising in the interview. The researcher used open-ended questions with the aim to get more considered responses and better access to the participants' views, interpretation of events, understandings, experiences and opinions (Coyle & Lyons, 2007).

The questions were asked in the participants' vernacular and they were allowed to tell stories in their vernacular. Those who understood and were fluent in English were also allowed that liberty.

- The following questions formed the structure of the interview:

- Can you tell me how it came about that you were referred to SANCA?
- Can you tell me about your drinking/smoking habits?

- What does it mean for you to drink or smoke cannabis?

- Do you know about the mine policies/rules? Can you tell me briefly about those rules?

- What comes to mind when you think of these rules and policies?

- Do you ever think of the rules of the workplace when you drink or smoke a day or the morning before work?

- Is there any reason for you to continue drinking or smoking when you know about the rules at work?

- What do you think the mines can do to help people in your position?

41

- Is there anything you think the mines can do to help the new employees not to fall into the same problems you are experiencing?

Further questions designed to help them recall and reveal their experiences were used in order to achieve deeper understanding. The use of their mother tongue allowed them to express themselves freely. There was richness and depth in these interviews in home languages as the participants would use any figure of speech in explaining and expressing what they wanted to say. The researcher also took note of the non-verbal communication that participants presented during interviews which helped them to better describe their experiences. Duration of interviews and number of questions varied from one participant to the other. Most of the interviews took an hour, while others lasted for one and a half hours based on how much information each participant wanted to share. The whole process of interviewing was conducted over 16 weeks and everyone had one interview of an hour or one and a half hours. All the interviews were conducted on SANCA premises in a specified office that was identified for this purpose, bearing in mind the ethical considerations.

3.5.3 Interview Recording

Once data has been collected, an important consideration was ensuring that the data are safely stored (Silverman, 2009). (Silverman stresses that researchers cannot rely on recollection of conversations. From memory researchers can usually summarize what different people said, but it is impossible to remember or note such matters as pauses, overlaps and the drawing in of gasps of breath). The interviews were therefore audio-recorded with the permission of the participants. Studying the recordings of conversations allows an opportunity to focus on the *actual details* of one aspect of social life. Each interview was recorded on a cassette and allocated a code using numbers with the specific date on which the interview was conducted. Three advantages in the use of audiotapes include the following:

1.   Tapes are public records and can be available to the scientific world

2.   Tapes can be replayed and transcripts improved

3.   Tapes preserve the sequence of utterances that can be inspected without being limited to the extracts chosen by the first researcher.

After the interviewing process, data were transcribed in English for the data analysis process.

3.5.4 Data Analysis

The interview recordings were each transcribed and the process took a very long time as the researcher had to repeatedly listen to the recordings. Each interview took between five and eight hours of transcription. Transcription allows the tiding up of natural conversations and therefore repetitive listening presented a much clearer image of each interview, including the laughs, silences as well as nonverbal hints in sighs (Silverman, 2009; Durrheim et al., 2006).

The transcripts were analysed individually, using Interpretative
Phenomenological Analysis (IPA) with an aim to capturing the mineworkers' subjective experiences (Willig, 2013).   The meanings are established by means of thorough exploration of each individual case. Analysis requires close interaction between analyst and text, the analyst seeks to comprehend the presented account whilst concurrently making use of his or her own interpretative resources (Smith, 2008; Willig, 2013).

The analysis was done in different stages following a step-by-step guide as provided by the IPA. Their perceptions were explored from the standpoint of the mineworkers' perception with no interest to produce an objective record of it (Forrester, 2010).

1.   Initial Reading of transcripts

At this initial stage the process started by iterative reading and re-reading of the transcript with an aim to get an overall 'feel' of the interview. The researcher was actively engaging with data, highlighting any significant areas in the transcript thus beginning to identify the overall theme which encapsulates the whole interview. This was followed by making initial exploratory notes on the transcript which included descriptive and conceptual features of interest. While in that process, the researcher highlighted the similarities, paradoxes, differences as well as amplifications in the individual interviews. The notes made from all the transcripts were condensed. This process allowed for the identification of tentative overall emergent themes which represented a synergy between the participants' description and the researcher's interpretation as an analyst (Coyle & Lyons, 2007; Giorgi, 2008).

2.   Identifying and labelling themes

The researcher returned to the transcripts and used the notes created in the left margin to produce themes in the right margin. At this stage the researcher began to use the theoretical concepts to make psychological sense of the data, ensuring the connection between themes and data. While this process continued, the researcher was always aware and careful not to over-emphasise the interpretative aspect and compromise phenomenological commitment of the IPA (Coyle & Lyons, 2007).

3.   Linking themes and identifying thematic clusters

At this stage the researcher was able to identify the connections and themes were clustered together. The process involved the establishment of patterns in the themes, recognising themes as unique to one or a few participant(s) or, conversely, as common to many participants. The process entailed the researcher's commitment to understanding the participants' descriptions and interpretation. It involved summarising, getting key meanings attached to contextual experiences, establishing continuous or salient themes from the initial interpretations This stage called for the identification of relationships between the

44

themes and creating the narrative account of the participants' experiences (Coyle & Lyons, 2007; Forrester, 2010; Willig, 2013).

4.   a summary table of themes and writing up

The final stage of analysis entailed the drawing of super-ordinate themes from the clusters and organised in a table. The researcher also tried to integrate the summary tables into a comprehensive list reflecting the experiences of the entire group of mine workers with the aim to produce the super-ordinate themes. The super-ordinate themes represent the central concepts of participants' experiential accounts and the quality of their experiences based on the phenomenon studied (what they said during the interviews). It was therefore essential for the researcher at this stage to differentiate between what the participants said in the interviews and her own interpretation of their experiential accounts (Forrester, 2010).

3.6 Research Quality Strategies

The quality of qualitative research refers to the stability and credibility of the findings and how well the research was conducted. Smith (2008) emphasizes that qualitative research has to be sound, rigorous and valuable and the researcher must be able to demonstrate that. The quality of the research was monitored using the set of criteria identified by Terre Blanche et al. (2006) and Delport et al. (2005), including credibility, transferability, dependability and conformability.

Credibility

To ensure that research conclusions are authentic and, the researcher verified the conclusions using questions and brief discussions with participants (Delport et al., 2005; Durrheim et al., 2006).

Transferability

The researcher produced detailed, comprehensive and rich descriptions with regards to substance use in the mining sector and experiences of mineworkers. These findings may be transferrable to similar contexts and generalized to broader populations and settings (Delport et al., 2005; Durrheim et al., 2006).

45

Dependability

In this study the dependability was enhanced by reading and re-reading the transcripts and double checking the themes as they kept emerging. Analysis was also done twice, where the researcher made notes on both occasions. The two sets of data were integrated and contrasted later to enhance dependability (Delport et al., 2005; Durrheim et al., 2006).

Conformability

According to Babbie and Mouton (2010) conformability 'is the degree to which the findings are the product of the focus of inquiry and not the biases of the researcher.' While the researcher was audio-taping the interviews she also took notes in the process in order to rechecking data and ensure conformability.

3.7 ETHICAL CONSIDERATIONS

This study was conducted within the bounds of ethical rules to protect the welfare and rights of participants (mineworkers) and it was guided by ethical principles (Durrheim et al., 2006). The research was approved by the Ethics Committee of the Faculty of Humanities at the University of Pretoria.

3.5.1 Informed Consent

The informed consent form (Annexure 1) was drafted clearly stating the process and the purpose of the study. This document was explained to the participants and translated to them in their mother tongue based on their level of education. The aim of the study and expectations of participants was explained to them truthfully with no deception using the language they all understood. The researcher had to ensure they understood the aims of research and their right to terminate at any time if they wished to do so, since participation is voluntary. The researcher allowed the participant to ask questions where they had concerns which she clarified before the participants could give their consent by signing the document. This document was signed by the participants and it served as an agreement between the researcher and the mineworkers participating in the study.

46

3.5.2 Anonymity and support

The researcher used pseudonyms and codes to refer to participants when recording the interviews to ensure anonymity and to protect the identities of participants. Anything that could be emotionally harmful and risky to them in any way, including judging them during the interviews as they share their experiences, was prevented. The researcher took high cognisance of this and listened with respect and constant assurance of anonymity to the participant.

The research was conducted in a venue chosen with high sensitivity to confidentiality and privacy for the participants. If they experienced any discomfort during the interviews it was arranged that they could see one of the other counsellors working at SANCA, this was done only when they gave consent to be referred.

3.8 Summary

This chapter provided the discussion of the research methodology. It gave an outline of the qualitative approach and positioned the research within IPA. The focus of the research is to make sense of how the mineworkers make sense of their social worlds.

In the following section the findings with regards to the analysis of data collected from the participants are presented.

CHAPTER 4

RESEARCH RESULTS

This chapter entails the discussion of the research results. Firstly, the following biographical details of participants is listed: age, education, position at work, place of residence and family situation. Their background information follows, highlighting differences and similarities. Finally, the themes are stipulated as they emerged during the analysis. The discussion of emerging themes follows. Identities are protected by the usage of pseudonyms rather than their real names.

4.1 Biographical details

Name	Age	Ethnic Group	Education	Position at work	Service	Residence	Family situation
RG	8	Zulu	Matric	Driver	years	Mine hostel	Married with 2 children
S	3	Xhosa	Grade 4	Machine operator	years	Mine hostel	Divorced, has four children who stay with their mother. He has parents
BT	8	Venda	No education	General mineworker	2 years	Rents a house	Stays with wife and children
S	7	Pedi	Electrical Engineering	Electrician	year	Mine hostel	Single, no children, has parents
KG	7	Xhosa	Grade 10	Underground foreman	9 years	Mine hostel	Married with 1 child
NL	3	Zulu	Electrical Engineering	Electrician	years	Mine hostel	Single, no children, has parents
M	9	Ndebele	Grade 2	Machine operator	9 years	Mine hostel	Married with adult children
KG	5	Pedi	Mechanical Engineering	Technician	years	Rents a flat in town	Single with 1 child and parents
SN	6	Swazi	Grade 4	Machine operator	years	Mine hostel	Single with no children

PS	2	Ndebele	Grade 7	Machine operator	0 years	Owns a house	Married with 5 children stays with his parents in same house
MM	7	Zulu	Grade 2	General mine worker	9 years	Mine hostel	Widowed (3 children) and re-married (no children)
H	0	Pedi	Grade 11	General mineworker	year	Mine hostel	Has a fiancé and 1 child
SD	9	Ndebele	Grade 7	General mineworker	5 years	Mine hostel	Married with 3 children
N	0	Ndebele	Grade 8	General mineworker	0 years	Mine hostel	Married with two children
AN	4	Swazi	Electrical Engineering	Electrician Team Leader	3 years	Owns a house	Married with five children
MK	2	Pedi	Grade 5	General mineworker	9 years	Mine hostel	Married with 5 children
M	6	Venda	Tertiary N2	Assistant Technician	years	Mine hostel	Single no children
S3	8	Tsonga	Grade 6	General mineworker	0 years	Mine hostel	Married with 4 children
GB	6	Ndebele	Grade 8	General mineworker	years	RDP House	Single with 1 child
MS1	8	Tsonga	No education	General mineworker	2 years	Mine hostel	Married with two children

4.2 Participants' Background Information

Twenty black male mine workers between the ages of 23 and 60 participated in this study. They presented a group of people regarded as extremely vulnerable to substance use (Davey, 2011). Their experience in the mines ranged from 1 to 39 years. Most of them stayed in the mine hostel except for one who rented a house, one who rented a flat in town, two who stayed in their own houses and one who stayed in an RDP house. Although most of the mineworkers stayed in the hostel, they were either married or had families and parents back in their homesteads. Some of them came from far and they only visited their families once a year during their annual leave. For some of them it was possible to visit their families

on a regular basis, but they indicated that it was expensive. They preferred to stay in the hostel, even if they were off-duty, until they were paid and were able to meet the financial expectations of their families when they go home.

Among the mineworkers only four had tertiary education and were formally skilled for their work (two electricians, a technician and an assistant technician with N2). These four, though amongst the younger participants, earned better salaries than the others who were employed as general workers. With experience some of them had nevertheless become machine well as every weekend when they were off-duty. They used smaller volumes of substances on week-days and used more on week-ends when they were off-duty. The few who were renting or owning a house or flat or were staying with family preferred not to drink on week-days, but they used cannabis before and after work on a daily basis. These participants indicated that they needed to be sober when in contact with operators or leaders, such as foremen.

Most of the mineworkers, young and old, were drinking on a daily basis after work as their wives and children. Those who smoked contended that mines could not conduct cannabis tests daily. Smoking cannabis during the week was perceived to be safe at the gate where they entered the mine premises. The tendency for binge drinking on week-ends was evident among the mineworkers who only smoked during the week and did not drink. 40% of the participants were referred on suspicion of having used cannabis and 60% because of intoxication with alcohol. The habit of harmful substance use appeared to be more predominant during week-ends and days off-duty.

For the younger mineworkers the use of substances was to fit in socially with the older mineworkers, wind down and relax with their friends after work and during weekends. They were drinking expensive types of alcohol like whisky and brandy, whereas the older ones were mainly drinking beer as well as African sorghum beer which the outlets in hostels provided. The younger, educated group demonstrated better understanding of policies in the mine than those with little or no education. The lack of understanding of the older participants could be ascribed to their low level of education which made it hard for them to read and interpret rules, but also because they were not fluent in the language(s) used during training. Most of these mineworkers indicated that they did not understand English. At the mines they communicate in (Fanakalo) which is a peculiar language used as lingua

Franca in South-African mines and which consists of words and terms from a plethora of other languages.

The participants used substances as a *hobby.* The mineworkers with long service records seemed to have a sense of entitlement, claiming a tacit permission to drink or smoke because they used to drink with their bosses prior to the existence of rules. For them it was normal to use substances and they emphasized that it was hard to be a mineworker without drinking or smoking. They contended that everyone in the mine was drinking, even the ones in higher positions. Some indicated that they drank one or two beers or two litres of African beer after a hard day at work. Others confessed that they had two joints of cannabis everyday (one in the morning and one in the evening).

During their long tenures at the mine, they have learnt how to avoid measures such as testing for substances (urine testing and breathalyser testing for alcohol). They stated that they had no difficulties entering the gate after a drinking night, because they had their 'ways' with security when they passed through the gate in the morning. The only time they experienced difficulties was when the security guards changed shifts, as they could then be 'unlucky' and get caught. Participants indicated that they used measures like shielding their breath with vanilla essence or other 'tactics' to disguise the alcohol or substances in their blood when the regular guards were not on duty. If they tested positive or were caught, they attributed that to bad luck, to betrayal by others, or to vindictive supervisors. Those who were smoking cannabis had learnt that testing took place once a year around a specific time. They perceived that as an advantage and it allowed them time to circumvent the process.

4.3 Emerging Themes

The themes were then tabulated as follows:

Themes	Sub-Themes

Reasons to use substances	Coping mechanism for stressful working conditions
	Relaxation strategy
	Coping with boredom and loneliness
	Frustrations around shift work and working hours
	Availability and affordability
	Not having other responsibilities
	Not taking responsibility for substance use
	Substance used for leisure and recreation
	Good feeling
	Onset and history of substance use
Substance use part of their culture	Tradition
	Mining Culture
	Peer group cohesion
Experience of safety policies	Knowledge and insight
	Impact of language used in training
	Trust in peer training
	Necessity for supervisors training on mining safety policy

Perceptions about testing	Positive attitudes towards the testing process
	Doubting validity of tests results
	Unfairness in testing process and results
	Invasion of confidentiality/privacy
	Older mineworkers cheating during testing
The disciplinary hearing	Fear of the consequences

The themes will now be discussed and direct quotes from the interviews will be used to illustrate the themes.

4.3.1 Reasons for mineworkers to use substances

The mineworkers shared their experiences which constituted a wide range of reasons for substance use based on how they perceived their situations.

4.3.1.1 Coping mechanisms for stressful work conditions

The participants emphasized that the mine work was hard, extremely dangerous, stressful and it demanded a lot of strength, both physically and mentally. They stated that working underground is highly risky and they counted each day lucky if they finished a shift safely with no accidents or injuries. Although there were safety measures in place these mine workers perceived the regulations not of value, as their safety depended solely on fate and their ancestral protection. They felt misunderstood and their experiences underground underestimated by everyone who did not work there on a daily basis. The only thing they knew was the underground work and its hardships where they were expected to produce wealth for their employers. The mineworkers indicated that, after a long scary and stressful day, it is always fulfilling to have a beer or two shared with friends and colleagues. Those who used cannabis also contended that, in order to be able to work in such a dangerous place, they always take a joint in the morning and one after work as well. Almost all the mine workers experienced their work as stressful. Here are some illustrations of what they said in this regard:

"Our work is stressful and dangerous, after work one needs just a dumpie, just to forget." (FS)

"It is hard there and it is dangerous, anything happens within a wink of an eye, one joint in the morning helps me not to think of that all the time." (JM)

"Working in the mine is tough, tiring, scary, and stressful and you need a lot of energy to work there, I take my joint in the morning to get some strength." (MM)

"I work in the mine and it is stressful, dangerous and scary and it is tiring, you will never know that, if you have never been there. You just need something to drink after work." (XG)

"Nobody really knows what we go through underground, they think it is just work like any other. It is hard there; one always need some joint before work; it helps not to think about dangers and accidents." (SMS13)

"Working in the mine make me forget everything else except the underground life, it is like my other name. A bottle of beer with my colleagues connects me to life." (BT).

4.3.1.2 Relaxation strategy

This is one of the prominent themes among the participants. The participants indicated that they drank alcohol or smoke cannabis to relax after a day or night of hard work in the mine. These are examples to illustrate what they said:

"After work I would get at least one joint to relax the body and the mind." (PS)

"I have my bottle of beer and I relax, forget about dangers and other frustrations at work." (ZG)

"When I finish work I rush to the hostel to have some beer and just relax with others." (LS)

*"When I finish my shift I just want to have something and relax." (*XG)

"Just one joint after a heavy day does it for me, then I go to bed." (MM)

"I sit with my room-mates after work and have umqombothi to relax." (SD)

4.3.1.3 Coping with boredom and loneliness

54

Most of the participants commented that working in the mine, and especially when they were off duty, was lonely and boring. When they were not at work, they found themselves idling and missing their families. They could not always go home whenever they were off-duty, because it was far and expensive. When they were bored they drank and smoked. This illustrates what they said:

"On day offs and after work you are in hostel doing nothing." (FS)

"Staying in the mine hostel can be very lonely and boring, especially when we are not working." (SN)

"My family is in Limpopo, I stay in the mine hostel, life there is lonely and boring, and days become very long." (H)

4.3.1.4 Frustrations around shift work and working hours

Most participants experienced shift work as frustrating and difficult to cope with, especially the night shift. The working hours were scheduled between day and night shifts. They declared shift work as a major stressor that negatively affects their sleeping patterns, especially when they change rapidly. This process made it difficult for them to sleep. Mineworkers would use a joint of cannabis or some alcohol to relax to enable them to sleep (Schultz & Schultz, 2010).

They complained that it was difficult to sleep during the day. It was also hard for them to switch from day shift to night shit and vice versa. They perceived the shift hours as unstable and ever changing, which made it hard to adjust to the pattern:

"It is difficult to sleep during the day when everyone is awake and moving around." (H)

"It is difficult to change sleeping pattern in between the shifts, they are not stable, and they keep changing. It is really hard, a few puffs of zol help me to sleep" (JM)

"People at home do not care that you work at night and must sleep during the day. They continue with their lives as normal, they make noise and forget about you. It is difficult. I just take a dumpie, then I sleep quicker" (BT)

The participants experienced the mines' working hours as too long. They felt their work was taking away their lives, as they always had to be available should there be emergencies even when they were off duty. Most of them expressed this frustration and feelings of losing

55

themselves to the mine as they felt they were controlled by the demands of the mine. In the mine there would often be emergencies. Common emergencies include the bursting of pipes, the falling of rocks, eruption of fires or power shut downs, any of which could occur at any time and seriously affect production. During emergencies electricians and technicians work around the clock until the problem is solved. General workers must also be present to assist the professionals. This is illustrated by the participants as follows:

"I find it hard to plan my day, I feel the mine controls my life, and I am their property." (ZG)

"We had worked long hours one night as we always do and we were called back immediately. There is no life." (NL)

"If you work in the mine you have no life of your own, you have to be available anytime if there is an emergency." (SN)

"I am always alert. I cannot sleep and relax, because I can be called back to work anytime, and it is tiring." (MM)

"I am so used to be at work at any given time although it is so hard not to sleep for long hours." (XG)

4.3.1.5 Availability and affordability

The mine hostels have outlets trading in alcohol and cannabis. This allows mineworkers easy access to the substances. The mineworkers stated that they did not have to go far to get the substances. The ladies that owned the outlets always had the substances in stock. They even brewed *umqombothi* and sold cannabis too. The participants emphasized that the prices were reasonable. The owners allowed them credit if they did not have money because they were regular and reliable customers.

"After work we meet in a shebeen where we always drink." (FS)

"I always pass by our usual place before I go to my room and get my 2 litres of Umqombothi to drink with my room-mate."(RG)

"Those ladies are cheap, you get a box of cannabis for R10, which you can use two times." (H)

"The ladies are kind and they trust us, we get beer on credit if we do not have and pay later when we get our salaries." (SD)

4.3.1.6 Not having other responsibilities

The young and single mine workers who had just started working seemed not to have any other responsibilities, except to take care of themselves. This results in them using substances.

*"I have one child at home, my two brothers are also working and my father has his own business." (*NL)

*"My boy stays with his maternal grand-parents and his mother is also working, she does not demand anything from me."(*ZG)

"All my friends drink, that's how we chill after work."(LS)

4.3.1.7 Not taking responsibility for substance use

The participants did not appreciate their drinking and or smoking as a problem behaviour. Most of these mineworkers seemed to minimise or rationalise their reasons to use substances. For others the onset and history of substance use had an impact on their current status. Some of them had long history of drinking or smoking and indicated that they would find it difficult to break the habit. They had not experienced any problems in the history of their using, until when they tested positive at work. This is illustrated in the following quotes:

"They think I have a problem, I don't, and I just have a bit of fun." (BT)

"When I take my joint, just one, I can think better and quick." (XG)

*"In the morning I take few puffs just to have energy at work."(*H)

"I take one joint after work to forget about this supervisor who makes my life hard at work." (SD)

"Smoking cannabis helps me sleep after the night shift and I have no problem at work." (MM)

"I started drinking at a very young age, I think I was 15. I cannot just stop now." (BT)

"*I have been drinking for long and had never experienced any problems."(PS)*

57

"I started smoking cannabis long ago. It is hard to stop smoking since I had been smoking for so long. It is really hard."(MM)

"I was very young when I started drinking. It is now part of me and I have no problem."(FS)

4.3.1.8 Using substances as part of leisure and recreation

Mineworkers perceived the use of substances as part of their leisure and recreational activities after work and during days off duty. They expressed a great need for recreational facilities where they can relax and spent their time effectively besides drinking, smoking or engaging in sexual activities. These are the examples of their concerns:

"After work you feel lost with nothing else to do. We usually play umrabaraba (an African board game played by two or more people. The board and tokens are often handmade)*, drink and smoke."* (JM)

"After cleaning my room and doing my laundry, I join the others. That is when we drink, smoke, laugh and have fun." (FS)

"I get so bored when I do not work, we all do. At that time I roll my joint and have fun and it keeps me going through the day." (H)

"Even a gymnasium would be nice, I like to exercise there is nothing there, the days of work become so long and boring." (NL)

"You sit there and there is nothing to do. I would look where others are and join them in the mrabaraba game, we drink, have jokes and have a good time." (MM)

4.3.1. 9 Good feeling

This emerged as a unique theme as this one participant had personal experience of using cannabis as medicine as well as remedy to feel better and experienced positive results. He indicated that when he was diagnosed with HIV he was emotionally upset and devastated. At that time he smoked cannabis every day to improve his mood and he felt good thereafter. He mentioned that he also became sick and he consulted a traditional healer who gave him traditional medicine. He commented:

"After I was diagnosed with HIV I developed ibhande (shingles) and when I went to the traditional healer he gave me imbiza (traditional drinking medicine) which was mixed with dagga and it dried up and I felt better as you can see me." (JM)

58

"*It was hard to hear I was HIV positive, I was frustrated and sad all the time. I needed something to forget and feel better about myself and smoking kept me better.*" (JM)

Another mineworker emphatically stated that he drank alcohol to cope with his life experiences. The participant stated that after divorce he felt very stressed and helpless. He then sought a mechanism to continue living without thinking of his conditions and to feel better about himself. This comment from him illustrates his sentiments:

"*When I drink I forget about all the problems in my life (divorce, resentment from children).*"

4.3.2 Substance use is part of their culture

4.3.2.1 Tradition

The participants in this study comprised African males. They were from different ethnic groups including Zulu, Xhosa, Pedi, Ndebele, Swazi, Tsonga as well as Venda. They all shared and appreciated the same beliefs regarding their traditions and cultural stereotypes. Drinking alcohol and/or smoking cannabis were socially accepted where they originated. According to them every occasion that took place in their communities including deaths, weddings and communal festivities were celebrated or commemorated by means of drinking and/or smoking. Their traditions formed a very important part of their lives and seemed to substantially contribute in sustaining their usage of substances. The participants emphasized that, at a certain stage of life, it would be expected of a young male to start drinking or smoking. According to the participants, that stage was related to the practice of initiation of a male child. For those ethnic groups that practised initiation rituals, the young males started drinking, smoking, dating and engaging in sexual relationships as soon as they graduate from the initiation schools. This could be as early as 15 years of age. It differs for each household. The use of substance forms part of the initiation process where they are trained for manhood. After the 'graduation ceremony' they are declared as 'men' as they have endured all the training hardships for a period of three months staying in the wilderness, thus allowing them to perform every duty and or ritual as well as exercise the practices that older men do.

Among the Zulus the manhood preparatory stage usually involves drinking, smoking, performing manly duties and sitting in the council of elderly males in social meetings. In these meetings the young male is taught about his ancestral origin, the belief system and rituals. They also learn how to conduct the discussions regarding communal matters.

59

Drinking of African beer and smoking cannabis form a significant part of these meetings. Most of the mineworkers asserted that they started using substances at the time of their initiation and had never been able to stop. The younger mineworkers revealed that they stopped drinking the African beer after initiation and started drinking beer. They would still drink when they were in their places of origin and attending or performing traditional rituals. Although some of older mineworkers drank beer, they contended that Africa beer was still the best for them. They emphasized it was easily obtainable, low-priced and defines who they really are. Therefore, their behavioural pattern in the hostel was a continuation of how they lived their lives as African males. This was common among the participants, irrespective of ethnic grouping. They drank and smoked to be merry as well as to numb the sadness.

These African males believed in their ancestors and spoke of connecting with them on occasion. They emphasized the strength and importance of using cannabis in this process. According to the participants cannabis allowed them to connect easily and effectively with their ancestors who also used to smoke cannabis in their lifetime. Their comments illustrate their reasoning:

"*It is normal in the Zulu culture for a man to smoke dagga and I also smoke.*" (NL)

"*After initiation I became a man, and I was allowed to start drinking, which is sign of growth and strength being a real man.*" (PS)

"*I burn ganja (a street name for cannabis) to chase away evil spirits and when I have idlozi (ancestral spirits) my family must give me ganja to smoke and get out of the trance.*" (JM)

"*You see I am Ndebele by birth. In my culture when I serve Umqombothi to other people I have to take a sip for every serving to show them there is no poison in it.*" (SD)

"*I drank umqombothi when I was growing up doing those rituals of stick fighting.*
I don't drink that much now, only when there is umsebenzi (ancestral ritual) at home in Nkandla."(NL)

"*I am a traditional man. Whenever I talk to my ancestors I need to take a puff of cannabis then burn it with impepho (traditional herb used by traditional healers) to honour my ancestors.*" (LS)

4.3.2.2 Mining culture

Participants indicated that as mineworkers they had their own culture. Their culture included having good stories and laughter together, playing umrabaraba, drinking and smoking among other things. They indicated that even their bosses drank. After work they went to the illegal outlets inside the mine hostels or sat in their rooms in groups. This was where they talked, laughed, ate, drank and/or smoked cannabis and were merry. Some of the participants indicated that they drank a minimum amount during the week to avoid being caught out during testing at the entrance gate in the morning. It appeared that the young men preferred beer during the week and had their expensive brandy or whisky on weekends. Most of the older men seemed to be enjoying their African beer more during the week and would have beer on weekends. They sometimes drank beer and African beer concurrently. Participants left the drinking places only to prepare for the next day and to sleep. They commented as follows:

"Everybody in my shift, drinks or smokes matekwane (cannabis). *I also take one joint in the morning and one in the evening"* (H)

"After work we just sit and talk about the day and we have few puffs from one joint and sleep." (TS3)

"As a mine worker drinking is the only way to be, it is just our culture. After work we sit together in an outlet or in the hostel and drink a few, not much. It is work tomorrow." (FS)

4.3.2.3 Peer group cohesion

There was a great sense of belongingness among the mineworkers. The participants mentioned that they were taught to do things together as they worked in teams or shifts underground. This was a very important aspect in their lives and it extended beyond the work context into their social life. The peer group then usually influence one another to use substances as indicated in different ways by the participants:

"At work we are taught to work as a team, we are used to doing everything together, so I drink with my colleagues." (ZG)

"On weekends I clean my room, do my washing then join ibandla (a group of men who usually stay and do things together and share the same ideas) *to smoke, drink and play umrabaraba."* (SN)

61

"After work we meet at our usual spot and have few drinks, and eat there if we want to."(RG).

4.3.3 Experiences of mining safety policies

The participants reported different experiences of mining safety policies. Their experiences are discussed in this section.

4.3.3.1 Knowledge and insight

Some of the participants had a good understanding of, and exhibited a level of compliance to, the safety policies in the mine. In their responses they displayed positive attitudes towards policies. Workers with long service in one or more mines found it difficult to understand the existence of safety policies. It seemed that these policies were unimportant when they started working twenty, thirty or forty years earlier. It was hard for them to even consider changing long standing customs and habits. Most of the older participants, and those with low levels of education, expressed poor insight and lack of knowledge regarding the substance use policies in the mine.

The following are illustrations of good knowledge:

"We are not allowed to have alcohol in our blood on duty, if you are caught you go for disciplinary hearing." (XG)

"I know that I am not allowed on the mine premises if I have substances in my blood." (LS)

"If you know you drank the previous night you must test yourself first before you go to the security at the gate." (NL)

"Well, I know if I have alcohol in my body and I test positive on the machine (breathalyser) *I do not force things I just go back home."*(SD)

"If I drank too much on week-end I always test myself first before I go to security, I do not want to be sent home." (RG)

Considering a lack of knowledge among long serving workers while everyone working at the mine is exposed to the same policies, the researcher was obliged to explore reasons for this phenomenon. Some of the reasons proposed were as follows:

"I did not know I can lose my job because I drank yesterday." (FS)

"I do not know much of these policies." (AN)

"What policy? I would sit and drink with my boss after work and there is no problem." (MM)

"We do not know these things. There were no policies when I started working in this mine, twenty-two years ago". (BT)

"I have been drinking for long, and have never had any problems in this mine before." (PS)

"I started smoking cannabis long time ago, since I started working in this mine and there were no rules but now it is really hard."(MM)

"I was very young when I started working in this mine and we used to drink and there were no policies." (JM)

4.3.3.2 Training not done in vernacular

Some workers were concerned that most teaching in the mine (including training on safety policies) was done in English. They did not understand English well and it left them not knowing much about the policies. Most of the participants expressed that they were not well educated and some of them never went to school. For that reason they experienced difficulties to learn or understand the safety policies in their work place. These are examples of their comments:

"They must teach us in the language we understand." (JM)

"They teach us in English we do not understand, since I started working in the mine we have been speaking Fanakalo with our bosses." (MM)

"If they talked the language I understand it would be better. I am always left in the dark because I do not know English." (MK)

"Like most of us I am not educated. It is hard to learn these things, so we end up not understanding even when they teach us." (FS)

"I never went to school, it is difficult to learn in English I do not understand anything." (BT)

"If you have never been to school like myself, it is hard to learn in the language you do not understand." (SMS 13)

4.3.3.3 Need for continuous training

Some participants believed that continuous training/ teaching could aid the understanding of the importance of the safety policies. Comments were as follows:

 "Teaching us must be done at least every three months."(ZG)

"*We forget these things, they must always teach us."* (MM)

4.3.3.4 Confidence in peer education

The participants demonstrated confidence in their peers or colleagues as they worked as teams in their shifts. They felt it necessary to have some of their peers trained in the mine policies and substances use so that they could teach and learn from one another. They thought it would be easier for them to ask their colleagues questions if they did not understand. They experienced policies as distant from themselves and only belonging to the realm of the employers who are concerned with rules. Here are some of their comments:

 "*They must train us to teach each other about these things, we are well used to each other. That will be easy."* (RG)

 "Why don't they train us to train each other in the hostels when we sit together, I can even ask questions in my language to somebody I am used to." (MM)

"*I can learn better from the people in my team. I am used to them, we do everything together. I can ask anything."*

 "*These people just make these rules for themselves, as I see them."* (JM)

4.3.3.5 Necessity for supervisors training

Some mineworkers experienced supervisors as not well trained in safety policies.   They thought that it would be helpful if the supervisors would also be well trained on safety policies. They commented in this regard as follows:

 "*They must teach the supervisors these policies so that they can teach us."* (NL)

 "Training must be strong on the supervisors, then they can train us because they understand better." (SD)

"My supervisor does not know these rules, he just uses his position to press us down. He must be thoroughly trained." (TM)

4.3.4 Perceptions about Testing

4.3.4.1 Positive attitudes towards testing

Some participants exhibited positive attitudes towards testing however, they had their concerns which they expressed explicitly:

"Well I do not have a problem with policies, especially testing, I think they are helpful." (RG)

"I do not have a problem with testing; it is good, but people are not faithful." (NL)

"Testing in the mine is good if it is well monitored." (LS)

"They just need to do testing correctly. Mines are dangerous."(ZG)

4.3.4.2 Doubting the validity of test results

Mineworkers expressed their concerns regarding the validity of test results. They experienced the testing process as not well monitored. They also felt there was a lack of professionalism among the people who do the tests. They were concerned that some mineworkers lost their jobs as a result of wrong readings because the people who did the testing were not skilled to do so.

"*Professional people who are trained must do the testing and testing must be monitored as well as results."* (NL)

"I always wonder how many people are expelled because of incorrect test readings." (RG)

4.3.4.3 Unfairness in testing process and results

Some of the mineworkers experienced the testing process as unfair and biased. They perceived the results as biased, and influenced by who one knows or had favour with and/ or what position one held in the mine.

"I have seen others go through the gate because they are friends with security or they are managers." (FS)

"*I remember at some stage we were drinking in the pub with this other guy, in the morning all of us were sent back after testing and he went through the gate, I still wonder how he managed, it is disturbing."* (JM)

"*I always go through, securities know me very well."* (XG)

"Testing methods need to be improved, something has to be done." (H)

4.3.4.4 Invasion of confidentiality and privacy

The participants perceived the testing process as invasive with no privacy and or respect for an individual. They felt exposed to their colleagues and everyone around. According to them testing was supposed to be a private matter which needed to be treated likewise. This also involved the announcement of results. A few mineworkers expressed their discomfort to urinate in front of a person of the opposite sex (females). The participants perceived the testing by a woman officer as undermining their manhood.

These are examples of their comments:

*"During testing I felt exposed and the tests results were just shouted for everybody to hear, I thought no." (*H)

"There is no privacy there, it is really bad." (SD)

"Why must everybody know I tested positive with cannabis, they just shouted my results out." (MM)

"I do not like how they give out the results, everybody is there, and it is too open." (JM)

"In my Zulu culture, it is a disgrace to urinate in front of a woman, I can't do that." (MM)

"I am an African man, I respect myself, I cannot just drop my zip in front of a woman it's a disgrace to my manhood, no." (BT)

4.3.4.5 Older mine workers cheating during testing

There were concerns that mineworkers were untrustworthy and cheated during the testing in order to have negative results. This was mostly common among older men and those mineworkers with longer service records. Some indicated that they knew when the annual medical assessment was. They would stop smoking cannabis two to three weeks before that and then start again afterwards. Others stated that they would bring urine from their children or friends who do not smoke and place it under the arm-pit to keep it warm until testing time. A few mentioned that they buy clean urine from their colleagues who do not smoke. The mineworkers perceived the intervals between the testing period as too long and it happens around the same time of the year which allows them to continue smoking as they find ways to escape the testing time. They commented that it was easy to cheat

because of the poor monitoring and lack of professionalism in the testing process in their workplace. These quotes illustrated this:

"I don't even worry about urine test, it's easy. I know how to be safe on that one. I stop smoking a month before the Red Ticket (medical assessment), then continue thereafter" (NL)

"I usually negotiate with those who do not smoke and get their urine at a little price." (LS)

*"My friends do not do cannabis, so I take their urine and find a way to keep it warm before the test, and that's it" (*SN)

"Those people there do not even check what we do behind the testing cubicle, nobody cares." (H)

"My concern is urine tests are done only after an accident or during Red Ticket after a year." (NL)

4.3.5 Taking responsibility for personal behaviour

Some of the mineworkers acknowledged their problems regarding substance use or harmful use. They took responsibility for their behaviour and the outcomes of the disciplinary hearing. They talked in the first person and referred to themselves as "I", unlike others who referred to themselves as "we" to maintain peer cohesion. Their comments were as follows:

"I cannot stop blaming myself." (LS)

"I was spending my money on alcohol while exposing my health and my job to danger." (NL)

*"I must know the dangers of alcohol and dagga as well as their policies." (*PS)

"I had a problem, I needed help, and I don't regret I came." (RG)

*"We are not allowed to have alcohol in our blood on duty, if you are caught you go for disciplinary hearing and that is why I am here." (*FS)

"My brothers and I had a few drinks on the way from home in KZN and I failed to wake the following morning; then I was absent from work. I can't blame my brothers." (MM)

4.3.6 The disciplinary hearing

It was evident that the process and the outcomes of the disciplinary hearing had a negative impact on the mineworkers.

4.3.6.1 Fear of the consequences

Almost all the participants experienced the disciplinary process as sad, frustrating and causing uncertainties and fear. Most of them were suspended for being temporarily unfit for work. They had seen their colleagues losing their jobs after a disciplinary hearing before. During suspension their salaries were cut down for the days they were absent or still in treatment, which affected their budgets and their families' financial status. They had to stay away from work until they completed the workshops and or they brought results proving that they were free of the substances they were using. These mineworkers were scared that if their test results stayed positive they could lose their jobs, especially those who smoked cannabis. They expressed their concerns and feelings as follows:

"I have seen a lot of people lose their jobs after hearing, it's scary." (MM)

"I am scared I would lose my job." (JM)

"My wife is very angry with me, I don't know what to tell her anymore. There is no money, I paid half of the rent and the owner of the house is not happy with me." (BT)

"It is hard. If you are suspended you don't get your full salary, it is sad, stressful and frustrating. Children need food at home." (ZG)

"I am afraid if I still test positive, the manager will expel me." (LS)

"If I lose this job who will employ me at my age? That will be a disaster to my life and family." (FS)

4.4 Summary

This chapter focused on providing the context within which the study was conducted, followed by the participants' background and the themes that emerged. The mineworkers' experiences provided a wealth of information from which a few common themes emerged. The core message from the participants was that substance use was part of the social norm

and that this behaviour was excepted until they were caught out by accident. In the next chapter the discussion of the results will be provided with an aim to answering the research question. The researcher will reflect on the strengths and limitations of the study as well as the recommendations for future research.

CHAPTER 5

DISCUSSION AND CONCLUSION

This chapter provides the discussion of research findings and the strengths and limitations of the study. These findings are integrated with findings from the literature and previous studies. Lastly, the conclusion and recommendations are provided.

5.1 Traditions

The mineworkers in the study were African males. Although they were from different ethnic groups, they shared cultural values. They identified with the cultural definitions of being a man which appeared to be related with substance use. For these mineworkers drinking alcohol and using cannabis was socially accepted and part of their way of living. Substance use was an important part of all their cultural ceremonies, efforts to make contact with their ancestors, all social interaction and is part of their masculine role in their families and communities (Ambler et al., 2014). For most of them there was no family ritual that was done without alcohol and cannabis. They experienced that the employer did not understand nor was he sensitive to their culture and how they defined their own identities. They viewed the expectation that they should not use substances as unrealistic.

The use of psychoactive substances are present in social life and culture. It is therefore, important to pay attention to cultural, social and political-economic factors when dealing with substance use within the South African context. Knowledge regarding these topics will enhance an understanding of how different groups make sense of the use of substances in their daily living and in social activities within their communities. For many communities using substances is socially accepted. In the community and family contexts of many participants the use of substances fulfils a requirement of the masculine role. This finding is in agreement with findings of Abbot and Chase (2008), who argued that any approach regarding the use and use of substances in the workplace should be bolstered by an understanding of the employees' sociocultural beliefs.

5.2 Belongingness/group cohesion

At the mine colleagues and roommates often replace the families and social clans whom the mineworkers left behind in their homesteads. There is a strong form of group cohesiveness among the workers (Gyekye, 2008). After work or on their days off duty they socialise. In the absence of recreational facilities at the mine, socialisation often consisted of using substances. The use of substances was a way of 'fitting in' to the social mine context.

While the mining industry aimed at creating and maintaining safe and healthy work environments, mineworkers had their own 'mine culture'. There seemed to be a substance use role modelling from the older mineworkers and those with longer service. The mineworkers with longer service insisted that they used to drink with their bosses every afternoon after a hard day's work before the safety rules and policies were enforced. This history could be viewed as a contributing factor to aggravate and condone the use of substances in the mining context. Substance use is perceived as a social norm by the new workers joining the mine. Mineworkers maintain that drinking and smoking keep them together.

5.3 External Locus of control

Locus of control describes individuals' sense of control over their lives, and the way people understand the problems they experience. It rather predicts how people will endeavour to solve such problems. People with internal locus of control view the bulk of events in their lives as subsequence of their own decisions and deeds. People with external locus of control, on the other hand, see events as being predominantly controlled by external factors including fate, luck, ill will or magic. People with external locus of control believe that they are helpless, without blame and not in control of their successes and failures. Such people believe that others have control over their lives. They usually step back with a supposition that they cannot make any difference (Wise, 2014).

The mineworkers experienced that there were many risks involved in working underground. However, they presented with high external locus of control (Cigularov, Chen & Stallones,

2009). Although they perceived their workplace as risky they did not seem to take responsibility for their safety, or blame for the consequences following the use of substances. According to them their safety was dependent on Mother Nature, which means they were lucky to be back safe from underground each day. In their view their situation was helpless and they had no control over it. They could not perceive how policies or rules could be helpful, since their work conditions will ever remain the same. They perceived the use of substances as one way of coping with such conditions. Unfortunately, such maladaptive behaviour brought serious consequences to them. While the mineworkers were concerned about the financial consequences and uncertain about maintaining their jobs due to suspension, they blamed it to bad luck, a supervisor who did not like them, an employer who was out to catch them or lack of knowledge due to poor access to information regarding policies. They could not be blamed for what happened to them.

5.4 Lack of understanding of policies

Despite receiving training on the safety policies and effect of substance use on job performance (Killian, 2008 and Pit & Quarry, 2007), mineworkers exhibited poor insight and lack of understanding of the mining safety policy. This was in agreement with Gyekye (2008) contention that blue collar employees such as mineworkers are not well disposed to safety enforcement policies in general.

Some mineworkers did not fully understand the policies. It appeared that the language used for training (English) created a barrier to learning for those who had lower levels of education.

According to Killian (2008) supervisor training should ensure that supervisors understand their role in enforcing the substance-free workplace policy and know how to identify signs and effects of harmful use of substance on job performance. The mineworkers perceived their supervisors as the first line of communication and important figures in their workplace. They would appreciate it if their supervisors had better knowledge of policies on substance use in order to be able to teach them.

The mineworkers emphasised the need for the training for all mineworkers. They exhibited high confidence and trust in their colleagues. They believed that if there was training provided for them, they would be able to train one another in their teams or hostel dwellings. According to the mineworkers, they understood and learnt better from one another. They

asserted they had an easier way and common language to communicate among themselves and they would be more comfortable to ask questions from colleagues where necessary.

5.5 Incongruence between policy and mineworkers' behaviour

Botes et al., (2009), reported that the miners were making inroads into refining and upholding the safety environment. That included measures to reduce fatalities in the workplace. This report stated that the company was devoted to advancing their people, raising standards as well as refining safety, health and environment. In compliance with ethical conduct principles, mining companies reported to have expelled some of their employees based on the consequences of breaches of principles including dishonesty, breaking safety or environmental rules and breaches of confidentiality among others. The report further indicated that the company had established a vigorous risk-based approach which underpinned the safety programmes. According to the report the company's safety vision, principles, policy and safety management were clearly specified. These guidelines were executed through operational safety improvement plans (SIP's) which were informed by intense gap analyses, group systemic and standardised approaches to safety management, identifying and implementing preventative actions. The assumption is that perceptions of employees are influenced by the appropriateness of the policy including equity and training of the officials administering policy procedures such as testing.

The results of this study indicate that there is a discord between the employers and some of the mineworkers with regards to the safety policies within their work context. The mineworkers interviewed seemed to have their perceptions which differ from the employers' intentions to ensure and maintain safety in the workplace. Workers perceive their work as stressful and demanding physically and psychological. For this reason the safety rules are meaningless to them. It seems there is an omission in paying attention on how the mineworkers cope with all the demands of their work environment.

Bain, Brown and Freeman (2008) contends that employees deserve to be treated with dignity and with extreme sensitivity to avoid humiliation and embarrassment. The mineworkers interviewed, who have been through the disciplinary process at the mine, perceived the safety policy as distant, unclear, evasive and unfair. Policies were viewed as protecting some while harming others. The mineworkers felt that the testing process

invaded their privacy, confidentiality, respect and cultural beliefs. The alcohol testing (breathalyser) was perceived as ineffective and without value, since the mineworkers have discovered ways to circumvent testing at the entrance gates, which made it unnecessary to comply. In order to create a better employee-work policy bond and congruence, it would be important for the employers to keep these perceptions in mind while establishing and enforcing safety policies. The employee-work policy bond may enhance the buy-in of policies from the mineworkers.

The outcomes of disciplinary hearings seemed to devastate mine workers, emotionally and financially. They felt hopeless and deserted. According to them, they learned about the rules in the policy only when they were summoned for disciplinary hearing. The frustration of low income during suspension and uncertainty with regards to their work, appeared to have negative outcomes in the lives and families of mineworkers. Mineworkers felt bad that they were caught, but did not realize that these consequences were as a result of their noncompliance with the policy. They did not seem to take responsibility for their actions.

5.6 Summary

The findings in this study concurred with previous research that found that substance use of mineworkers were common. Workplace stress has been identified as a main source of substance use among mine workers and alcohol and cannabis were used as a coping mechanism. The habit was also exacerbated by their Africa culture as well as the mine culture (of drinking and smoking) which the mine workers developed as a group. Workload and shift work are job demands that are thought to have substantial effort to contribute to stress and use of substances.

While mining companies (Botes et al., 2009) had made the efforts to create a safe and healthy workplace, some mineworkers had poor understanding of mine policies and the consequences of not complying with the policies. Others appeared to have a disregard for the policies. Those mineworkers with long service working in the mine appeared to have a history of 'permitted' use of substances after work in the mine. The mineworkers seemed to have learnt ways to escape the policy measures. This perpetuated and maintained the habit of substance use without being caught. Some mineworkers did not identify with the policies. They perceived the policies as belonging to employers with punitive intentions.

Mineworkers exhibited a poor understanding of the role of the employer in protecting employees and in providing a safe working environment.

Fostering and emphasizing the importance of safety policies will help to eradicate the mind-set of permissiveness from the workers with longer service. It will be of assistance to facilitate the teaching on policies such that it allows the mineworkers to own the process and realise that policies are meant to protect them and other people in the workplace. They could begin to take the policies seriously and thus comply.

5.7 Strengths of the study

The study was conducted within a qualitative framework. This approach afforded an opportunity to enter into the mineworkers' worlds and share in their subjective experiences. The descriptions of their experiences were given as natural and honest as they occurred in their daily lives and as the mineworkers were encouraged to share their own experiences in their own words (Smith et al., 2009). Through phenomenological paradigm the assumptions were eliminated and the true reflections of how mineworkers perceived their conditions and the safety policies within their work context were recognized.

The researcher personally conducted the interviews which allowed for first-hand experience of their feelings, thoughts, perceptions and attitudes. During the interviewing process she could observe their non-verbal expressions including the tone of voice, language expressions (idioms etc.) they used to express themselves. The information from the observations was of great assistance during the interpretation of the mine workers' accounts.

The interviews were semi-structured which permitted flexibility in answering the questions, opening a chance for deeper discussion. The use of mother tongue (Zulu, Xhosa, SeSotho, Swazi and Ndebele) was very helpful for the mineworkers to express themselves freely in the best way they could. The process provided for rich and in-depth information. The researcher's knowledge and ability to speak their different languages stirred their interests and motivation to talk even more as they felt important, respected and understood.

During the interviews the researcher was working at SANCA, therefore she was familiar with the context. This allowed a better opportunity to invite the mineworkers to the study and to build relationships of trust with the participants. The mineworkers were able to share their stories with confidence since they were comfortable and feeling safe with the researcher.

5.8 Limitations of the study

The aim of qualitative analysis is a complete, detailed description. No attempt is made to assign frequencies to the linguistic features which are identified in the data, and rare phenomena receives (or should receive) the same amount of attention as more frequent phenomena.

The main disadvantage of using qualitative methods to form analysis is that their findings cannot be extended to wider populations with the same degree of certainty that quantitative analyses can.

The major drawbacks associated with qualitative analysis are firstly, the process is time-consuming. The second potential problem is that a particular issue could go unnoticed. All researcher's interpretations are limited. Research quality is heavily dependent on the researcher's skills, personal experience and knowledge thus influencing the observations and conclusions. This results in a difficulty to maintain assess and demonstrate accuracy as well thoroughness in the process.

At times it was difficult for the researcher to separate the role of a researcher from that of a therapist. She had to be careful at all times not to confuse her roles. Her subjective stance could have impacted the results of the study. The researcher had to learn to set the boundaries for the mineworkers as they seemed to perceive the interview process as a platform to express all their concerns. She had to constantly remind the mineworkers about her role and the purpose of the interviews and the study in order to ensure and protect the quality of data.

The study focused on black males. This was a small, homogeneous group of mine workers who shared a common experience (Willig, 2013). These males had undergone a disciplinary process and were referred to SANCA for re-test and assistance. The researcher aimed at finding 'a more closely related defined group for whom the research question would be significant' (Smith, 2008). For this reason the study lacked cultural diversity. The disciplinary process could have influenced their viewpoints, as they would have answered the questions based on emotions. The results can therefore not be generalised to all mineworkers and workers at all the mines in the area, although qualitative research may be transferable to similar conditions (Willig, 2013). Despite the limitations mentioned above,

76

the mines could take notice of some comments of the mineworkers in an effort to improve their way of implementing mining safety policies.

5.9   Recommendations to mining houses

Mine workers use substances as a coping mechanism for stress. Gibson (2008) contends that work stress should be alleviated or and prevented among mine workers. Prevention strategies for workplace stress in mining need to manage psychological and physical demands of the work place (Edwards, 2012). Mine work is known and perceived by the workers to be hard and demanding physically. Improving work conditions and environment will be of great assistance in this regard. Creating a workload that is in line with workers capabilities and resources will reduce stress thus combat the need to use substances to feel energetic at work. Continuous monitoring of the work environment is essential to be able to identify the risk factors and their negative health effects in time. Improving the working environment is the foundation of prosperity in the coal industry.

Based on the results in this study it is evident that workers do not have good understanding of the policies in their workplace. Results further suggest that workers perceive themselves as not being supported nor understood by their superiors. Establishing, enhancing and maintaining comprehensible and consistent communication between management and workers will enrich the inter-relationships between both parties. The conflict between work and family and the relationships have a great effect on the working pressure, the understanding and support from family and good interpersonal relationship will make them happy, then improve their work efficiency. Having a discussion with the workers and find out their difficulties and paying attention to their physical and mental health could eliminate the psychological barriers, allow workers to work to have a good mentality.

The mining management could continuously negotiate with the mineworkers on the implementation of the safety policies. The negotiations should allow the workers to express their views regarding policies and the acknowledgement of their concerns by the employer is of vital importance. The key aspects in the implementation of the policy include communication of work expectations, the emphasis on prohibited behaviours as well as clear announcement of the consequences for violation the policy. This could be of assistance in fostering the education regarding the penalties of the disciplinary hearing and

how the process would affect the mineworkers including the costs of suspension from work. The process during the discussions should be directed at persuading the mineworkers to comply as well as change their mind-set regarding policies. According to Bain, Brown and Freeman (2008), the policies that are clearly articulated and primarily concerned with rehabilitation, adequate information and training are more positively acceptable by the employees.

While emphasizing the policies it would be of crucial assistance for employers to observe workers' difficulties, complaints and health problems. Cognisance should be taken of workers' irritability, aggression, errors, decreased performance, higher levels of absenteeism, drinking or smoking problems etc. This should not be summarily punished, but primarily be identified as indicators of a need for assistance with emotional or physical health. Internal assistance or a referral to external expertise to alleviate root problems can then be rendered much more readily, but without being invasive or overly paternalistic.

Implementation of stress management interventions, providing psychological assistance for workers affected by stress and effectively managing the stressful factors will be of great assistance in reducing levels of stress and to mitigate detrimental effects of work stress.

Allowing workers an opportunity to share their experiences and express their feelings And concerns, will promote the sense of autonomy.

Strengthening the safety education and training may facilitate better understanding of policies. Lacking knowledge exacerbates low self-efficacy, they don't have a correct attitude towards work. Safety education and training can improve employees' ability and self-efficacy and reduce unsafe behaviors caused by working pressure. Thorough and well-defined information as well as training regarding policies and structures of the mine will heighten their appreciation of policies thus accelerate the compliance. The training content may also benefit if it is based on an understanding of cultural diversity and other important contents of health and safety policy as they concern the workers. The knowledge and information from the training may offer empowerment for the mineworkers to train their colleagues (peer training). The consideration of language should take prime importance while preparing the training material and facilitators. This could allow psycho-education to be implemented on a large scale as the mineworkers would be keen to attend if they understand what is being taught. It could be utilized to start a peer education process as indicated by the workers.

Continuous training measures would ensure the continuity and enhance the compliance among mineworkers.

Mine workers experience shift work as more challenging than other counterparts. The shift design should take cognizance that workers may be sleepy in the night shift due to insufficient rest and lack of good sleep. Consideration of adequate breaks and shift change over will aid in reducing fatigue as well as allow the workers enough time to rest and recover (Gibson, 2008). Arranging the working time legitimately, enriching their spare time for the leisure and entertainment activities, which can make them experience physical and mental good feeling thus work in a better state. Providing recreational facilities for workers' use after work or on off-duty times and days will enhance relaxed atmosphere and facilitate feasible social interaction among workers. Recreational facilities within or around the mine premises could be of assistance to combat boredom and loneliness among mineworkers. The access to such facilities and the implementation of interesting programmes could enhance and improve the culture of practising healthy lifestyles. This endeavour will promote positive and adaptive mechanisms to cope and manage stress in and outside work place.

Holding an activity that invites family members to come to visit. This will facilitate a better understanding of the workers' work and life in the workplace to the family members. Discussing and informing the families about the situation of employees may allow an opportunity to solve the problems of families thus alleviating stress to the workers.

It would be of assistance to preserve consistency, adequacy as well as fairness while implementing rules and procedures, because employees can be cynical and suspicious about policies. Urine testing requires special consideration which suggests the need for private bathrooms and same gender testers. The testing system for alcohol at the gates seems to be permissible to some workers. Workers passing the same security officers on a daily basis eventually form a bond with them and then find it easier to pass untested or with fake test results. This could require a regular and unpredictable rotation of officers to alleviate circumvention. Ways to ensure that results are indeed consistent and fair and are perceived as such, needs to be established. Implementing substance use (cannabis and others) testing together/simultaneously with alcohol testing will be of assistance in ensuring that workplace id free of other substances as well.

Effective supervision processes and guidance is of utmost importance in assisting the workers to understand the nature of work they do as well as the risks involved.

Among other items in the policy content it would be recommended that substance use test intervals be reconsidered. Mineworkers who use cannabis seemed to get in and out of the mine under the influence of the substance because there is no daily assessment. Such behaviour could impede safety in the workplace. It would be of assistance if the testing period is not fixed but follows an indeterminate schedule that is not known to even trust workers beforehand. This could assist in getting valuable and more credible results regarding the use or prevalence of cannabis within the mine premises. In this manner mineworkers would not be able to yield negative results or falsely pass the medical assessment even when they are actually using. The employers will be able to apply disciplinary measures to the deserving workers. This action may encourage the mineworkers to abstain from the habit which will help to enhance and maintain safety in the workplace. It is recommended that education in this regard put more emphasis on the effects of substance use and use in their lives as human beings, their families as well as in the workplace.

5.10 Conclusions

This study endeavours to provide the reasons for the mineworkers to continue to use of substances in a zero tolerance context. The mineworkers' perceptions with regards to mine policies were also explored. This has been an apparent omission in previous studies. The study allowed for a safe place for mineworkers to express their feelings, views and attitudes regarding their work context. It facilitated a better understanding of how they viewed their daily living in their job environment.

This study showed that substance use was part of the social culture of the mines for some mineworkers, which stood in contrast with the strict safety policies that should be enforced. The results in this study yielded strong evidence that workers used substances as coping mechanisms for stressful conditions in their workplace. These mineworkers presented with poor insight of the effects of substance use as well safety policies in place. The policies were perceived with ambivalence resulting in non-compliance by most of them. Only a few realized that policies were meant for their safety and health in the workplace and that employers had legal, moral, and logical obligations to take care of their employees.

The recommendations above can assist the mine management to develop strategies to effectively implement safety policies and to encourage mineworkers to also take responsibility for their own behaviour and to comply with policies thus enhancing safe and substance- free work environment.

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Annexure 1

INFORMED CONSENT

I _____ do agree to participate in a research study conducted as follows:

Faculty : Humanities

Department : Psychology

Name of Researcher: Thembi Barnabas (thembs.barna@gmail.com)

Supervisor : Prof M. Visser (maretha.visser@up.ac.za)

Title : Mine workers' experiences related to substance use in a zero tolerance policy context.

Purpose

In the light of the problems regarding substance use as experienced by the mining industry, this research explores the reasons for mineworkers' persistent use of substances despite the known zero tolerance enforcement. The mineworkers' perception of the substance use policy will also be explored. This research aims to provide a better understanding of mineworkers' behaviour. The research results will be invaluable in developing interventions to enhance compliance with the mining policies.

Competence

The researcher is trained and she is allowed by the University of Pretoria's ethical code to conduct the research study under supervision and to protect the participants from any potential harm.

Risks

There are no potential risks or harm envisaged during the research process, except when the research suggest that I have a problem regarding substances, it may have psychological impact which will be attended to with immediate effect.

Participants' rights

Participation in the study is voluntary, therefore I understand that I can withdraw at any time from participation without negative consequences should I wish to do so.

Benefits

I understand that there are no monetary benefits to the study per se but, should it be confirmed from the research study that I have a problem with substances, I will receive help from SANCA.

Confidentiality

I have been assured of confidentiality and anonymity during the research study. The information will be treated with confidentiality and my name will be disguised with pseudonyms. If I withdraw from the study, the information already give will be destroyed.

Storage and usage of research information

I understand that the research information will be gathered by means of recording tapes and the University of Pretoria stores the research information for 15 years, and it may be used for teaching, archiving and research in the future. The researcher may also write an article based on this study at a later stage.

Declaration

I hereby, confirm that I understand all the information regarding the research study as explained to me. I therefore, agree to participate and will be present for all interviews as scheduled.

_____   Date:

Participant

_____   Date:

Witness

_____   Date:

Researcher

Interview Schedule

Am going to ask you some questions which I will request you to answer as honest as possible. Should you feel uncomfortable to answer any of the questions you are free not to answer that particular question. As mentioned earlier on you are free to withdraw from the study at any time should you decide along the process.

1. How did it come about that you were referred to SANCA?
2. How did you start drinking or using cannabis?
3. What does using alcohol or cannabis mean to you as a person?
4. Tell me about the policies in your workplace and what you think about them?
5. Are there any reasons why you still drink or use cannabis despite the strict rules in your workplace?
6. How do you feel about urine tests and breathalyser tests? Are you afraid of the consequences of tests?
7. How do you think people in your position can be helped by the mine?
8. How can mine help recruits not to get into a habit of drinking or smoking cannabis before or during work hours?