The experience of psychological trauma and the management thereof in the mining industry

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Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Magister Commercii* in Industrial Psychology at the Potchefstroom Campus of the North-West University

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COMMENTS

The reader should be reminded of the following:

- The editorial style follows the format prescribed by the Publication Manual (6th edition) of the American Psychological Association (APA). However, a modified version of the format is used in line with the policy of the Programme in Industrial Psychology of the North-West University, Potchefstroom Campus. The format used for the research article is in accordance with the guidelines for authors for the *South African Journal of Industrial Psychology* (SAJIP).
- The revised research proposal forms the first chapter of the mini-dissertation. Therefore, this chapter is presented in a different voice when compared to subsequent chapters which report on actual findings.
- The mini-dissertation is submitted in the form of three chapters, which include one research article (chapter 2). Chapter 1 and 3 have numbered sections according to the formatting followed in the research unit, WorkWell.

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DECLARATION

I, Tenise van Niekerk, hereby declare that this mini-dissertation entitled "The experience of psychological trauma and the management thereof in the mining industry" is my own work and that the views and opinions expressed in this work are those of the author and relevant literature reference as shown in the references.

I further declare that the content of this research will not be handed in for any other qualification at any other tertiary institution.

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NOVEMBER 2016

DECLARATION FROM LANGUAGE EDITOR

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21 November 2016

To whom it may concern

I, Liezl Potgieter, hereby declare that I have done the language editing of the mini-dissertation by Tenise van Niekerk (student number 21619220) titled: "The experience of psychological trauma and the management thereof in the mining industry" submitted in fulfilment of the requirements for the degree *Magister Commercii* in Industrial Psychology at the Potchefstroom Campus of the North-West University.

Yours sincerely

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SUMMARY

Title: The experience of psychological trauma and the management thereof in the mining industry.

Keywords: Psychological trauma management, workplace trauma, mining industry, mine, traumatic stress, South Africa

Employees in the mining industry experience various forms of psychological trauma (PT) at their workplace. They are directly and indirectly exposed to PT such as accidents, retrenchments and strikes. These events sometimes lead to PT if it is not managed properly. Therefore it is important that every mine in the industry has a well-developed psychological trauma management programme (PTMP) available to their employees and that they are aware of and informed of these programmes. If the mining industry does not give sufficient attention to PT and PTMPs, it is evident that this could negatively influence employees' work performance and they could experience this stress and trauma to the extent that they are not able to cope anymore, which could have serious consequences such as post-traumatic stress disorder (PTSD). In order for employees in the mining industry to function optimally and to avoid further accidents, it is very important that the mining industry regards this study as an informative tool.

The general objective of the study was exploring the experience of PT and the management thereof in the mining industry. The researcher utilised a qualitative research approach in order to gain an in-depth understanding into the population's experience. The sample consisted of nine employees of the different mines from which all were permanently employed at the mine and have been working at the mine for at least one year or more. Participants' job descriptions varied from HR managers, safety officers, machine operators, training officers and plant coordinators. The researcher conducted semi-structured interviews in order to understand the participants' perspectives on this phenomenon and their responses were transcribed in a verbatim manner. A data analysis was then conducted in order to gain themes and subthemes, which was then reported on.

From the findings it was evident that the employees at the mines and in the mining industry as a whole, experience trauma as a difficult event due to sudden and unexpected events such as serious accidents or any life-threatening events that can either happen to them directly or indirectly to a fellow colleague. These employees indicated that they are partially aware of PTMPs such as doctors and psychologists, external wellness centres and the Employee Assistance Programme (EAP), as well as the freedom to speak to the HR Department. The majority of participants indicated that these PTMPs are ineffective mainly due to access, awareness, availability and support from supervisors and managers. They suggested on-site help that is readily available when they need help and assistance, better communication, information and creating awareness. They also preferred face-to-face counselling and help, which external wellness centres and the current EAP are not providing to them at this stage.

In summary, from the findings it was apparent that the South African mining industry should invest and focus on well-developed PTMPs specifically targeted at the needs of the employees in this industry and the PT events that they experience. An effective PTMP should include immediate or on-site help and assistance, access to these PTMPs and support and encouragement to take part in the available PTMPs. It is important that all counselling sessions are handled in confidentiality and that the mines inform, communicates and make them aware of the available PTMPs and how to gain access. They also emphasised the importance of the mine catering for their specific language and culture needs when implementing a PTMP. This study makes a great contribution to the phenomenon of PT and the management thereof, especially in the mining industry, which, at the moment, is a very relevant topic in South Africa. If the mining industry makes work of implementing a well-developed PTMP aimed at the needs of the employees in the mining industry, it could contribute towards their employees' well-being, which in turn could help reduce strikes and also reduce mining accidents. This study also contributes to existing literature on the topics of PT, PTM and PTMPs in South Africa.

OPSOMMING

Titel: Die ervarings van sielkundige trauma en die bestuur daarvan in die mynbedryf.

Sleutelwoorde: Sielkundigetraumabestuur, werkplektrauma, mynbedryf, myn, traumatiese stres, Suid-Afrika

Werknemers in die mynbedryf ervaar verskeie vorme van sielkundige trauma (ST) by hul werkplekke. Hulle word direk en indirek blootgestel aan traumatiese gebeurtenisse soos ongelukke, afdankings en stakings. Hierdie gebeurtenisse lei soms tot ST as dit nie behoorlik bestuur word nie. Dit is daarom belangrik dat elke myn in die industrie ’n goed ontwikkelde sielkundige traumabestuur program (STP) beskikbaar het vir hul werknemers en dat die werknemers bewus gemaak word van en ingelig is oor hierdie programme. Indien die mynbedryf nie die nodige aandag aan sielkundige trauma en die bestuur daarvan gee nie, is dit duidelik dat dit ’n negatiewe invloed kan hê op die werknemers se werkprestasie en hulle kan hierdie stres en trauma tot so ’n mate ervaar dat hulle dit nie meer kan hanteer nie, wat ernstige gevolge kan hê, soos post-traumatiese stresversteuring (PTSV). Ten einde te verseker dat werknemers in die mynbedryf optimaal funksioneer en om verdere ongelukke te verhoed, is dit baie belangrik dat die mynbedryf hierdie studie as ’n ingeligte instrument beskou.

Die algemene doel van die studie was om die ervarings van ST en die bestuur daarvan in die mynbedryf te ondersoek. Die navorser het kwalitatiewe navorsing gebruik om sodoende ’n diepgaande verstaan van die populasie se ervarings te kry. Die steekproef het bestaan uit nege werknemers van verskillende myne, waarvan almal permanent aangestel is by die myn en ten minste vir ’n jaar of meer daar werk. Deelnemers se posbeskrywings wissel van menslikehulpbronbestuurders, veiligheidsbeamptes, masjienoperateurs, opleidingsbeamptes en aanlegkoördineerders. Die navorser het semi-gestruktureerde onderhoude gevoer om sodoende die deelnemers se perspektief van die fenomeen te verstaan en hulle antwoorde is woordeliks getranskribeer. ’n Data-analise is gedoen om temas en subtemas te verkry en die navorser het daaroor verslag gedoen.

Vanuit die bevindinge was dit duidelik dat werknemers by die myn en in die mynbedryf as ’n geheel trauma as ’n moeilike gebeurtenis ervaar as gevolg van ’n skielike en onverwagse

gebeurtenis soos ’n ernstige ongeluk of ’n lewensbedreigende ervaring wat met die persoon self direk of indirek met ’n medekollega kan gebeur. Die werknemers het aangedui dat hulle gedeeltelik bewus is van beskikbare sielkundigebestuursprogramme soos dokters, sielkundiges, eksterne welsyn sentrums en die Werknemer Hulpprogram (WHP), sowel as die vryheid om met die Menslikehulpbrondepartement te praat. Die meerderheid deelnemers het aangedui dat hierdie STPs vir die bestuur van sielkundige trauma oneffektief is, grootliks as gevolg van ’n gebrek aan toegang, bewustheid, beskikbaarheid en ondersteuning van toesighouers en bestuurders. Hulle het voorgestel dat hulp op die perseel beskikbaar is wanneer hulle hulp nodig het, asook beter kommunikasie en inligting en dat bewustheid geskep moet word. Hulle verkies ook aangesig-tot-aangesig-berading en -hulp, wat eksterne welsyn sentrums en die huidige WHP en die huidige EAP nie op hierdie stadium vir hulle bied nie.

Uit die bevindinge blyk dit duidelik dat die Suid-Afrikaanse mynbedryf moet belê in en fokus op goed ontwikkelde STPs vir die bestuur van sielkundige trauma wat spesifiek geteiken is op die behoeftes van die werknemers in hierdie bedryf en die ervarings van sielkundige trauma wat hulle tegemoetkom. ’n Effektiewe STP vir die bestuur van ST sal onmiddellike hulp op die perseel beskikbaar hê, daar sal toegang tot hierdie programme wees en daar sal ondersteuning en bemoediging wees aan hierdie programme om deel te neem. Dit is belangrik dat alle beradingsessies vertroulik hanteer word en dat die myn hul werknemers inlig en met hulle kommunikeer, sowel as hulle bewus maak van die beskikbaarheid van STPs vir die bestuur van sielkundige trauma sowel as hoe om toegang daartoe te verkry. Hulle het ook die belangrikheid daarvan beklemtoon dat die myn voorsiening maak vir hulle spesifieke taal en kultuur wanneer hierdie programme geïmplementeer word. Die studie lewer ’n groot bydrae tot die fenomeen van ST en die bestuur daarvan, spesifiek vir die mynbedryf, wat op hierdie stadium ’n baie relevante onderwerp is. As die mynbedryf werk hiervan maak om ’n goed ontwikkelde program te implementeer wat gemik is op die behoeftes van die werknemers in die mynbedryf, kan dit bydra tot die werknemers se welstand, wat weer kan help om stakings en verdere mynongelukke te verminder. Hierdie studie dra ook by tot bestaande literatuur oor die onderwerp van ST, sielkundigetraumabestuur (STB) en STPs in die bestuur van ST in Suid-Afrika.

CHAPTER 1
INTRODUCTION

Introduction

1.1. Problem statement

Mining is one of the most dangerous work environments where psychological trauma (PT) often occurs (Wilson, 2011). The mining occupation involves high risks (Zungu, 2013) although the gold and coal mining industries are of the most important role players for the South African economy. According to Slaughter (2007) literature suggests that the South African mining industry is forced to compete on the world markets and this competition leads to mine managers prioritising output rather than safety when it comes to their employees.

According to Stevens, Calitz, Joubert, Gagiano and Nel (2006) the South African gold mining industry can be considered a high-risk environment for trauma. Hermanus (1993) reported that in the time period between 1900 and 1991 more than 68 000 mineworkers died in the South African mining industry by means of accidents and over one million workers were permanently disabled. More recently, over the past five years earth-fall and transport accidents (truck and tramway accidents) have caused serious injuries and even fatalities in the South African gold mining industry (Stevens et al., 2006). Underground earthquakes are one of the major threats that accompany working in the mining industry (Maiden & Terblanche, 2006). A study conducted by Maiden and Terblanche (2006) reported on mining accidents causing trauma to its employees. Among these were mine-related earthquakes at a mine close to Stilfontein on 9 March 2005 where 26 miners were trapped and rescued and 16 remained missing. Another incident took place at Kusasalethu mine near Carletonville on 2 July 2012 where a rockfall trapped 10 employees resulting in 5 fatalities. Sorensen (2012) indicated that the labour unrest, resulting in the well-known Marikana mine tragedy on 16 August 2012, resulted in the deaths of 44 people, including two mine security guards that were brutally killed. At least 78 additional workers were also injured during this incident. Very recently a mine-related tragedy once again hit South Africa when mine workers died at the Goldfields Lily Mine in Barberton, Mpumalanga, after a section of ground collapsed (Wa Monareng, 2016).

According to Foa, Keane, Friedman and Cohen (2008), mining accidents that occur may have different negative effects on different individuals, but they can contribute to the epidemiology of Post-Traumatic Stress Disorder (PTSD). A literature search on PTSD in the South African

mining industry resulted in the realisation that there has only been limited research done on this topic in spite of the high incidence rate of traumatic accidents in this industry. Little is known on how mine employees experience traumatic incidents. There is thus a need to explore the experience of PT of employees in the mining industry.

PT refers to an emotional reaction that occurs after a specific traumatic event has taken place such as an accident, natural disaster or a life-threatening experience (American Psychological Association, 2013). Additionally, Kalsched (2014) stated that traumatic events are extraordinary, not because it hardly ever happens, but because it devastates an individual's natural ability to adapt to life. These events usually involve a threat to life or bodily integrity and generally involve close encounters with violence or even death and therefore they are seen separate from an everyday misfortune (Weathers & Keane, 2007). The person experiencing the traumatic event might feel helplessness and terror to an extreme extent. James and Gilliland (2012, p. 8) define a traumatic event as "a perception or experiencing of an event or situation as an intolerable difficulty that exceeds the person's current resources and coping mechanisms". A traumatic experience leads to PT when the person dealing with the trauma fears death, total destruction or psychosis and experiences overpowering emotions and thoughts (Giller, 1999). Allen (1995) stated that there are two components to traumatic events: objective and subjective components. "It is the subjective experience of the objective events that constitutes the trauma. The more you believe you are endangered, the more traumatised you will be. Psychologically, the bottom line of trauma is overwhelming emotion and a feeling of utter helplessness" (p. 14).

Mitchell, Sakraida and Kameg (2003) defined critical incidents as events that happen unexpectedly and result in a person feeling out of control and losing faith in their environment. PTSD is one of the possible outcomes following a critical incident. Several traumatic events which occur in the workplace are human-error incidents, accidents, natural disasters, retrenchment, restructuring and layoffs, bullying, violence and even death. Aforementioned workplace traumatic events may result in negative wellbeing (Hoffman, 2012). Leserman et al. (2005) indicated that increased physical pain and decreased physical functioning may occur in people that suffered from a severe trauma. Optimal human functioning may thus decrease after a traumatic experience and interventions may be required (Williams, 2013). Individuals

suffering from traumatic events can also develop psychological distress, lowered morale and reduced organisational effectiveness (Greenberg et al., 2003).

According to Ortlepp and Friedman (2002) criminal violence has increased drastically in South Africa over the last few years. Yang, Spector, Gallant-Roman and Powell (2012) indicate that violence occurring in society is often reflected in workplace violence and this may result in a traumatic stress response as well as the onset of PTSD. It has become a well-recognised psychological disorder following a traumatic event and can be characterised by re-experiencing the traumatic event(s) through nightmares or recollections (Rose, Bisson & Wessely, 2003). The American Psychiatric Association (2013) argued that a person can only be diagnosed with PTSD if one or more of the following effects are present: (a) repeated memories and dreams of the traumatic event, (b) flashbacks, and (c) extreme psychological distress or reactions when confronted with situations related to the traumatic event. VandePol and Beyer (2009) stated that decreased productivity, high turnover intention, low morale and high levels of health claims are just some of the consequences that could occur if trauma in an organisation is not treated. Greenberg et al. (2010) added that reduced organisational effectiveness could also result if trauma is not properly managed in the organisation.

Coping with a traumatic event that is workplace related can be one of the most challenging tasks a team can face, and while the traumatic event is tough enough in itself, the residual effects can be longer lasting without proper and effective management (Zayfert & Becker, 2006). Many organisations expose their employees to situations which involves intense psychological stressors that might result in PT. This PT needs to be effectively managed in order to prevent long-term traumatic consequences.

Psychological trauma management (PTM) can be defined as a multi-component behaviour approach that attempts to improve individual well-being (Frueh, Turner, Beidel, Mirabella & Jones, 1996). These authors further state that PTM consists of occupational adjustment, emotional reactivity, avoidance behaviour, emotional modulation and psychological reactivity. According to Greenberg et al. (2010) PTM is a support process to ensure that those who have been exposed to a traumatic event or are suffering from psychological distress due to traumatic events are assisted and encouraged to seek help. The aim of PTM is not to be a specific treatment, but rather to encourage short-term support and to help refer those not following a

normal recovery to formal sources for help and support (Greenberg et al, 2010). Kaminer and Eagle (2010) explained PTM as the total management of trauma which includes acute interventions like Critical Incident Stress Debriefing (CISD) and Psychological First Aid (PFA), short- and medium-term interventions like trauma counselling and long-term interventions like intensive therapy. Hobfoll et al. (2007) recommended five core principles to assist in effective trauma management interventions: (a) a safe environment, (b) calming, (c) a sense of self efficacy as well as community efficacy, (d) connectedness, and (e) hope. It is important to touch base with employees and help them understand that stress is inevitable in the workplace and that it is acceptable to seek help. An acute trauma management intervention that is widely used internationally, as well as in South Africa, is known as Psychological Debriefing (PD).

PD can be described as a formal kind of post-traumatic care (Van Emmerik, Kamphuis, Huisbosch & Emmelkamp, 2002). According to Mitchell et al. (2003) the most important goal of PD, or commonly known as debriefing, is to ease the impact of the traumatic event and to encourage the victim to start participating in a recovery process. The focus of debriefing is to relieve stress as soon as possible. An example of a brief group intervention to help manage PT in organisations is CISD, which forms part of Critical Incident Stress Management (CISM). This group intervention can be used to provide a supportive environment for people going through a traumatic experience (Mitchell & Everly, 1996). CISM can be used on emotionally healthy individuals that are experiencing acute, normal stress as a result of an abnormal trauma. It is not designed to solve cumulative stress or to deal with long-standing issues prior to the critical incident (Mitchell et al., 2003). Mitchell et al. (2003) further explained that CISD guides an individual to (1) talk about their pain, (2) make correct interpretations about their experiences, and (3) return to normal functioning. It can be seen as a seven phase, group programme that allows individuals to talk about different aspects of their traumatic incident in a controlled environment. Van Emmerik et al. (2002) conducted a meta-analysis on the critique received for CISD over the previous two decades. They found that there exists a lack of current evidence to prove that PD is a useful treatment to prevent PTSD. After conducting their study their results showed that CISD has no efficacy in decreasing the symptoms of PTSD or other trauma-related symptoms and although it is still widely used, they suggest that it may even include harmful effects. They argued that CISD did not prove to be more effective than non-

CISD interventions (Van Emmerik et al., 2002). In conducting research on PD methods it was found that PFA is more commonly used.

PFA refers to providing information, comfort, emotional support and instrumental support to those affected by a traumatic event (National Child Traumatic Stress Network and National Centre for PTSD, 2006). Kantor and Beckert (2011) indicated that contact and engagement, safety and comfort, stabilisation, information gathering, practical assistance, information on coping and linkage with collaborative services are the core elements of PFA. According to Brymer et al. (2006) PFA can be effective in reducing the early distress caused by traumatic events and can help to gain short- and long-term adaptive functioning and coping and should be utilised in the immediate aftermath of the traumatic event. PFA provides individuals with the necessary skills and knowledge to respond effectively to psychological consequences or disasters in both their own lives and the lives of their family and friends (Everly, Phillips, Kane & Feldman, 2006).

Although some mining companies in South Africa are currently making use of other counselling services, the effectiveness of its interventions, for example trauma counselling, is not known. The first trauma management programme in South Africa was implemented by Badenhorst and Van Schalkwyk (1992), namely the Care of Pressurised Employees programme (COPE). This programme was developed after one of the biggest mining accidents in 1987 caused 52 fatalities when mineworkers fell to the bottom of the shaft. Badenhorst and Van Schalkwyk (1992) developed this management programme to help employees and their families cope with the strains and burdens that have an effect on the quality of their lives, their health and their productivity after traumatic events like the one mentioned above. The COPE programme focused on three main operational modes:

a) Providing care to employees affected by a past critical incident;
b) Providing care to employees involved in minor critical incidents;
c) Providing care to employees involved in major critical incidents.

In spite of the traumatic nature of the mining environment, not enough qualitative research findings are available referring to the PTM in the South African context (Kaminer & Eagle, 2010). Little is known on how traumatised mine employees experience critical incidents and it

is not clear which short-, medium- and long-term PTM methodologies are favoured in the mining sector and how effective these interventions are. Based on the problem statement, the following research questions are posed:

- How is psychological trauma and psychological trauma management conceptualised in the literature?
- What are the experiences of psychological trauma among employees at the mine?
- How is the current psychological trauma management programme experienced at the mine?
- How would employees value the effectiveness of psychological trauma management programmes at the mine?
- What recommendations can be made for a psychological trauma management programme at the mine?

1.2. Expected contribution of the study

1.2.1. Contribution to industrial/organisational literature

This study will contribute to current literature involving PTM in the South African mining industry. The focus will be on both the individual and organisational aspects in the South African mining industry. According to the Health Professions Council of South Africa (HPCSA) form 218 (2011) industrial/organisational psychologists need to be able to plan, develop and apply theories, paradigms, models and principles of the psychology field to matters connected to the work-related issues in order for them to comprehend, adjust and improve individual, group and organisational behaviour, well-being and efficiency. Contributions in terms of rich contextualised descriptions and experiences of PT (Kaminer & Eagle, 2010) and the perceived effectiveness of a psychological trauma management programme (PTMP) will be made. Qualitative enquiries regarding PT in the workplace are rare (Tehrani, 2004), and this study will add to the body of literature. New themes related to the aforementioned will be discussed and recommendations for future research will be made.

1.2.2. Contribution to the individual and the organisation

The mining industry will have a better understanding on PTM (Badenhorst & Van Schalkwyk, 1992) and obtain greater knowledge on the way in which PT is currently being managed in the mining industry. It will enable this industry to re-evaluate the policies and systems they have in place to manage PT. This will enable management to manage PT better on an organisational level (Tehrani, 2004). The individual will therefore also have a better understanding and greater knowledge on the concept of PTM and what they can expect from the services they can make use of to help them through trauma. This will enhance the well-being of these employees and the organisation will ultimately benefit from it. Since trauma management forms part of workplace interventions, the HPCSA recommends that industrial psychologists are effectively trained in trauma interventions (HPCSA, 2015). This study will make a contribution in terms of guiding the industrial psychologist to ensure effective organisational functioning through designing and implementing trauma management programmes.

1.3. Research objectives

The research objectives comprise the general objective and specific objectives of this research study.

1.3.1. General objective

The general objective of this research was to explore the experience of PT and the management thereof in the mining industry.

1.3.2. Specific objectives

- To review how psychological trauma and psychological trauma management are conceptualised in the literature.
- To explore the experiences of psychological trauma among employees at the mine.
- To enquire how the current trauma management programme is experienced at the mine.
- To enquire how employees value the effectiveness of a psychological trauma management programme at the mine.
- To enquire what recommendations can be made regarding the current psychological trauma management programme at the mine.

1.4. Research design

The research design comprises the research approach, research strategy and research method.

1.4.1. Research approach

An explorative, descriptive qualitative research approach (Mouton & Marais, 1994) was used to inquire about, as well as describe the effects of a PTMP at two mines. Qualitative research was undertaken to obtain a deep understanding of a phenomenon. This endeavour of complete understanding is facilitated by collecting multiple forms of data and then analysing it from different angles (Leedy & Ormrod, 2013). According to Struwig and Stead (2001) qualitative research includes methods such as observations, interviews, focus groups and content analysis and the participant is seen as the most important aspect of the qualitative research. This study was highly contextual since a thick, rich description of PT and the effects experienced by employees in the mines regarding a PTMP was explored and described. Orb, Eisenhauer and Wynaden (2000) agreed in this regard by stating that the researcher's main goal is to gain the participants' involvement in exploring, examining and describing their feelings, thoughts and behaviours. Qualitative research can however not occur in a theoretical vacuum even though it may be explorative in nature (Henning, Van Rensburg & Smit, 2013). According to Wagner et al. (2012), qualitative inquiry can be conducted from various paradigms.

The constructivist/interpretivist research paradigm was deemed most suitable by the researcher for this study. The researcher relied upon the participant's (mine employee's) view of the phenomenon (experiencing the mine's PTMP) being studied and also recognised the impact on the research from her own background and experiences (Creswell, 2012). The constructivist/interpretivist approaches to research are related (Wagner et al. 2012), both aim to understand how humans experience the world and posit that reality is a product of social construction (Henning et al., 2013). In addition an inductive, phenomenological research paradigm was used to give a rich description of the effects of a PTMP at the mines. According to Mayan (2009) phenomenology is the study of pre-reflective experience as it is lived. This research paradigm enabled the researcher to deeply understand the essence of both the mines' employees' perceptions, perspectives and understandings (Leedy & Ormrod, 2013) regarding both mines' PTMP.

The ontological (nature of being or reality) assumptions of the aforementioned research paradigms can be found in constructionism. According to Bryman and Bell (2011) and Matthews and Ross (2010), constructionism is an ontological position which promotes the ideas that (a) social phenomena and their related meanings are constantly being fulfilled by social actors. This means that social phenomena and classifications are constructed through social interaction and frequently reviewed, (b) researchers' understanding and experiences of society are also constructions. The implication thus is that researchers will always represent a particular account of social reality instead of a version which can be regarded as final, (c) knowledge is perceived as unknown.

The nature and scope of knowledge (epistemology) of the constructivist/interpretivist research paradigms can, at the hand of Ormston, Spencer, Barnard and Snape (2014) be summarised as (a) knowledge can be constructed by exploring and comprehending the social world of people via their meanings and interpretations, (b) researchers produce interpretations and meanings based on those of the people they study, (c) interpretation is mainly facilitated via an inductive process as it has its foundation in data. Recognition is however given to the observations theory, as it can be rich with thoughts and assumptions, (d) the research process affects reality, facts and values cannot be differentiated and objective research in not possible, (e) social research is influenced by meaning and self-directed action and not by laws of nature as found in the

natural sciences, (f) social reality cannot be summarised or presented truthfully as social views and understandings may differ.

It was therefore important that the researcher looked at the events and situations from the participants' viewpoint and the participants' interaction was important in this process. The participants' experience of traumatic events, the PTMP and the perceived effectiveness thereof were explored and described as experienced by employees exposed to traumatic events.

1.4.2. Research strategy

A case study approach was used as a research strategy in this study. Rule and John (2011) defined case study as a methodical and considered inquiry of a specific case in context. The unique characteristics of case studies is that they follow a more comprehensive approach in understanding how participants relate to and interact with each other within the given situation and how they create meaning of a phenomenon under study (Nieuwenhuis, 2007). The case study method was used in this study because according to Creswell, Hanson, Plano and Morales (2007) the case study approach places emphasis on an issue with a detailed description of the specific case that is selected to provide understanding into the issue concerning an individual, multiple individuals, programme or activity. The enquirer aimed to explore PT among employees at two mines and described their experiences of a PTMP. Data were collected through semi-structured interviews.

1.4.3. Research method

The research method comprises the research setting, entrée and establishing researcher roles, sampling, research procedure, data collection methods, data recording, strategies employed to ensure data quality and integrity, ethical considerations, data analysis, and reporting style.

1.4.3.1. Literature review

A literature review was done on PT and PTM. Attention was given to PTM in the mining industry both locally and abroad. Academic resources relevant to this study was utilised

concentrating on key words such as PTM, workplace trauma, mining industry, mine, traumatic stress, South Africa. The sources that will be consulted include:

- Databases such as: Academic Search Premier, Business Source Premier, EbscoHost, Emerald, Google Scholar, Nexus, SACat, SAePublications and Science Direct
- Academic Journals such as: The American Psychiatric Association, South African Journal for Industrial Psychologists, Journals on psychological trauma and psychological trauma management.

1.4.3.2. Research setting

The study was conducted among employees at two mines in the North-West province. The setting for the data collection were at the workplace of the employees, interviews were conducted on site at a private office where the employees work, away from disturbances during working hours. This was done to avoid any inconvenience to the participant and to avoid restricted areas due to safety and security as identified by the mines.

1.4.3.3. Entrée and establishing researcher roles

In order to ensure that the proposed study adheres to ethical principles, approval from the NWU Ethics Committee was sought before commencement. The proposed study falls within a current NWU research project for which NWU ethical clearance was obtained (NWU-00084-10-S4). Consent to gather data was obtained from the relevant management structure of the mines. A formal letter explaining the objective of and motivation for the study was sent when permission to conduct the study at the mines was requested.

Voluntary participants were contacted and interviews were arranged with them. A date, time and venue was arranged for interviews to take place with willing participants. Help from supervisors, line managers and employee wellness services was needed in order to identify and ask the mines' employees to participate in the study. A document was given to the participants beforehand, explaining the study and the reasons thereof (Annexure A). This document included the title and objectives of the study, the requirements to take part in this study and the contact details of everybody involved in the study. An informed consent document was given

to each participant beforehand that indicates that participation is voluntary and the participant may leave this study at any time. The participant was also informed of the use of the voice recorder.

The role of the researcher was to actively facilitate the process and help participants to discuss their experiences, feelings and thoughts. According to Ritchie and Lewis (2005) the facilitator's role is to manage the process in such a way that the required subjects are covered, but to not influence the views expressed by the participants. The enquirer thus took on the role of interviewer during the data collection process. The researcher aimed to stay on topic and stay objective in each interview in order not to influence the study and ensure correct interpretations and observations (Terre Blanche, Durrheim & Painter, 2006). Following the data collection phase, captured data was transcribed in a verbatim manner (Creswell 2012). A content analysis was used to code and analyse the data. According to Nieuwenhuis (2010) content analysis refers to a systematic approach to summarise documents, interviews and transcripts. All relevant data was cleaned after transcription was complete in order to extract themes and sub-themes by means of coding. Interviews was done in each participants' preferred language, which included English and Afrikaans. The Afrikaans interviews were translated to English in such a way that the meaning of the responses were not lost when results were reported on.

1.4.3.4. Research participants and sampling methods

The participants in this study included employees at the mines who have been exposed to at least one mine-related traumatic event. The selection of participants was thus based on reasons directly related to the research (non-probable sampling) (Botma, Greeff, Mulaudzi, & Wright, 2010). According to Schreuder, Gregoire and Weyer (2001), non-probability sampling does not use random samples, but rather subjective methods to decide which elements should be included in the sample. Purposive sampling is based on the judgement of the researcher to ensure that the sample consists of the necessary characteristics in order to reach the researcher purpose (Schreuder et al., 2001) En dan convenience sampling (Convenience sampling was used at the mines as the researcher was granted access (Schwandt, 2007). Purposive sampling is based on the judgement of the researcher to ensure that the sample consists of the necessary characteristics in order to reach the researcher purpose (Schreuder et al., 2001).

1.4.3.5. Data collection methods

Semi-structured interviews were utilised in order to obtain the most effective data. According to Struwig and Stead (2001) semi-structured interviews refers to predetermined questions that are being used in the interview, but participants may elaborate on each question and topic, even if it is not necessarily related to the question. This enables the researcher to identify themes and sub-themes that emerge from the questions (Nieuwenhuis, 2007). Open-ended questions were used in order to ensure that a wide range of themes were collected from interviews and this also helped participants to elaborate on the questions asked (Ivey, 1988). Data collection was guided by the principle of data saturation, where repeated replications provide confidence in the findings (De Vos, Strydom, Fouché & Delport, 2005). An interview schedule will be utilised to guide the researcher in asking relevant questions. The following questions were asked during the interviews:

1. What do you regard as psychological trauma?
2. What type of traumatic incidents are you faced with at the mine?
3. Are you aware of any psychological trauma management programme at the mine?
4. Do you regard the programme as effective?
5. What recommendations can you make concerning psychological trauma management in the mine?
6. Is there any other thing you would like to add regarding trauma, trauma management or trauma management programmes in the mining industry?

1.4.3.6. Data recording

Data was collected through semi-structured interviews. Within the informed consent document, participants gave the researcher permission to make use of a voice recorder. The importance of speaking loud and clear was explained to participants. The researcher was the only one with access to the recordings in order to ensure confidentiality. Interviews were then transcribed verbatim into a Microsoft Excel sheet and this information were also be kept in a safe place. The true identities of the participants was not revealed at any stage of the research. Interviews and any other data collected during interviews, for example field notes were compared to

determine if any data has been overlooked. Voice recordings were captured on a disk and kept in a safe place (locked away) with necessary backups of all electronic files.

1.4.3.7. Strategies employed to ensure quality data

According to Struwig and Stead (2001) it is essential to ensure reliability in the interview process in order to ensure quality data and it is therefore important that thorough preparation is done beforehand. A pilot study was conducted before the interviews to ensure that the participants understand the questions asked. The pilot study assisted the researcher to determine the participants' behaviours and attitudes towards the study.

The researcher was trained in conducting interviews in order to be aware of cultural issues and respond to verbal and non-verbal behaviours in a suitable manner. An electronic voice recorder was used and extra batteries were available in case of an emergency (McNamara, 2009). One question was asked at a time to ensure a quality answer and the researcher stayed neutral and objective. The researcher kept in control of the interview when the participant took too long to answer questions and brought the participant back to the topic when necessary (McNamara, 2009).

Confirmability, credibility, dependability and transferability are criteria that are considered as important when specifically focusing on the trustworthiness of the findings. Confirmability, also referred to as objectivity, can be defined as the ability of an independent researcher to replicate the research findings if removed from the bias, perceptions and subject evaluation of the researcher (Marshall & Rossman, 1995). Credibility can be defined as the internal validity in the qualitative inquiry. It specifies the extent to which the participant can relate to the findings of the research study. The participants' views were constantly matched with the data (De Vos et al., 2005). Bitsch (2005) defined dependability as the application of research findings over an extended period of time. It is important to create consistency in findings over time through storing interviews, field notes and other important documents. Transferability of findings enables the researcher to compare or apply findings to other contexts or different populations (Terre Blanche, Durrheim, Painter, 2006).

1.4.3.8. Ethical considerations

Ethical considerations were essential to the study in order to ensure an effective and productive research process. Ethics can be seen as the moral guidelines to social acceptable behaviour and guides the character of a person or process (Struwig & Stead, 2001). According to Creswell (2003) the researcher are held liable to protect the participant within all possible sensible limits and guard participants from any form of physical discomfort that may be caused by the research process. The researcher therefore acted fair, honest and treated participants with respect.

Informed consent was a very important ethical consideration of this study. All participants were informed about the purpose of the study and that it is a voluntary process, nobody as forced to participate and they could withdraw at any stage, regardless of their motivation to do so. They were able to participate with no deception or intimidation. This consent indicated to them the reasons behind the study, what the desired outcome would be and why it would be beneficial for them to participate. No advantage was given to those who participated compared to those who did not. The results obtained were dealt with confidentially and participants were informed that their answers, action and the information and data received will be kept confidential and will only be used for the benefit of the study.

1.4.3.9. Data analysis

After data was collected, it was analysed to gain accurate information on the participant's experiences. Data analysis refers to organising and making sense of captured data over time, systematically analysing the data to verify patterns in the text. (Struwig & Stead, 2001). According to De Vos et al. (2005) data analysis involves several steps:

- *Reading through data* that has been transcribed in a verbatim manner in order to obtain an overall impression of the content and context.
- *Organising data* by going back to the interview schedule and identifying the important questions that the researcher wants answered.
- *Coding data* in order to label or name units of related meaning that were identified in the data. They are then categorised.
- *Identifying emerging themes* and the thematic relationship between them.

- *Recoding* if necessary.

1.4.3.10. Reporting style

A qualitative reporting style was used when reporting on the research findings. Results were reported and interpreted in the form of a narrative which consisted of a detailed discussion of various themes. Themes and sub-themes were reported on in table format. Direct quotes from participants were provided in the narrative to substantiate the findings. According to Leedy and Ormrod (2005) qualitative research is more flexible and it will therefore continuously progress over the itinerary of the research project.

1.5. Overview of chapters

Chapter 2 contains a detailed introduction, literature review and discussion regarding the findings of the study in the form of a research article. Chapter 3 contains the conclusions reached, limitations found and recommendations for future research of this mini-dissertation.

1.6. Chapter summary

Chapter 1 contains the problem statement and research objectives are discussed, followed by the method followed for research.

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CHAPTER 2
RESEARCH ARTICLE

THE EXPERIENCE OF PSYCHOLOGICAL TRAUMA AND THE MANAGEMENT THEREOF IN THE MINING INDUSTRY

ABSTRACT

Orientation: Employees in the mining industry are regularly exposed to life-threatening and traumatic events at their workplace and these events might lead to these employees experiencing psychological trauma (PT) to such an extent that they are not able to cope and need help and assistance. It is thus important that the mining industry implements a well-developed psychological trauma management programme (PTMP) in order to make sure that their employees' well-being are taken care of.

Research purpose: The main purpose of this study was to explore the experience of psychological trauma and the management thereof in the mining industry.

Motivation for the study: The researcher of this study was motivated by the fact that employees in the mining industry face various forms of PT and if these traumas are not managed effectively it could lead to serious consequences for the individual being exposed to the trauma as well as the organisation as an unfocused and traumatised individual could cause more accidents.

Research design, approach and method: The researcher decided to conduct a qualitative research study in order to gain in-depth information from participants' perspective of this phenomenon. A total of 9 participant results were used in this study, from which all were permanently employed at the mines for at least one year. Semi-structured interviews were conducted with participants and the answers were transcribed in a verbatim manner. A content analysis was then conducted in order to analyse the data collected.

Main findings: From the findings it was evident that the employees in the mining industry experience PT and that the traumatic events they experience have a negative effect on their everyday lives and well-being, both at home and at work. They indicated that serious accidents, including vehicle accidents, rock fall and falling pipe accidents, that happen either directly to them or indirectly to a fellow colleague, as well as retrenchments, dangerous strikes and traumas at home added to their traumatic experiences. Some participants indicated that they are aware of some form of trauma management provided by the mines, but that the majority did not find these programmes effective and suggested that they become more aware of and

informed on where they can attain proper help and assistance once they have experienced a traumatic event.

Practical implications: It is of the essence that the mining industry and all of its different departments invest in a well-developed psychological trauma management programme that includes access to face-to-face counselling on a regular basis and that employees are aware of it and informed thereof.

Contribution/value added: Value was added and contributions were made on both an individual as well as an organisational level. Employees as well as the mines have a better understanding of the concept of psychological trauma and how it is currently being managed in the mining industry. They can now re-evaluate the policies and systems they have in place in order to help and assist their employees in traumatic incidents and events in order to manage trauma better on an organisational level. Individuals have better knowledge on what they can expect from the mining industry when going through a traumatic situation, which will enhance their well-being.

Key words: Psychological trauma management, workplace trauma, mining industry, mine, traumatic stress, South Africa

Introduction

Mine-related accidents are currently topical in South Africa (Cairncross & Kisting, 2016). The mining industry specifically has a lot of critical incidents that might cause psychological trauma (PT) which may negatively impact the quality of life of its employees (Amponsah-Tawiah, Leka, Jain, Hollis, & Cox, 2014). As with any other industry the employees' wellbeing is essential to the productivity of this industry. Lee and Mohammed (2006) noted that the mining employees play a vital role in the South-African economy. They are also the workers mostly influenced by traumatic events in the mines as they are mostly working on the operational level of the mines activities. The central focus of this study was therefore to determine in a qualitative way how employees in the mining industry experience psychological trauma and the management thereof in the mining industry.

According to Winde and Stoch (2010) the South African mining industry emerged from the discovery of gold in the old Transvaal and a few years later the discovery of diamonds in Kimberley. The South African economy was transformed, infrastructure developed and other

economic sectors arose from this discovery, uplifting the South African local economy. According to Wilson (2011), over the years, traumatic incidents have become a recurring subject within the South African and international mining industries. Between the period of 1900 and 1991, over 68 000 mineworkers died and more than one million workers were permanently disabled because of mine-related accidents in South Africa (Hermanus, 1991). Local South African newspapers reported mining accidents such as a 12-hour mission by a rescue team to bring 486 mineworkers safely to the surface after they have been trapped by a fire at the Kusasalethu Gold mine near Carletonville on 24 February 2014. In another incident that same month, 8 miners lost their lives at Harmony Gold's Doornkop mine also due to a fire. PT due to mining accidents are also occurring internationally. From the early 1950's up to now it is evident that Chinese coalmines hold the world record for the most frequent accidents where more than a hundred deaths are caused in each (Geng & Saleh, 2015). These authors drafted a table that included accidents in Liuguantun, Hebei where 108 people died on 7 December 2005, another accident occurred in Xinyao, Shanxi, resulting in 105 deaths on 5 December 2007 and in Xinxing, Heilongjiang, another 104 people died on 21 November 2009 in mining accidents in China, and these are just to name a few. On 13 May 2014, 301 mine workers were killed at an underground coal mine in Soma, Manisa, Turkey, due to an explosion and 18 mine workers drowned in a flooded coal mine at the Ermenek mine near Karaman, Turkey (Arbak, 2015). These statistics give a clear indication that trauma is very much part of the mining industry, both nationally and internationally, and that PT needs to be managed properly in this industry.

According to Saleh and Cummings (2011) some of the causes of mining accidents include methane and consecutive coal dust explosions, which is caused by the incorrect use of mining equipment or the use of unsuitable explosives underground. Blasting related accidents such as fly-rocks, premature blasts, misfires and mine-induced seismicity are other causes of mining accidents that contribute towards the PT of mine workers (Tsumoto & Hirano, 2010). Fires as yet another cause of mining injuries, can be the result of flammable natural gasses and ignitable coal dust (Amyotte, 2014). Escape routes are blocked by explosions and workers get trapped underground, fighting for survival (Sun, Lu, Fan & Lu, 2015). Mine structures and support collapsing that occur due to earth tremors can cause rock falls and injure and trap mine workers underground (Upadhyay & Ranjan, 2016). Additionally miners have drowned due to leaks from subterranean water bodies (Misra, Kanher, Ostry, & Jha, 2010). Patterson and Shappell (2010) reported that during electrical maintenance, workers have been shocked and burned.

The authors report that occupational diseases, hearing loss and high stress levels due to the danger of their jobs all contribute towards the PT that mine workers are exposed to in their everyday lives.

According to Matthews, Bohle, Quinlan and Rawlings-Way (2012) after a serious mine-related injury occurs, mine workers and their families are faced with the consequences which include medical bills, loss of job due to amputations or prostheses or in some cases mine workers are left disabled and can never work again. The emotional impact of the injury could cause PT to occur in these individuals. Post-traumatic stress disorder (PTSD) is one of the various negative effects that might occur after such a traumatic event (Comaroff, 2013). PTSD is defined by the American Psychiatric Association (2013) as an anxiety disorder that could result from experiencing or witnessing life-threatening events such as natural disasters, serious accidents, and personal assaults. Campfield and Hills (2001) indicated that PTSD occurs when normal recovery fails and the individual struggles to adapt after the experience to such an extent that symptoms persists or even intensifies. According to Zungu (2013) mining accidents are increasing and even after attention has been given to physical injuries, severe mental health problems like PTSD might persist long after the traumatic incident has taken place. If this PT is not managed by an effective trauma management programme it could lead to even more accidents, strikes or other traumatic events.

Various laws exist stipulating the importance of occupational health services. The most significant of these are the Occupational Health and Safety Act (OHSA) of 1993 and the Mine Health and Safety Act (MHSA) of 1996. The MHSA includes a medical inspectorate to enforce occupational health standards (Jeebhay & Jacobs, 1999). It is therefore important to determine if there are effective PTMP present in the mining industry. Very recently a mine-related tragedy once again hit South Africa when mine workers died at the Goldfields Lily Mine in Barberton, Mpumalanga, after a collapse of ground incident (Wa Monareng, 2016). According to Wa Monareng (2016), a container that was being used as an office, crashed down a sinkhole, trapping the mine workers underground. Most of the other mine workers were saved, but the three workers in the container could not be rescued in time. In a media statement sent out from the South African Government the affected families received trauma debriefing and counselling services and was also referred to the South African Social Security Agency (SASSA), they also claim that further services will be provided such as family therapy,

necessary interventions, on site relief of distress assistance and community therapy for all the parties involved.

One of the psychological trauma management (PTM) interventions being used to assist with trauma management is psychological debriefing (PD). According to Ronan, Kelly, LeBlanc and Burke (2015), Critical Incident Stress Debriefing (CISD) and Psychological First Aid (PFA) are also being used to help individuals to deal with PT. As indicated earlier, Badenhorst and Van Schalkwyk (1992) implemented the Care of Pressurised Employees Programme (COPE) to assist mining employees with PTM. Except for this programme, there are few other South African developed programmes to assist employees in the South African mining industry to manage their trauma effectively. The external wellness centres Group and Independent Counselling and Advisory Services (ICAS) are used in the mining industry as external employee assistance providers (Terblanche, 2007). It is unclear whether employees in the mining sector find these services effective to deal with PT following exposure to a traumatic event.

Research purpose and objectives

The main objective of this research was to explore PT among employees at the specific mine and their experience of a psychological trauma management programme (PTMP). The specific objectives of this research were:

- To review how psychological trauma and psychological trauma management is conceptualised in the literature.
- To explore the experiences of psychological trauma among employees at the mine.
- To enquire how the current trauma management programme is experienced at the mine.
- To enquire how employees value the effectiveness of a psychological trauma management programme at the mine.
- To enquire what recommendations can be made regarding the current psychological trauma management programme at the mine.

These objectives are followed by a literature review relating to psychological trauma management in the mining industry.

Literature review

Mining industry

According to Durand (2012) South Africa is very reliant on the economic prospects gained from the mining industry; both the country's economy and the financial health of its people can largely be related to the health of this industry. In 2009 the South African Mining Industry consisted of 1000 mines and 483 212 employees, these figures have since grown tremendously (Vearrier & Greenberg, 2011). Mining is unfortunately also one of the most dangerous work environments where PT often occurs (Wilson, 2011). Saleh and Cummings (2011) added that traumatic injuries are a significant problem in the mining industry and common causes of fatal injuries in this sector includes electrocution, rock falls, mobile equipment accidents, explosions, fires, falls from heights and entrapments. The South African mining industry has to compete on the world markets and this sometimes leads to mine managers focusing on output as a top priority rather than employee wellness. This competition could also place pressure and stress on employees in the mining industry (Slaughter, 2007). Naude and Rothmann (2003) indicated that working in a stressful environment leads to the risk of injury and health problems such as psychological health disorders and burnout for employees.

Frankel (2013) explained that every mine aims at zero occupational injuries and fatalities, but unfortunately the nature and operations of the mines often make it inevitable for injuries and deaths to occur. Cramped and intoxicated environments as well as the powerful equipment mine workers operate, all contribute towards the injury and death rate and the mining operations can't succeed without this (Freese, 2016). Research has shown that the way in which minerals are being discovered, mined and processed could cause serious mining accidents (Amponsah-Tawiah et al., 2014). Slaughter (2007) explained that some minerals are reached through blasting which directly or indirectly could contribute towards rock falls. According to Mark, Pappas and Barczak (2011) during a rock fall the whole area and even surrounding areas start to shake to such an extent that loose rocks fall unexpectedly and if employees are not extra cautious this could lead to serious accidents that could cause PT to both the employee that was injured and the employees that witnessed the accident.

Economic Development Minister, Ebrahim Patel, reported that the South African Mining industry is also in trouble due to the thousands of job losses that occurred (Wa Monareng, 2016). Physical accidents are thus not the only occurrence in the mining industry that could cause traumatic stress to employees, who might expect high salaries but receive low payments (Horton & Chilton, 2010). According to Horton and Chilton (2010), salaries might also not increase in the way in which employees wish that it would, which more often than not leads to strikes that become life-threatening and dangerous. Ntswana (2014) indicated that the South African mining industry is in turmoil and many employees get retrenched because of restructuring and the conditions that the mines in South Africa are currently in. All of these factors should be carefully considered as they could all lead to PT in the individual going through these circumstances. These factors could also be experienced directly, where the individual is involved in a mine-related trauma, or indirectly where they witness a fellow employee being involved in such a traumatic event.

According to Foa, Keane, Friedman and Cohen (2008), mining accidents that occur may have different negative effects on different individuals, but they can contribute to the epidemiology of Post-Traumatic Stress Disorder (PTSD). A literature search on PTSD in the South African mining industry resulted in the realisation that there has only been limited research done on this topic in spite of the high incidence rate of traumatic accidents in this industry. According to the American Psychiatric Association (2000) survivors of mine accidents also experience PTSD because of the painful guilt they feel for surviving when others did not. The survivors might feel that they could have done something to prevent the accident from happening or that they could have done more to have helped those colleagues that were injured. They also sometimes struggle with the question: "Why did it happen to them and not to me?" More recently, earth-fall and transport accidents (truck and tramway accidents) have caused serious injuries and even fatalities in the South African gold mining industry (Stevens, Calitz, Joubert, Gagiano, & Nel, 2006). Underground earthquakes are one of the major threats that accompany working in the mining industry (Maiden & Terblanche, 2006). A study conducted by Maiden and Terblanche (2006) reported on mining accidents causing trauma to its employees. Mining-related earthquakes at a mine close to Stilfontein on 9 March 2005 where 26 miners were trapped and rescued and 16 remained missing, are among these. Another accident occurred at Kusasalethu mine near Carletonville on 2 July 2012 where a rock-fall accident trapped 10 employees resulting in five fatalities. Sorensen (2012) indicated that the labour unrest, resulting

in the well-known Marikana mine tragedy on 16 August 2012, resulted in the deaths of 44 people, including two mine security guards that were brutally killed. At least 78 additional workers were also injured during this incident. Very recently a mine-related tragedy once again hit South Africa when mine workers died at the Goldfields Lily Mine in Barberton, Mpumalanga, after a part of the ground collapsed (Wa Monareng, 2016).

Psychological trauma

According to Hoffman (2012), numerous cases of trauma and specifically PT occurs in the South African workplace. Events that may lead to PT includes natural disasters, bullying, accidents of human error and even death. As a result of these events, individuals could experience sleeping disorders, feelings of fear, difficulty breathing, chest pain and headaches (Lateef, 2005). PT refers to an emotional reaction that occurs after a specific traumatic event has taken place such as an accident, natural disaster or a life-threatening experience (American Psychiatric Association, 2013). McCann and Pearlman (1990) defined PT as "an experience that is (a) sudden, unexpected or non-normative, (b) exceeds the individual's perceived ability to meet its demands, and (c) disrupts the individual's frame of reference and other central psychological needs and related schemas" (p. 10). From the above definitions it is clear that PT is conceptualised in literature as an unexpected, unnatural and life-threatening event that results in an upsetting psychological response characterised by an inability to cope with the psychological demands of the event. It is important to realise that PT is defined by the individuals' experience of the specific trauma (Van der Kolk & McFarlane, 2012). Allen (1995) stated that there are two components to traumatic events: objective components and subjective components. "It is the subjective experience of the objective events that constitutes the trauma. The more you believe you are endangered, the more traumatised you will be. Psychologically, the bottom line of trauma is overwhelming emotion and a feeling of utter helplessness" (p. 14). The traumatic event could be a single experience or multiple recurring events that overwhelm the individual to an extreme extent (Luckhurst, 2013). The author also points out that the individual might delay the consequences because he/she struggles with the immediate circumstances and thus might ultimately lead to long-term negative consequences (Luckhurst, 2013).

According to Spiers (2015) trauma can be caused by a wide range of events. Physical trauma that might threaten an individual's survival or sense of security might cause PT. Harassment, sexual abuse, bullying, employment discrimination and domestic violence are just some of the many causes to PT and some of them are found in the mining industry (Carrington, McIntosh, Hogg, & Scott, 2013). Extreme natural disasters such as volcanic eruptions, earthquakes and being part of a war can also cause PT (Briere & Scott, 2014). Caruth (2010) explained that the victim of a traumatic event might remain fixated on the trauma if the trauma is not integrated into the totality of his/her life experiences. This will result in the reliving of traumatic memories which reoccur in the form of re-enactments, nightmares or feelings related to the trauma which could also cause extreme or acute stress in the individual (Caruth, 2010). LeBlanc et al. (2011) additionally indicated that acute stress and traumatic situations could in some instances be directly related to each other. The authors defined acute stress as a psychological and physiological experience. Following an acute stress situation, both trauma and stress might have negative effects on the well-being of employees and could ultimately have an effect on their work performance (Arnetz, Arble, Backman, Lynch, & Lublin, 2013). Work-related stress can be experienced at a variety of levels (personal, interpersonal and organisational) and in many occasions occur after a critical incident has taken place that exceeds the individuals' natural ability to cope (Michie, 2002). Mitchell, Sakraida and Kameg (2003) defined critical incidents as events that happen unexpectedly and result in a person feeling out of control and losing faith in his/her environment. PTSD is one of the possible outcomes following a critical incident.

PTSD is prevalent in the South African mining industry (Zungu, 2013). According to Clements and Sinclair (2016), post-traumatic stress is a common reaction to an exceptionally challenging event that is followed by a normal recovery process. Campfield and Hills (2001) propose that the post-traumatic stress becomes a disorder when this normal recovery process does not succeed and the individual continuously struggles to adapt after the experience to such an extent that the acute symptoms persist and intensify. According to Kaplan and Sadock (2009) PTSD occurs when a person experienced, witnessed or has been confronted with a situation in which the person is involved in death, serious injury or a threat to bodily integrity of the self or others. Symptoms can include re-experiencing of the traumatic event through thoughts, dreams and even the re-enactment of the incident (Mevissen & De Jongh, 2010). According to Bond, Tuckey and Dollard (2010) traumatic events which occur in the workplace include

human-error incidents, accidents, natural disasters, retrenchment, restructuring and layoffs, bullying, violence and even death. Aforementioned workplace traumatic events may result in negative well-being (Hoffman, 2012). Leserman et al. (2005) indicate that increased physical pain and decreased physical functioning may occur in people that suffered from a severe trauma. Optimal human functioning may thus decrease after a traumatic experience and interventions may be required (Williams, 2013). Individuals suffering from traumatic events can also develop psychological distress, lowered morale and reduced organisational effectiveness (Greenberg et al., 2003). Coping with a traumatic event that is workplace-related can be one of the most challenging tasks a team can face and while the traumatic event is tough enough in itself, the residual effects can last even longer without proper and effective management (Zayfert & Becker, 2006). Many organisations expose their employees to situations which involve intense psychological stressors that might result in PT. This PT needs to be effectively managed in order to prevent long-term psychological and physiological traumatic consequences.

Psychological trauma management

Psychological trauma management (PTM) can be defined as a multi-component behaviour approach that attempts to improve individual well-being (Frueh, Turner, Beidel, Mirabella, & Jones, 1996). Freuh et al. (1996) further state that PTM consists of occupational adjustment, emotional reactivity, avoidance behaviour, emotional modulation and psychological reactivity. According to Greenberg et al. (2010) PTM is a support process to ensure that those who have been exposed to a traumatic event or are suffering from psychological distress due to traumatic events are assisted and encouraged to seek help. From the above definitions, PTM can be conceptualised as a multi-dimensional methodology that has at its aim to address and alleviate the negative consequences experienced by the affected person(s) following exposure to a traumatic incident. The aim of PTM is not to be a specific treatment, but rather to encourage short term support and to help refer those not following a normal recovery to formal sources for help and support (Greenberg et al., 2010). Hobfoll et al. (2007) recommended five core principles to assist in effective trauma management interventions: (a) a safe environment; (b) calming; (c) a sense of self-efficacy as well as community efficacy; (d) connectedness; and (e) hope. It is important to touch base with employees and help them understand that stress is inevitable in the workplace and that it is acceptable to seek help.

PTM can occur in (a) acute/front line interventions such as Psychological Debriefing (PD), Critical Incident Stress Debriefing (CISD) and Psychological First Aid (PFA), (b) short-term/brief/medium-term interventions where, for example, cognitive behavioural therapy is used to treat Acute Stress Disorder and PTSD and (c) long-term therapy for extreme PTSD (Kaminer & Eagle, 2010). An acute trauma management intervention which is widely used internationally, as well as in South Africa, is known as PD and can be described as a formal kind of post-traumatic care (Van Emmerik, Kamphuis, Hulsbosch, & Emmelkamp, 2002). According to Mitchell et al. (2003) the most important goal of PD is to ease the impact of the traumatic event and to encourage the victim to start participating in a recovery process, the focus of Critical Incident Stress Management (CISM) is to relieve stress as soon as possible.

PFA refers to providing information, comfort, emotional support and instrumental support to those affected by a traumatic event (National Child Traumatic Stress Network and National Centre for PTSD, 2006). Kantor and Beckert (2011) indicated that contact and engagement, safety and comfort, stabilisation, information gathering, practical assistance, information on coping and linkage with collaborative services are the core elements of PFA. According to Brymer, et al. (2006) PFA can be effective in reducing the early distress caused by traumatic events and can help to gain short-term and long-term adaptive functioning and coping and should be utilised in the immediate aftermath of the traumatic event. This acute/front line intervention provides individuals with the necessary skills and knowledge to respond effectively to psychological consequences or disasters in both their own lives and the lives of their family and friends (Everly, Phillips, Kane, & Feldman, 2006). CISD will be explained thoroughly in the next section.

Psychological trauma management in the mining industry

In finding an effective psychological trauma management programme (PTMP) it is important to realise that both natural and manmade disasters take place in the mining industry. Swanepoel, Erusmus, Van Wyk and Schenk (2003) distinguish between these disasters in indicating that natural disasters could include earthquakes, floods and epidemics whereas manmade disasters could include labour unrest (and the violence that goes along with it), fires and bomb blasts. This difference will determine the way in which intervening and management

of trauma will occur. Nonetheless it is important that the mining industry, which is a workplace affected by traumatic incidents, has an effective PTMP in place in order to help employees deal with their traumatic stress (Van der Kolk & McFarlane, 2012). It is also important to mention in this instance that both employees and employers should be aware of and understand the rules and regulations set out in the Occupational Health and Safety Act, No. 85 of 1993 (OHSA). This act lays out rules that can help prevent accidents from happening in the mining industry and thus lowering the chances for PT to occur.

In addition to following the law concerning health and safety, it is also important that a well-developed PTMP is implemented at the onset of the traumatic incident (Lateef, 2005). Although some mining companies in South Africa are currently making use of other counselling services, the effectiveness of its interventions for example trauma counselling, is not known. The first PTMP in the South African mining industry was implemented by Badenhorst and Van Schalkwyk (1992), namely the Care of Pressurised Employees Programme (COPE). This programme was developed after one of the biggest mining accidents in 1987 caused 52 fatalities when mineworkers fell to the bottom of a shaft. Badenhorst and Van Schalkwyk (1992) developed this PTMP to help employees and their families cope with the strains and burdens that have an effect on the quality of their lives, their health and their productivity after traumatic events like the one mentioned above strikes. The COPE programme focused on three main operational modes (a) providing care to employees affected by a past critical incident; (b) providing care to employees involved in minor critical incidents and (c) providing care to employees involved in major critical incidents.

According to Terblanche (2007) South Africa has a well-developed programme to assist employees called the Employee Assistant Programme (EAP). This programme however assists employees with solving their personal problems regardless of the causes thereof. Hence the need for a programme that is more focussed on mine-related trauma management. PD is another way in which some mines assist employees going through a traumatic incident. According to Campfield and Hills (2001) this approach facilitates employees to come to terms with their situation and adjust to their daily routine after the traumatic event has taken place. One of the models used for debriefing is CISD, which can be used to provide a supportive environment for individuals going through a traumatic experience (Friedman, 2015). CISD forms part of a multi-component intervention called Critical Incident Stress Management (CISM) which

covers pre-crises to post-crises over a wide spectrum. CISD is a seven-phase, supportive programme for intimate groups and its focus is in crises intervention (Friedman, 2015). Burque, Baker, Van Hasselt and Couwels (2014) debate that CISD could not entirely be used as psychotherapy and is more applicable to a discussion of the traumatic incident. These authors found a lack of current evidence to prove that CISD is a useful treatment to prevent PT and PTSD. After conducting their study, Burgue et al. (2014) showed that CISD has no efficacy in decreasing the symptoms of PTSD or other trauma-related symptoms and although it is still widely used, they suggest that it may even include harmful effects. Van Emmerik et al. (2002) argued that CISD did not prove to be more effective than non-CISD interventions.

In spite of the traumatic nature of the mining environment, not enough qualitative research findings are available referring to PTM in the South African context (Kaminer & Eagle, 2010). Little is known on how traumatised mine employees experience critical incidents and it is not clear which short-term, medium-term and long-term PTM methodologies are favoured in the mining sector and how effective these interventions are.

Research design

This research design includes three sections, namely the research approach, research strategy and research method utilised during this study. First we will look at the research approach the researcher used for the study.

Research approach

An explorative, descriptive qualitative research approach was used to explore the experience of PT and the management thereof in the mining industry. According to Maxwell (2012) explorative research is used to gain understanding into a situation, community, phenomenon or individual. Descriptive research gives a clear indication of the detail of a situation, social setting or relationship (Yin, 2013). The researcher emphasised the importance of gathering in-depth information through the experiences and perspectives of the mine workers, therefore a qualitative research design was utilised. The qualitative approach indicates the complex nature of the phenomena under study and aims to understand that phenomena from the participants' perspective and thus interacts with participants from an objective point of view (Maxwell,

2012). It was important for the researcher the better understand how PT and PTM in the mine is experienced from the participants' viewpoint. The researcher took an objective stance, entering the site where participants experience the problem with an open mind.

An inductive, phenomenological research approach was additionally used in order to deeply understand the essence of the perceptions, perspectives and understandings of the employees. Gray (2013) explained that inductive research begins with an observation and not a pre-established assumption. A phenomenological approach aims to understand the individual and their perception, perspective and understanding of a situation (Cresswell, 2012). The researcher thus wanted to explore and gain a deep understanding into the employees' perspective of PT and PTM in the mining organisation without any pre-conceived opinions as to how they experience it. A constructivist/interpretivist paradigm was further used to discover the reality of the process through the eyes of the mining employee. This guided the researcher in the explanation of the components of the research. According to Cresswell (2012) the constructivist paradigm holds that no truth exists, but rather a narrative reality that is changing continually. Reality is thus constructed personally and socially and the subject is involved. According to De Vos, Strydom, Fouché and Delport (2005) reality, viewed from this paradigm, can only be reported as experienced by the individual participants (ontology) on how the social phenomenon can be recognised to them (epistemology). Following the research approach, the researcher utilised the resulting strategy:

Research strategy

A case study approach was followed in this study. According to Creswell, Hanson, Plano and Morales (2007) this approach includes the exploration of a "bounded system", which could mean that the case is bounded by context, time and/or a place. It could also refer to a single or multiple case that involves in-depth data collection, over a period of time, including multiple information sources and includes a unit of analysis, which refers to the object under study and in this case the mining employee and the PTMP. The researcher aimed to explore and describe the mining employees' experience of PT and the PTMP at the mine through detailed, in-depth semi-structured interviews with employees. Finally the researcher made use of the following research method in order to conduct this study.

Research method

Research setting

The research setting for this study was two mining organisations in the North West Province. These two mines was included as a result of the relevance of high incidence of PT. At both mines, semi-structured interviews were conducted in a private office on the site where the employees work, away from any disturbances, during work hours. This venue was selected since it was easily accessible to the mine workers and the familiar environment made them feel more comfortable. The researcher took measures to minimise interruptions during the interviews by closing the door and asking participants to switch off any electronic devices that could disturb the interviews. Interviews was done in each participants' preferred language, which included English and Afrikaans. Afterwards, the researcher thanked the employees for their participation and ensured them of the important contribution they have made to the study. The data was then safely stored on a password protected computer and backed up on a safely stored hard drive in order to ensure confidentiality.

Entrée and establishing researcher roles

The research project was approved by the tertiary institute's ethics committee. This study also formed part of a larger project which obtained the following ethical clearance number: NWU-00084-10-S4. The researcher took on various roles during the research as described by Creswell et al. (2007). These roles include those of facilitator interviewer, transcriber and data analyst. The researcher conducted proper planning on how to address the organisation as well as how to conduct interviews with employees, transcribe the information collected and analyse the data. Consent was granted by the organisation through first explaining the objectives and motivation of the study and the outcomes of the interviews. Line managers and supervisors acted as gatekeepers in order to ensure that the relevant employees took part in the study.

Before the researcher started with the interviews, participants were briefed on what the study involved, how their information will be used and what the outcomes of the study will be. Thereafter the researcher took on the roles of interviewer and facilitator. After conducting the

interviews, the researcher transcribed and analysed the data collected, extracted themes and subthemes and reported on the findings thereof. Interviews was done in each participants' preferred language, which included English and Afrikaans. The Afrikaans interviews were translated to English in such a way that the meaning of the responses were not lost when results were reported on.

Research participants and sampling methods

Non-probable purposive and convenience voluntary sampling was utilised in this study. By using non-probability sampling the probabilities are not known for selecting a particular individual, because the researcher does not know the population size or the members of the population (De Vos et al., 2005). According to Creswell et al. (2007) purposive sampling ensures that a particular case is chosen for the study. In order to collect rich data, the employees had to be exposed to at least one mine-related traumatic event at the specific mine. Participants and the site were selected in order to inform the research problem. Although the researcher aimed to find specific participants that have been involved in a mine-related incident, participation was still voluntary and participants were not forced to be part of the study and free to leave the study at any time without explanation. An overview of participants' (N=9) characteristics can be seen in Table 1.

Table 1

Characteristics of participants (n=9)

Item	Category	Frequency	Percentage
Gender	Male	5	56%
	Female	4	44%
Age	28–33 years	4	44%
	34–39 years	2	22%
	40–45 years	1	11%
	51–56 years	2	22%
Ethnicity	White	5	56%
	African	3	33%
	Coloured	1	11%
Language	Afrikaans	6	67%
	English	1	11%
	isiZulu	1	11%

Table 1 continues

Characteristics of participants (n=9)

	Sesotho	1	11%
Highest Qualification	Grade 11	2	22%
	Grade 12	2	22%
	Technicon Diploma	4	44%
	University Degree	1	12%
English Proficiency	Good	8	89%
	Excellent	1	11%
Job Description	Plant Coordinator	2	22%
	Safety Officer	3	34%
	Human Resources	2	22%
	Contractor Admin	1	11%
	Training Officer	1	11%
Years' Experience at the Mine	1–5 years	3	33%
	6–11 years	4	45%
	12–17 years	1	11%
	18–23 years	1	11%
Household Situation	Married/living with a partner, without children	1	11%
	Married/living with partner, with children	5	56%
	Single or divorced, without children	2	22%
	Single or divorced, with children	1	11%

Table 1 shows the sample consisting of nine employees of the mine with a balance between male (56%) and female (44%) participants. The majority (44%) of the participants were aged between 28–33 years, while only one participant (11%) were aged between 40–45 years. Participants were mostly white (56%), but included African (33%) and coloured (11%) participants. The majority of participants were Afrikaans speaking (67%), while others were English (11%), isiZulu (11%) or Sesotho (11%). Taking the participants' highest qualification into consideration, the table indicated that most of the participants hold a Technicon Diploma (44%), while others completed Grade 11 (22%) and Grade 12 (22%). Only one participant had obtained a University Degree. When participants were asked to rate their English proficiency, 89% indicated that their ability to speak the language is "Good" and 11% indicated that their ability to speak the language is "Excellent". With regards to their job descriptions, the majority

of participants were safety officers (34%), but human resource managers (22%), plant coordinators (22%) and training officers (11%) were also included in the study. Taking into consideration the amount of years these employees have been working on the mine, the majority (45%) has been on the mine for 6–11 years, while 33% had been there for 1–5 years. The majority of participants (56%) were married/living with a partner, with children, whilst 22% were single or divorced, without children.

Data collection methods

Semi-structured interviews were conducted in order to obtain participants' perceptions and experiences of PT and the management thereof at the specific mine and to ensure that research objectives are achieved. These interviews also gaged the participants' understanding of PT and guided the researcher in understanding what types of traumatic events take place at the mine. Semi-structured interviews are prepared around areas of specific interest, but still flexible and are used to obtain a detailed picture of the individuals' perception of PT and the PTMP at the mine (De Vos et al., 2005). Open-ended questions were asked to employees in order to give them the opportunity to explain in-depth and from their point of view what PT is, what types of PT events occurs at the mine and how PT is managed at the mine. The researcher used an interview guide with predetermined questions but also made use of probing questions in order to obtain thick, rich data and better understand the participants' perceptions and experiences of trauma management at the mine. Participants were informed of the purpose of the interviews and ensured of their confidentiality. Creswell et al. (2007) indicated the importance of a pilot study in order to realise some practical aspects and understand one's own level of interviewing skills. A pilot study was thus conducted in order to measure the effectiveness of the interviewing process and to see if the questions are relevant and formulated in an understandable manner.

Participants were interviewed one on one, in isolation from anybody but the researcher. An interview guide (Annexure A) was given to participants in order to facilitate the process. Each participant was briefed on the reason for the interview. The researcher explained in detail the aim of the study and how the data being collected will be used. They were informed of confidentiality; both their own identity and that of the mine was protected during the study.

Before the recording device was switched on and the interviewing started, participants were given the opportunity to ask any questions if there were any uncertainties. Questions included in the interview guide were as follows:

1. What do you regard as psychological trauma?
2. What type of traumatic incidents are you faced with at the mine?
3. Are you aware of any psychological trauma management programme at the mine?
4. Do you regard the programme as effective?
5. What recommendations can you make concerning psychological trauma management in the mine?
6. Is there any other thing you would like to add regarding trauma, trauma management or trauma management programmes in the mining industry?

The researcher made notes during the interviews to ensure all actions were captured.

Data recording

Interviews were recorded with a digital voice recording device. The device had brand new batteries and extra batteries were available at all times. Each participant was taken through the informed consent, explaining to him/her what the purpose of the study is and ensuring that all information will be dealt with confidentially. Participants were given an opportunity to ask questions and permission was granted to make use of the digital recording device. All participants filled in the consent forms as well as their biographical information. After the interviewing commenced, recordings were then transferred to a computer, which is password protected, and erased from the device. Next, the interviews were transcribed verbatim in an Excel document together with all field notes taken during the data collection process. All recorded and transcribed data were compared in order to ascertain if any data have been overlooked. The researcher was the only one with access to the data and made sure that backup copies were made with limited access.

Strategies employed to ensure data quality and integrity

The following strategies were utilised in order to ensure quality and integrity:

Conformability refers to the researcher being objective at all times. The researcher is not allowed to ask leading questions in order to get the desired information from the participant (De Vos et al., 2005). The role of the researcher is only that of a facilitator even though during the gathering of information the researcher was required to define some concepts to the participants in order for them to better understand the questions asked. The researcher did not ask leading questions and did not have any preconceived ideas that could influence the results of the study.

Credibility refers to the researcher being responsible for providing accurate information and can thus be seen as internal validity. This criterion ensures that the subject is identified and described accurately (Richards, 2014). The researcher should portray an accurate picture of the participants' views and opinions. During the research the researcher provided exact quotations of participants' answers and thus portraying credible opinions from the participants' side.

Dependability refers to the research being reliable and thus meaning that the same questions, setting and sample will lead to the same response. Research should follow a logical pattern, be audited and well-documented (De Vos et al., 2005). The researcher aimed to report on the findings in detail in order to ensure that future research can be repeated and that the same results can be generated.

Transferability refers to how the information and data in this study can compare to a similar approach or study. The researcher should be able to transfer the findings from one specific case to another (Bazeley, 2013). The researcher made sure that this study can be applied to a wider population and not just that of the mine at which the research was conducted. A detailed discussion of the results was conducted and the researcher made recommendations in order to ensure transferability to similar environments.

Data analysis

According to De Vos et al. (2005) data analysis involves several steps:

- *Read through data* that has been transcribed in a verbatim manner in order to obtain an overall impression of the content and context. During the research the researcher read

through all of the transcribed data in order to see the bigger picture and made notes on significant themes.

- *Organising data* by going back to the interview schedule and identifying the important questions that the researcher wants answered. The researcher made sure that the objectives of the study were reached through the questions and that important questions were answered in the appropriate manner. Participants' answers were grouped according specific and appropriate research outcomes as laid out in this study.
- *Coding data* in order to label or name units of related meaning that was identified in the data. They are then categorised. The researcher categorised the transcribed data in order to organise data and to ease the process of identifying themes.
- *Identify emerging themes* and the thematic relationship between them. Each response was carefully considered and themes and subthemes were identified and categorised. Both themes and subthemes were identified.

Ethical considerations

In order to ensure that the proposed study adheres to ethical principles, approval from the NWU Ethics Committee was sought before commencement. The proposed study falls within a current NWU research project for which NWU ethical clearance was obtained (NWU-00084-10-S4). Permission was obtained from the specific mine authorities to gather data. All participants were thoroughly informed of the purpose of the study as well as their role in participating. Thereafter participants were provided with an informed consent document which they had to sign in order to ensure that they give the necessary permission for their answers to be used as data for this study. The researcher informed the participants that this was a voluntary process and that they could withdraw at any time and request that their data will not be used in this study. Confidentiality was also ensured and participants were informed that neither their own nor the mine's identity would be revealed in this study.

Reporting style

A qualitative reporting style was used to report on the results of the study. Data was transcribed in a verbatim manner and each participant's exact response on the questionnaire was captured

and reported on. A detailed discussion on themes and subthemes was done in a narrative with direct quotations from participants to substantiate the findings.

Findings

From the data collected from semi-structured interviews, information was analysed and organised into categories, themes and subthemes. The findings of the interviews will be substantiated by using direct quotations from the participants. The participant responsible for the quotation is indicated after each quotation (i.e. P1 indicates Participant One's quotation). Each table will consist of the most descriptive responses from participants and in order to accommodate all languages, quotations provided in Afrikaans were directly translated into English. The findings are provided in the order of which participants answered the semi-structured interviews and resulted in the following categories:

Table 2: Category 1: Defining Psychological Trauma (PT)
Table 3: Category 2: Types of Traumatic Events
Table 4: Category 3: Psychological Trauma Management Programmes (PTMP)
Table 5: Category 4: Effectiveness of PTMP
Table 6: Category 5: Suggestions for improved Psychological Trauma Management (PTM)

Category 1: Defining psychological trauma (PT)

In finding the first category, participants were asked what they regard as Psychological Trauma. The following themes and subthemes emerged from the findings and are summarised in figure 1 and reported in table 2 thereafter:

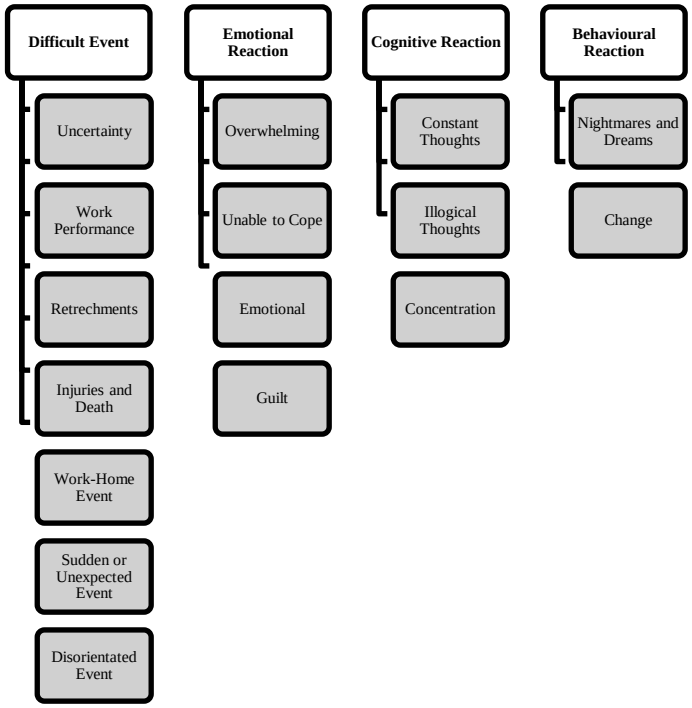

Figure 1: An illustration of the themes and subthemes of category 1.

From the findings in category one it was clear that a number of themes emerged when defining PT, namely: *Difficult Event, Emotional Reaction, Cognitive Reaction and Behavioural Reaction. Difficult Event* outlined the sub-themes of Uncertainty, Work Performance, Retrenchments, Injuries and Death, Work-Home event, Sudden or Unexpected Event and Disorientated Event. *Emotional Reaction* included the sub-themes: Overwhelming, Unable to Cope, Emotional and Guilt. *Cognitive Reaction* gave rise to the sub-themes: Constant Thoughts, Illogical Thoughts and Concentration. *Behavioural Reactions* included the sub-themes: Nightmares and Dreams and Change. Table 2 gives a clear indication of the findings that emerged from category one:

Table 2

Defining Psychological Trauma (PT)

Theme	Sub-theme	Response
Difficult event	Uncertainty	"I think it is when you go through something that is difficult for you and you don't know how to handle it." (P1)
		"… and now you are in a position where you cannot think clearly …" (P6)

Table 2 continues

Defining Psychological Trauma (PT)

	Work Performance	"At the end it can influence your performance at work." (P3)
		"… it affected me badly (at work). That day I was strong, but thereafter it started to bother me." (P2)
	Retrenchments	"Retrenchments that is on its way." (P3)
		"Yes, currently with the mines closing down we have a month before we must go home and me and my husband both work on the mine." (P4)
	Injuries and death	"fatalities and injuries" (P3)
		"Let's say you or someone you work with gets seriously injured or that person dies." (P4)
	Work-home Event	"It is something that happens, either at work or at home, that really affects you as a person and something emotionally changes in you." (P5)
		"If you are affected directly or indirectly, either at work or at home, something happened to you or someone you work with" (P4)
	Sudden/Unexpected Event	"It happens suddenly and unexpectedly and then you have to make a plan to sort out what is bothering you or make a plan to come out on top again." (P5)
		"It can for instance when a strike happens suddenly and it gets out of hand …" (P3)
	Disorientated Event	"It is an event that entirely throws you upside down, from your feet and then you must climb again." (P5)
		"… you can't focus, because your head is with the problem the whole time." (P3)
Emotional Reaction	Overwhelming	"It works on your emotions and is so overwhelming." (P1)
		"It is when you come to a point where so many bad things have happened to you that you feel you can't go on any further and life is just pushing you down." (P9)
	Unable to cope	"You don't know how to cope with it on your own." (P1)
		"It is when there is an event that affects you psychologically to such an extent that you need help." (P2)
	Emotional	"… something happened to you or someone you work with or that is close to you and then you are affected emotionally" (P3)

		"I think it is when something in your life goes wrong or something happens to you that makes you feel sad." (P8)
	Guilt	"It is when for instance somebody is in an accident and they die and you feel this guiltiness in your mind." (P6)
		"Also when you're own or someone else's life is in danger or if an accident happen, maybe not with you, but you feel bad for the other person or feel bad about what happened to you." (P8)
Cognitive Reaction	Constant thoughts	"It becomes a trauma when you think about it the whole time." (P3)
		"… it's stuck in your mind and you keep thinking about it" (P6)
	Illogical thoughts	"… and now you are in a position where you cannot think clearly" (P6)
		"You don't know if you want to live anymore …" (P9)
	Concentration	"You struggle to concentrate …" (P9)
		"… it takes your mind off of work …" (P3)
Behavioural Reactions	Nightmares and dreams	"… you even have nightmares or dreams because it is still stuck in your mind …" (P6)
		"… to such an extent that you think and dream about it …" (P2)
	Change	"I think it is how you psychologically maybe change after you traumatic event, for instance an accident. Life changes for you thereafter." (P7)
		"… and something that changes you …" (P5)

*P = participant

From table 2 it is evident that the participants defined PT as a difficult event that is characterised by uncertainty regarding how to think clearly about the traumatic incident and not knowing how to deal with it. One participant for example mentioned that the traumatic event affected him to such an extent that he needed help. In addition to the uncertainty, participants also defined PT as a difficult event that negatively influenced their work performance. An example of this is when a participant indicated that the traumatic event constantly played out in his head to such a degree that he couldn't focus on his work. Another difficult event for participants was facing the possibility of, or going through a retrenchment process. Participants furthermore define PT as difficult events related to injuries and death. One of the participants stated that he had to declare a mine worker dead and escort the body up from underground. This incident affected him. In addition, participants defined PT as a difficult

event that happened at work or at home to the self or a colleague, leaving the party affected by it. An example of a difficult event at work was when one participant indicated that a rock fell on him and broke his back, leg and ribs leaving him partially paralysed. Another participant shared that she and her husband were attacked at home resulting in her husband being hospitalised and undergoing a long rehabilitation process. Her life was in chaos. Furthermore participants defined PT as a difficult event that was sudden or unexpected, leaving the person not to feel in control of the situation. Relatedly participants also defined PT as a difficult event that is disorientating, leaving the party confused and unable to focus.

PT was also defined, from the perspective of the participants, as experiencing overwhelming emotions and not knowing how to continue with life after exposure to a traumatic event. Participants likewise defined PT as the inability to cope, after a traumatic incident, without help. Moreover participants likened being emotionally affected by a critical incident to PT. The emotional reaction of experiencing guilt following direct or indirect exposure to a traumatic event furthermore defined PT for participants.

Furthermore, PT was defined as a cognitive reaction with constant thoughts about the traumatic event coming strongly to the fore. To illustrate this point, one of the interviewees shared that the thoughts of that incident still played in his mind for some time after it had happened. Another cognitive reaction in defining PT was having illogical thoughts where thinking clearly became an obstacle, and considering the value of continuing with life, a struggle for participants. Likewise, the participants indicated that a lack of concentration following a traumatic incident is also related to their definition of PT. Participants of this study furthermore defined PT in terms of behavioural reaction reporting nightmares and dreams about the mentally invasive content of the traumatic event. The final definition of PT offered by the participants related to the changing effect a traumatic experience had on their person. One participant explained that it scared him emotionally.

Next, the findings of category 2 are being reported on.

Category 2: Types of traumatic events

Table 3 provides the findings of category 2. This category emerged from probing on the types of traumatic incidents that participants are faced with at work. The themes that were presented

from the findings included: *Death and Fatalities, Injuries and Accidents, Home-Work Influence, Psychological and Distressing Event.*

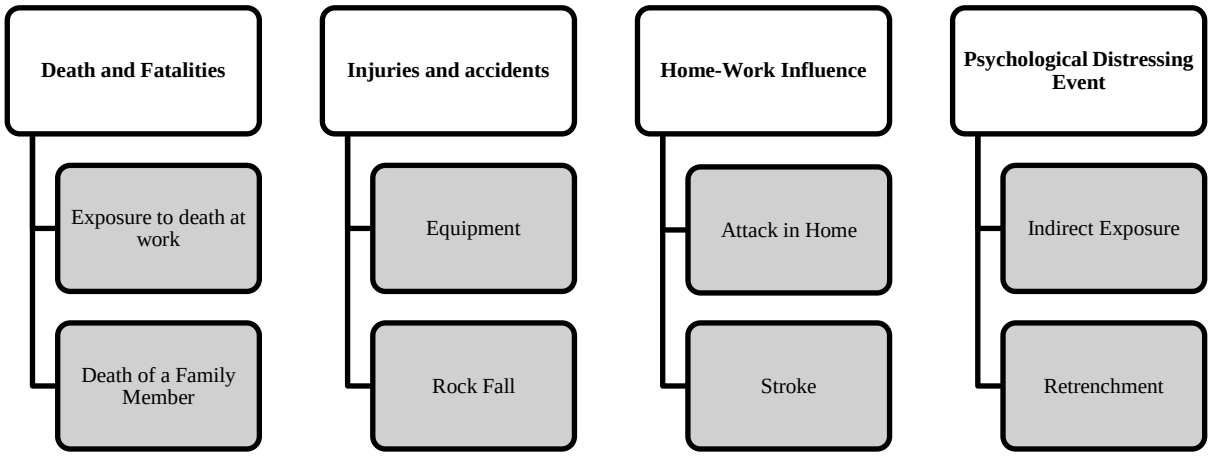

Figure 2: An illustration of the themes and subthemes for category 2

From the findings, it is clear that different types of traumatic events emerged that had a negative influence on participants. These included a lot of death and fatalities due to exposure to death at work and death of a family member. Injuries and accidents due to equipment and rock fall accidents also occurred from the findings. It was evident that attacks at home and medical issues such as strokes has a home-work influence on employees. It was also apparent that participants experienced psychological distressing events such as indirect exposure and retrenchments. Table 3 gives an indication of the findings of category 2.

Table 3

Types of traumatic events

Theme	**Sub-theme**	**Response**
Death and Fatalities	Exposure to death at work	"I have had fatalities where people got hurt, in accidents." (P1)
		"I had to pronounce him dead and escort him out from underground." (P2)
	Death of a family member	"My mom first passed away in 2012 …" (P5)
		"… 3 days after that my child died, which was very hard for me." (P5)

Table 3 continues

Types of traumatic events

Injuries and Accidents	Equipment	"Basically I deal with truck drivers and have dealt with people that have been involved in an accident." (P6)
		"… I was part of a fatal where pipes fell on top of someone …" (P8)
	Rock Fall	"I had to take out a man from underground that died due to a rock that hit his chest." (P2)
		"A rock fell on me and broke my back, my ribs, my legs and I had internal injuries." (P7)
Home-Work Influence	Attack in Home	"… before all of that we were attacked in our house, where my husband was struck by a panga in his head." (P5)
		"There was also a break-in at our house where we were held hostage." (P9)
	Stroke	"Last year my husband had a serious stroke and that is where everything went haywire, because two weeks before his stroke, our baby was born. I was a new mom with a new-born baby, plus we have another older son, but my husband was in the hospital." (P5)
		"Yes, 20 years back I was in an accident underground. I was in the hospital for 6 months and had a light stroke, I still have to use a wheelchair and crutches." (P7)
Psychological Distressing Event	Indirect Exposure	I also saw people who saw other people die that was affected so badly by what they saw and experienced. People are so traumatised that they can't even think clearly just to give a statement." (P6)
		"I did however see, when it already happened, how all the pipes are laying on top of that man and I knew he were not going to make it." (P8)
	Retrenchment	"Yes, I have been through two retrenchments, is was traumatic because I have a family and I have no idea what I will do tomorrow or what is going to happen tomorrow and the way in which they just tell you that you are retrenched, without warning. Now you have to start worrying how you will pay your car and your house and how you are going to put food in the table." (P3)
		"Yes, currently with the mines closing down we have a month before we must go home and me and my husband both work on the mine." (P4)

*P = participant

From table 3 it is evident that participants experienced death and fatalities both at the workplace and at home. Exposure to death at work was quite prominent and had a huge impact on participants. One participant mentioned that he had to go underground to an accident scene and pronounce a mine employee dead. Thereafter he had to escort the body out which caused him

to experience PT. Although the researcher tried to keep the study workplace specific, it was evident that exposure to death at home was another traumatic event participants had to deal with which influenced their work. One participant shared that dealing with the loss of a parent and a child in short succession took her a long time to process. Work-home influence in the form of physical attacks at home were also indicated as particular traumatic events from the perspective of interviewees. In addition, participants related that experiencing a stroke personally or that of a family member at home, influenced their lives, including work life, profoundly. One participant mentioned that the period after the incident marked chaos in her life. Psychologically disturbing events was experienced in the form of being exposed indirectly to traumatic incidents. A participant mentioned that he is a safety officer who has seen numerous fatalities and injuries involving people who were in accidents. He has to go underground and help and bring the injured out of the mine. Another psychologically disturbing event that the participants indicated was retrenchments. This included the possibility of, or actual layoffs. One of the interviewees was directly influenced by this as she received notice of retrenchment. The findings of category 3 will be discussed next.

Category 3: Psychological Trauma Management Programmes (PTMP)

The findings in category 3 emerged from asking participants if they were aware of any psychological trauma management programmes (PTMP) that were available at their workplace. The themes and subthemes that emerged from this question includes: *HR Department, Sick Leave and Structured Programmes*. From the *HR Department* theme, the subthemes *Refer to Doctor and Psychologists* and *Assessments* emerged. *Sick Leave* indicated the sub-theme *Time Off* and *Structured Programmes* raised *External wellness centres* and *EAP*.

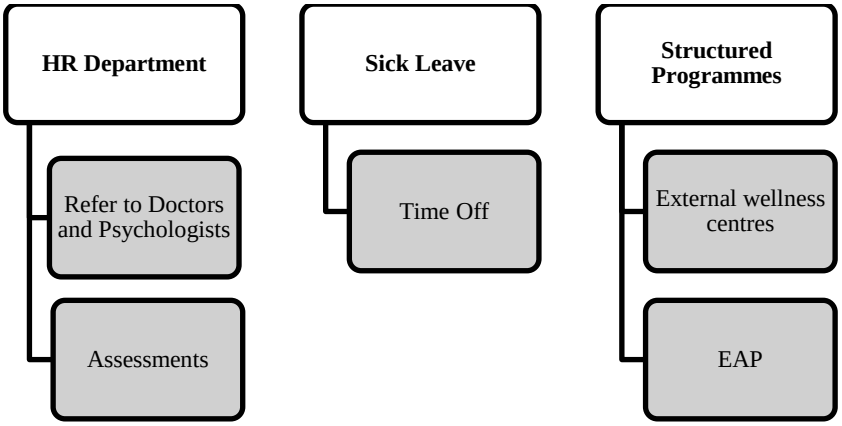

Figure 3: An illustration of the themes and subthemes for category 3

Table 4

Psychological Trauma Management Programmes (PTMP)

Theme	Sub-theme	Response
HR Department	**Refer to Doctors and Psychologists**	"Yes, our company has it. If something happens, they send you for treatment. The HR department handles those stuff, but they send the people that got hurt to doctors that can refer them to psychologists to make sure they get the right treatment." (P1)
		"We outsource psychologists to help and assist us and talk to the person and find out what is wrong in order to get him in a better state of mind." (P6)
	Assessments	"The HR was there that same day. I had to take everybody's names that saw what happened or tried to help the diseased guy or that was involved in anyway. All those people had to go and see HR and I had to give feedback a week later about who went and who didn't. Those who didn't want to go had to write a statement to say that they chose not to go as well as the reason why they decided that."(P8)
		"No, nothing I know of. I think there is a place somewhere where you can go for an assessment and sit and chat to people, but it is not really explained to us where and how to get help in such situations." (P9)
Sick Leave	**Time Off**	"… you obviously get time off from work and are still getting paid and the mine covers a certain amount of the expenses …" (P1)
		"Yes, I help with that. I firstly take him/her off from the scene and to my office and try to organise a psychologist, someone to help him. I will send him home and let him cool off." (P6)

Table 4 continues

Psychological Trauma Management Programmes (PTMP)

Structured Programme	**External wellness centres**	"Yes, we have external wellness centres, I was at them and they helped me." (P2)
		"So it looks to me as if the programme, I think it's called external wellness centres, really helps and it's not one sessions, they usually go for long periods of time, usually about a year for the psychologist sessions." (P1)
	EAP	"Yes, we have EAP which we can call for assistance." (P4)
		"… so I think there is a programme helping them." (P1)

*P = Participant

From table 4 it is clear that the mine are making psychologists and doctors available to help individuals who are going through a traumatic event to help them deal with what happened to them. These are dedicated people that need to make sure that employees going through a traumatic event gets the necessary help, support and treatment. Participants stated that they get send for assessments where they go for multiple sessions for about a year at a psychologist to help them deal with their trauma in a constructive manner. These psychologists are however outsourced and that is where participants started to complain about the help that they are getting.

They feel that they are left on their own to further deal with the psychologist and because the psychologists are outsourced, they can't always get to the psychologist as much as they need to. This made some participants that went through traumatic events that they did not really benefit that much from the psychologist, because some of them only saw the psychologist once. Participants furthermore indicated that they get paid time off from work to deal with their traumas and this really helps them a lot. It was reported that they get 15 days off to cool down and heal in order to be fine again.

The above mentioned only refers to psychologist helping and getting sick leave off from work. The researcher is focussed on specific PTMP and thus kept on collecting data in order to find out if the mine has a specific programme to help employees. Surprisingly only one participant indicated that they do know that external wellness centres are available at the mine and another mentioned that they can call EAP for assistance. This clearly showed that people are not entirely informed of these programmes.

The HR department also plays a big role in helping employees deal with their traumatic incidents. A participant indicated that as an HR manager it was his job to make sure everybody involved in the accident, whether directly or indirectly, had to give up their names and go for help at the HR, they would then be referred for professional help if necessary. Those individuals that refuse to go speak to HR about the event have to give reasons for why they refused help, because they can't be forced into going for help. Once again participants reported that they are not informed on where they can go for help. The findings from category 4 will be indicated next.

Category 4: Effectiveness of PTMP

In table 5 the findings of category 4 were related to the effectiveness of the PTMP that the participants were aware of at the mine. The findings presented only two themes for this category, either the programme is *effective* or the programme is *ineffective.* The subthemes are seen below:

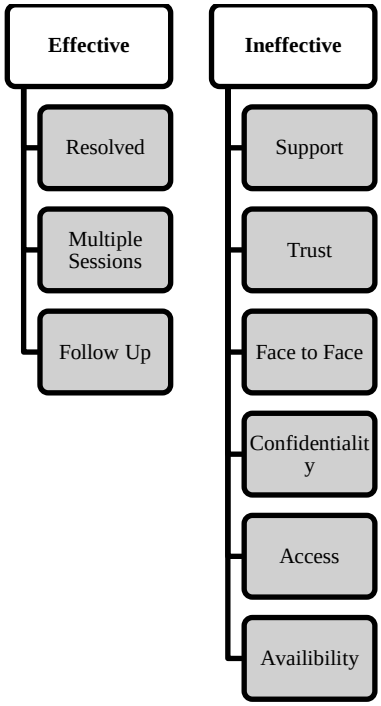

Figure 4: An illustration of the themes and subthemes for category 4

Table 5

Effectiveness of PTMP

Theme	Sub-theme	Response
Effective	Resolved	"I have seen that people going through a trauma take off from work for their traumatic treatment and then they come back to work and it doesn't seem as though they still have issues. So it looks like the programme helps." (P1)
		"Every time that I walked away it felt as though it is more and more lifted off my shoulders." (P2)
	Multiple sessions	"… they go to multiple psychologist sessions for about a year …" (P1)
		"I had four or five sessions with them, but they just chatted, they didn't say something strange …" (P2)
	Follow-up	"Yes, it is helping a lot, because I will follow up and ask him if he did go to the psychologist and if it helped him, if he doesn't feel better we can try another psychologist or another method to help him." (P6)
		"Yes, long after the accident happened, the guy that witnessed the accident still went for follow-up treatments and even my team leader got help from the HR." (P8)
Ineffective	Support	"No, they told me: 'Deal with it'. There was no further help." (P3)
		"As far as I know there is an EAP programme for people that have psychological or emotional problems, but I think what's bad about it is that people with problems should go and see those people on their own, the mine does not look after their people or make sure that they are okay." (P7)
	Trust	"I think people know about it, but they don't trust the people to talk to them … they can't relate. It makes it pointless if there is no trust." (P4)
		"… then everything fell flat, because she attributed many of my emotions (related to trauma) to my pregnancy which made me very unhappy." (P5)
	Face to face	"We need someone that can talk face to face with us that can see our pain, not over the phone. If they can maybe send a psychologist once a week to talk to employees, because employees will make appointments to talk about their issues and what is bothering them." (P4)
		"I want to see a psychologist face-to-face, I can't drive there and the petrol money alone just to get to the psychologist does not always fit our budget." (P5)
	Confidentiality	"They have to call from someone else's office, which doesn't make it that confidential…the person is not comfortable talking about it in front of someone else." (P4)

		"It should also be kept confidential so that people cannot gossip about who is seeing the psychologist. So maybe it can be off the mine premises." (P5)

Table 5 Continues

Effectiveness of PTMP

	Access	"You have to phone them to say what's going on, etc. then they tell you to go to a psychologist and there is no psychologist near here, we have to drive far to get to a psychologist." (P5)
		"… some employees don't even have phones or landlines to make that call." (P4)
	Availability	"I also feel that I need weekly help and I don't always have the capacity to talk to the psychologist every week or when I need someone to talk to. She sometimes doesn't even answer the phone and by the time she phones back I already found help somewhere else from a friend or so." (P5)
		"I will say no, because I am not even informed well enough about available programmes." (P9)

*P = Participant

From table 5 it is evident that the majority of participants experienced the PTMP as ineffective, although there were some that indicated their experience of the programme is effective and has helped them with their traumatic experiences. Participants indicated that some of them do not receive any help at all, supervisors or managers just tell them to deal with their trauma. Other participants specified that they think that people know there is help or a programme or person to assist them with their trauma, but they do not know or trust the people enough to open up to them about their trauma, they also feel that these people won't be able to relate with them, which makes therapy pointless. Alternatively participants mentioned that they know about external wellness centres and the EAP, but those assistance programmes are only telephonic and they need face-to-face conversations with psychologists. They feel that people can't see their pain over the phone and some employees do not have access to phones in order to make a call to external wellness centres for help and if they go and use someone else's landline in their office, it breaks confidentiality. They want those conversations to be private. Additionally participants felt that even though they went to the psychologist, the psychologist did not help them through their process properly. Participants stated that they need more help and support from supervisors and HR managers to make sure they are okay. Some employees were not informed about a programme at the mine at all.

There were however some participants that felt that they went for help after being referred by the mine and the help and assistance they received were effective. Although indirectly participants mentioned that they have seen their friends and colleagues take time off from work for traumatic treatment and when they came back they did not have the same issues. Participants also felt that the fact that the mine sends you for multiple sessions helps the programme to be effective and some reported that they felt relieved after traumatic treatment. The findings from category 5 will be reported on next.

Category 5: Suggestions for improved Psychological Trauma Management (PTM)

Next, the findings from category 5, relating to suggestions that participants had in order to improve PTM at the mine, are reported on. The themes that emerged from this question includes: *Frequency of Psychologist, Awareness* and *Communication.*

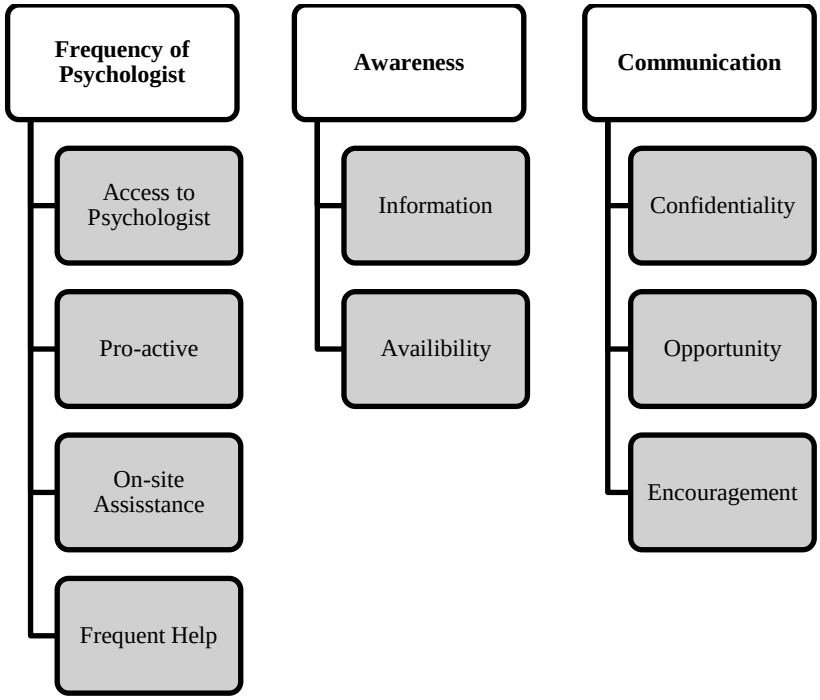

Figure 5: An illustration of the themes and subthemes for category 5

It is clear from the themes that emerged that participants suggest it is important to have access to an on-site psychologist. Next, the findings are reported.

Table 6

Suggestions for improved Psychological Trauma Management (PTM)

Theme	Sub-theme	Response
Frequency of Psychologists	Access to psychologist	"I think the processes could be quicker. It takes a long time, you don't lose your arm today and they go for psychological help tomorrow. It is a very long process and sometimes it takes up to 6 months before you can see a psychologist." (P1)
		"The mine must have a psychologist that is more accessible." (P5)
	Pro-active	"The mine should have a list of people that went through traumas and at least once a year they should send those people to go and talk to somebody. The mine should be pro-active" (P7)
		"We are never prepared concerning our safety during strikes." (P5)
	On-Site Assistance	"Those people can sometimes lose money if they do not work, because they lost an arm for instance. They can become so desperate in that time that they can be a danger for themselves and other, so I think it can help if the process is quicker." (P1)
		"… on site maybe talk to the people" (P2)
	Frequent help	"… but it has to be a regular thing, it must be established." (P5)
		"You must get someone beforehand and afterwards that talks to the people about retrenchments. We don't want to just wait and see what happens." (P3)
Awareness	Information	"There should definitely be more awareness about it. A person knows about these programmes, but a person doesn't always know what it is about or in what way it can help you. People are not informed about what the programme can mean to you." (P8)
		"People should be better informed about the available programmes and they should have the freedom to say if they have experienced something bad that had a traumatic effect on them. Here is nothing that says if

		you have a problem you can talk to this or this person. They should advertise it better or something. (P9)

Table 6 continues

Suggestions for improved Psychological Trauma Management (PTM)

	Availability	"… or that has more time to see the people at the mine, for instance you know Wednesdays and Thursdays the psychologist is at the mine and you can make an appointment with him/her, then you know you see the psychologist on a regular basis." (P5)
		"Maybe they should put up posters on the availability of programmes or stuff like that. I don't even know what the programme's name is." (P8)
Communication	Confidentiality	"Communication must be kept confidential so that other cannot gossip about who is at the psychologist. So maybe it should just not be on the mine's premises." (P5)
		"… the person is not comfortable talking about it in front of someone else" (P4)
	Opportunity	"Communication is very important, management must communicate clearly to their employees and give employees the opportunity to speak up and be honest about what they are feeling and what they are going through." (P6)
		"… at least once a year they should send those people to go and talk to somebody." (P7)
	Encouragement	"The HR must have an open door policy and management must encourage employees to communicate." (P6)
		"If you are a shy person, you might rather not go, whereas if someone goes with you, you feel more comfortable … culture and your language plays a big role and should also be taken into consideration" (P8)

*P = Participant

From table 6 it is evident that participants' experience of the available PTMP on the mine is a process that takes too long. Participants would like to have access to psychologists and they want the process to be quicker than it is at this stage. They want easier access to psychologists for instance. Participants indicated that to speed up the process could prevent serious consequences like employees committing suicide. Even though participation in PTM of any kind is a voluntary process, they indicated the need for participants to work together and even suggested that they might need to make going for treatment after a traumatic incident

compulsory. Furthermore, participants suggested that immediate or on-site support could be helpful. They indicated that having the accessibility to and availability of psychologists on the mine could help them deal with their traumatic experience with more ease. They suggested having a psychologist on site once or twice a week would help. Participants also indicated that confidentiality of such treatment is compulsory. They do not want people to know they are being counselled, because they might be shy or afraid of what other would say.

Additionally, participants indicated that uncertainty, due to retrenchments, should be sorted out by open communication. They would like their supervisor or HR manager to brief them before and after a retrenchment so that it does not catch them by surprise, which causes the event to be a traumatic one to them. Communication and being informed is thus important to them and a characteristic that they are currently missing at the mine. Another important suggestion from participants is to get the HR manager or a supervisor or mentor to encourage employees to seek help. They need to know there is an open door policy for them to talk to HR when they need help and assistance and would suggest that the mines be more pro-active in supporting the employees that has been through a traumatic event. Participants also indicated that the mine needs to create more awareness of available PTMP and the opportunity to speak to someone should you feel that you cannot cope or cannot handle the traumatic experience that you have been through. They want to be more informed on where and how they can seek help, by putting up posters for instance.

Discussion

Outline of the findings

The overall objective of this study was to explore the experience of PT and the management thereof in the mining industry. From the results it is evident that PT does occur in the mining industry in different forms and employees have diverse experiences of the use and effectiveness of how trauma is being managed in the South African mining industry. It was clear from the data collected that participants experience and understand PT as a difficult event or serious accident that is caused by uncertainty and stress and has an influence on their work performance. They also stated that serious accidents cause them to constantly think of the trauma to such an extent that they can't cope and have nightmares and bad dreams. Examples

of these traumatic events are accidents, but also retrenchments and personal problems at home. From the evidence it was clear that there are some sort of PTMP on the mine, like external wellness centres and HR referring employees to psychologists. The majority of employees however indicated that they found the PTMP to be ineffective due to not being informed enough on how and where to get help. They suggested accessibility to an on-site psychologist and that the mine should create more awareness around PTMP. The researcher asked specific interview questions in order to reach the specific objectives lined out in the study. The results are attended to by referring to the objectives of the study:

The *first objective* was to review how PT and PTM are conceptualised within the literature. The American Psychiatric Association (2013) defined PT as an emotional reaction that occurs after a specific traumatic event has taken place such as an accident, natural disaster or a life-threatening experience. Van Der Kolk and McFarlane emphasised the importance of realising that PT is defined by the specific individual's experience of the specific trauma. McCann and Pearlman (1990) defined PT as "an experience that is (a) sudden, unexpected or non-normative, (b) exceeds the individual's perceived ability to meet its demands, and (c) disrupts the individual's frame of reference and other central psychological needs and related schemas" (p. 10). From the above definitions it is clear that PT is conceptualised in literature as an unexpected, unnatural and life-threatening event that results in an upsetting psychological response characterised by an inability to cope with the psychological demands of the event. To determine what the employees in the mining industry regard as PT, each employee was asked to define the term in their own words and own experience. The results showed four themes, each with some sub-themes. The themes that emerged from the first objective was (a) death and fatalities, (b) injuries and accidents, (c) home-work influence, (d) psychological distressing events. Sub-themes that emerged from death and fatalities were exposure to death at work and death of a family member. Injuries and accidents indicated equipment and rock fall. Home-work influence includes attacks at home and strokes and psychological distressing events were accompanied by indirect exposure and retrenchments.

Participants indicated that once a traumatic event happened to them, it becomes so difficult that a person do not know how to handle it, such an individual experiences a great deal of stress to such an extent that they struggle to cope. They constantly think of the traumatic event that happened to them, either directly or indirectly and this affects their performance at work as

they are not fully focused on just their work. The uncertainty of retrenchments were also compared to a situation that causes PT. LeBlanc et al. (2011) stated that traumatic events can be linked directly to acute stress.

McCann and Pearlman (1990) defined PT as a sudden and unexpected event that exceeds an individual's perceived ability to cope. Participants also indicated that PT can be defined as a sudden and unexpected emotional and psychological event that overwhelms their emotions to such an extent that they know they need help, because they cannot cope with this situation on their own. The traumatic event could be life-threatening, causing the individual to feel bad about what happened to them or someone close to them, having an effect on their concentration at work. This event could also disorientate an individual and can make them feel that they have been thrown from their feet and need to get back up. They indicated that this traumatic event could cause a person to change as life might not ever be the same for them. As defined earlier PT is defined by the American Psychiatric Association (2013) as an emotional reaction after a traumatic event has taken place.

Although the researcher placed emphasis on PT and PTM in the working environment of the mining industry, it was also evident that participants experienced that PT could cause work-life imbalance due to the fact that traumatic events happening at home could cause a person to be so caught up with their personal problem that they lose focus and cause accidents or that a workplace trauma overspills into their personal lives, that could cause friction in their families. This corresponds to the findings of Berdahl and Moon (2013) who reported that employees could experience personal problems at any given day such as health issues, family or relationship drama or even financial problems. According to the data that was collected the sadness of something going wrong could also cause PT because a person feels emotionally bad as so many bad things have happened to them. PT could lead to reactions such as a lack of interpersonal trust, both at work and at home, substance abuse that could cause trouble in both the work and home environment and a lack of intimacy as well as isolation from others (Goodman, Saxe, & Harvey, 1991).

According to Yoo, Cho, Cha and Boo (2013), people who have seen a traumatic event, such as accidents or natural disasters could experience helplessness, pain and guilt, even if they were not directly exposed to the event. A large amount of participants defined PT in terms of a

serious accident and the guilt they felt if they were somehow the cause of the accident or if they were unable to help a fellow employee that got seriously injured or died due to the serious accident. The participants also indicated that PT is caused due to serious accidents as the person being affected by the accident, either directly or indirectly, constantly thinks of the accident and might come to a point where they experience illogical thoughts and do not think clearly. They stated that they have experienced nightmares and dreams of the accident because their minds are affected by the accident and it leaves emotional scars that they need to deal with. The American Psychiatric Association (2013) indicated that PT has a huge effect on an individual's thoughts and they could experience dreams and flashbacks of the event. It is thus clear that the results of the data collection are in line with literature and previous research on PT and the management thereof.

In summary, findings from the data collected and the definition of PT as conceptualised by literature could indicate that in the mining industry, PT can be defined as a difficult event that could happen to a person either directly or indirectly and has emotional and psychological consequences. It can be seen as a serious accident that happens suddenly and expectantly that could make a person fear for their own or someone else's life and it bothers them to such an extent that they can't cope and need help.

The *second objective* was to explore the experiences of PT among employees at the mine. Participants were asked which types of traumatic events they have been faced with in the mining organisation. Wilson (2011) and Kurnia, Sasmito and Mujumdar (2014) indicated that the mining industry is one of the most dangerous work environments where PT often occurs. From the findings it was clear that participants have experienced certain types of traumatic events at the mine, such as fatal accidents, projectiles, instances where they had to retrieve deceased colleagues and retrenchments that causes uncertainty. It was also evident that circumstances at home could cause PT that has an effect on participants work performance, such as the death of a parent or child, a brutal attack at home and personal health such as a stroke. This is similar to the findings of Maslach and Jackson (2013) that employers should recognise PT as a workplace concern in order to reduce absenteeism due to personal problems. Vehicle accidents, both at work and at home, rock fall accidents and falling pipes were all types of traumatic incidences that employees have experienced at the mine or at home that has caused tremendous PT in their lives. Hoffman (2012) specified several traumatic events that occur in

the workplace such as human-error incidents, accidents, natural disasters, retrenchments, bullying, violence and even death. This is in accordance with the data that the researcher gained from the participants at the mine.

From the results it was clear the participants have experienced PT in the form of serious accidents and projectiles that have caused fatalities and injuries. Participants have also been traumatised from escorting diseased colleagues from underground and pronouncing them dead. This had a tremendous traumatic effects on these employees. These accidents cause PT whether employees are directly or indirectly affected by the incident. Some were left paralysed or lost limbs due to these accidents. Tsumoto and Hirano (2010) similarly found that blasting-related mining accidents such as rock falls, premature blasts, falling pipes and vehicle accidents as well as other causes of mining accidents can contribute towards the PT of mine workers.
According to Ntswana (2014), the South African mining industry is in turmoil and many employees gets retrenched because of restructuring, economic declines and the condition in which the mining industry currently are in South Africa. Another theme that emerged from the data collected that agrees with Ntwana (2014) was retrenchments, which caused uncertainty with participants. Some have been through more than one retrenchment and it becomes traumatic when one does not know they are being retrenched. The mining industry does not always prepare employees that retrenchments is coming, they just get called in and are given a letter that they have been retrenched. Now they start worrying about finances, food, transport, their families that they need to support and they have no idea where they will get a new job.

It was once again evident that situations at home also have a traumatic effect on employees, which spills over to their working environment. A theme that emerged from this interview question was the loss of a loved one, like a parent or a child, an attack at home or an illness such as a stroke. Participants indicated that the loss of a loved one close to them has such a dramatic and traumatic effect on them that they cannot focus on their work at all, they also have to stay away from work in order to arrange funerals and be with family members. Illness such as a stroke, either directly or indirectly to your husband/wife could cause PT as employees now have to worry about work, children and finances on their own; this strain causes stress with could be so serious that a person is unable to cope with the pressure. Alexander and Klein (2001) conducted a study in which they found that circumstances involving family and friends can worsen the traumatic event, especially where a person feels helpless. Attacks at home is

another theme that emerged from the findings and the injuries that accompany such attacks. These attacks could have such an extreme traumatic effect on a person that they fear going to work, fear being alone and could result in loss of work performance. Ortlepp and Friedman (2002) specified that criminal violence has increased drastically in South Africa.

In summary it was found that participants did in fact experience trauma in the mining organisation in the form of serious accidents, including rock falls, falling pipes and vehicle accidents that cause injuries and fatalities. They were also traumatised by retrenchments and personal tragedies such as the loss of loved ones and violent attacks. These events corresponded with the findings in literature.

The *third objective* was to enquire how the current PTMP is experienced at the mine. After identifying the types of traumatic events that participants experience at the mine, in order to validate the traumatic nature of the incidents that requires a PTMP, participants were asked how they experience the current PTMP at the mine. The researcher wanted to know if employees were aware of any PTMP and to find out what types of PTMP are available at the mine. The findings indicated that participants experienced the mine managing trauma through doctors and psychologists, providing sick leave after a traumatic event, PTMPs such as external wellness centres and EAP, removing employees from the traumatic scene and providing access to human resources. It is important to note that not all employees experienced the PTMPs at the mine as effective as will be explained in the fourth objective. These questions were asked to find out if employees know of any form of PTMP on the mine.

Participants indicated that the mine provides doctors and psychologists to provide treatment and assistance to employees going through a traumatic event (where it is available). Some went for multiple sessions over a long period of time. It was evident that these psychologists are being outsourced by the mine and are thus not permanently available, which could cause the necessary help to be insufficient. Very few participants made use of this approach in managing their trauma. It was also evident that no or little awareness regarding any PTMP exists in the mining industry. The Workplace Trauma Centre (2011) emphasised the importance of immediate PTMPs in any high pace, stressful environment. Furthermore it was evident that the mine helps employees deal with traumatic incidents by allowing them 15 days sick leave in order to cool down and the mine helps to cover certain expenses in order to help their

employees. Employees get removed from the scene as soon as possible and then HR or a safety manager will try to get the traumatised employee in contact with a doctor or psychologist as soon as possible.

Organisations should utilise PTMPs in order to provide employees with the necessary psychological assistance after a traumatic event has taken place (Greenberg et al., 2010). In terms of PTMPs, participants indicated that some of them have made use of the external wellness centres and EAP. Some of the external wellness centres are call centres where they can call in and talk to somebody. There was a mutual feeling among participants that this technique (telephonic counselling) was not effective as they would rather talk to someone face to face. The Human Resource Department of the mine is also involved in helping employees manage their trauma by writing up the names of those involved in the traumatic event either directly or indirectly and making sure that they get help. If they refuse, they should state why they refuse to get help. Some participants also indicated that they have no idea if there is any PTMP on the mine or how to get hold of someone in HR. It was thus clear that a PTMP does not really exist at the mining organisation and where it did, employees were unaware of it or preferred not to make use of the service.

In summary, it is clear that a PTMP is not permanently available to traumatised employees and they are also not aware of where they can find help, should they need to talk to someone.

The *fourth objective* was to enquire how employees value the effectiveness of a PTMP at the mine. While interviewing participants and understanding the way in which they experience PTMP's at the mine and the availability thereof, the researcher asked participants whether they regarded these PTMP's at the mine as effective. From the results it was evident that the majority of participants experienced the available PTMP's as ineffective. Some employees did however experience the mining's PTMP's as effective, but they were the minority and even they still had some concerns.

It was evident from the findings that participants found the PTMPs on the mine not completely supportive or adequate. From findings it was evident that some of the participants have really received no help at all and were told to deal with their trauma on their own and they had to seek help by themselves. Yoo, Cho and Cha (2013) supported this statement by stating that

when an organisation does not look after their employees efficiently, that they will seek help outside the working environment which might be time-constraining and a financial burden. Participants also indicated that they do not trust the people assigned to help them through a traumatic event, they feel these people can't relate to their struggle and this makes the process pointless. As mentioned before, participants once again indicated that external wellness centres and EAP available to them is ineffective as they do not find telephonic counselling effective. They would prefer talking to someone face to face. Participants also indicated that some of them do not have any access to a phone in order to make use of these facilities and if they phone from their manager, supervisor or the HR department's office, it will breech confidentiality and takes away the privacy of the counselling. Some participants felt that the process of counselling is not successful because it is not complete, they felt that psychologists help them to a certain point and then they are left on their own. It is also once again evident that employees are not aware and informed of PTMPs on the mine.

Ortlepp and Friedman (2002) indicated that organisations should realise the importance of increasing employee's emotional, behavioural and psychological well-being. In addition, some participants did however indicate that they experienced the available PTMPs as effective. Some participants indicated that they have seen people go through a traumatic event and went for traumatic treatment and when they came back to work they seemed as though they had worked through their issues. It is important however to realise that in this case, it is only an observation of the effectiveness of the programme. In order for effective PTM to increase, clients need to be actively involved in the PTM process (Asmundson, 2014). Some participants felt that when they talked to a psychologist or HR official they felt their trauma getting lifted off from their shoulders more and more each time. It was evident that the fact that employees are allowed to go to multiple sessions to manage their trauma and go to follow-up meetings with the psychologist helped the PTMP to be more effective. According to Briere and Scott (2014) regular therapy sessions are recommended over a period of time, depending on the client's symptoms. The face-to-face interaction with psychologists and HR personnel also seems to be more effective as indicated in the findings.

And the *fifth objective* was to enquire recommendations that can be made regarding the current PTMP at the mine. Participants suggested that the mine should speed up the process, they mentioned that it can take up to six months before a person get sent to a psychologist for help.

The more time goes by, the worst the tragedy might become for the person going through the PT. Participants indicated their fear of colleagues committing suicide due to depression and desperation. They want a structure in place, because they do not want to sit in uncertainty to wait and see what happens. Being exposed to a traumatic incident in the mining industry is psychologically disturbing (Nie, Huang, Sun, & Li, 2016) and it is understandable that mine employees like to see a quick response from their employer, including timeous referrals of affected employees to appropriate experts. According to Mitchell et al. (2003) debriefing is necessary as soon as possible in order to ease the impact of the traumatic event and to encourage the victim to start participating in a recovery process. Participants also suggested that they should make a PTMP compulsory. PTM is however a voluntary process and according to Greenberg et al. (2010) PTM is only a support process to ensure those that have been exposed to a traumatic event or are experiencing psychological stress due to a traumatic event are assisted and encouraged to seek help. It is however important to touch base with employees and help them understand that stress is inevitable in the workplace and it is acceptable to seek help.

Additionally participants suggested that the mine ensures easier access and availability of a psychologist on site so that they can get immediate help after a traumatic incident has occurred. LeBlanc et al. (2011) explained that a counsellor should be seen as a requirement in the workplace, rather than an amenity. Participants would prefer to see a psychologist more frequently, on the premises, but another participant also emphasised the importance of keeping the sessions confidential and do not want everybody else to know that he is seeing a psychologist as people would make fun of him. Psychologists in the work place should vouch complete confidentiality and give clients absolute assurance that their sessions will be handled with confidentiality (Adam, Peters, & Chipchase, 2013). They also mentioned the importance of creating awareness around available PTMP. The majority of participants indicated that they are not informed of how and where to seek help after they have been through a traumatic experience. According to Synnott et al. (2016) it is important that an initial one-day workshop is done with employees in order create awareness of PTMPs and educate employees on the topic of trauma.

Greenberg et al. (2010) indicated that PTM is not a specific treatment, but a way to encourage short-term support and to help refer those not following a normal recovery process to seek

formal help and support. Participants agreed and stressed the importance of communication and having the opportunity to communicate with their managers and supervisors, they want to be able to speak openly and honestly about how they feel and suggested that HR be more supportive of the process of PTM. It is important that HR has an open door policy and be more pro-active in assisting traumatised employees.

In summary, participants recommended on-site access to PTMP's or psychologists, whilst still keeping the sessions confidential would greatly benefit them. They emphasised the importance of being informed and aware of available PTMP's and want support from their HR, supervisors and managers. They also want the mine to speed up the process in order to avoid further emotional and psychological damage after a traumatic event has taken place.

Limitations and recommendations

During and after the study was conducted a few limitations and recommendations stood out. The sample size was small, but this was a qualitative study and the aim was to explore PT and the management thereof. Themes and subthemes were extracted and data saturation was achieved. The sample of this study was diverse in terms of job description as it included HR officials, safety managers, machine operators, training officers and plant coordinators. It is recommended that future studies also focus on homogenous job categories for example rock drilling operations, hoist drivers and team leaders more exposed to typical mining-related traumatic events. Another limitation is that the study was conducted at two mines, one coal mine and one platinum mine in the North West Province. A recommendation for future studies could be to explore PT and the management thereof in other mines as well, i.e. gold, diamond and iron ore mines. A limitation that was noted in this study relates to the use of English and Afrikaans in the semi-structured interviews as not all participants were equally fluent in either of these languages. A pilot study was however conducted before data collection commenced in order to adjust questions and make it more understandable where necessary. It is recommended that future studies also explore PT and the management thereof in the mining industry in terms of population group and that interviews are conducted in African languages, i.e. isiZulu and Sesotho to make it easier for participants to express their lived experiences. Some participants were uncomfortable at the beginning of the interview due to uncertainty, but once the purpose of the interviews, as well as informed consent, confidentiality and the fact that they can withdraw at any time was explained to them, they became more comfortable with

the process. Information and research on managing PT in the mining industry, both nationally and internationally, were very limited. The researcher thus recommends that this topic should be researched further and more in depth. PTMP focussing on PT in the mining industry was also scarce and it is recommended that the mining industry should invest in developing a PTMP specifically for mining-related traumatic events.

Practical implications

Participants were made aware of the traumatic incidences they have been through and have seen happen to colleagues. It was thus important for the researcher to be able to counsel participants that felt emotional when talking about their traumatic experiences. It was also clear to the researcher that talking about trauma inevitably causes participants to talk about their personal traumas and it was difficult to keep to work-related or mine-related traumas. Participants were also made aware of the importance of PTMPs and might insist on having such support at the mine. The mine might have to develop, market and manage the PTMPs on the mine in a more efficient manner. Both participants and managers emphasised the importance on feedback from the study and the researcher is thus obligated to go back to the mine and give feedback on the findings whilst keeping information confidential.

Conclusion

It was clear from the research and findings of the study that employees in the mining industry are exposed to traumatic incidences, whether it is a serious accident, strikes or retrenchments. These traumatic events clearly have a negative effect on the employees and their well-being. PTMP's are very important, but unfortunately the findings of the study revealed that mines do not see PTMP as a necessity and employees are unaware and uninformed about such programmes or help. The mining employees need and want psychological and emotional support to be available and accessible. It is evident that effective and mining specific PTMP's should be implemented and employees should be briefed on how to get help, the goal of the PTMP and where they can get help from.

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CHAPTER 3
CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Chapter 3 will indicate the conclusions reached in this study as well as limitations that was found and recommendation for future research.

3.1 Conclusion

The general objective of this study was to explore the experience of psychological trauma (PT) and the management thereof in the mining industry. A summary of the different categories and themes are provided in the figure below:

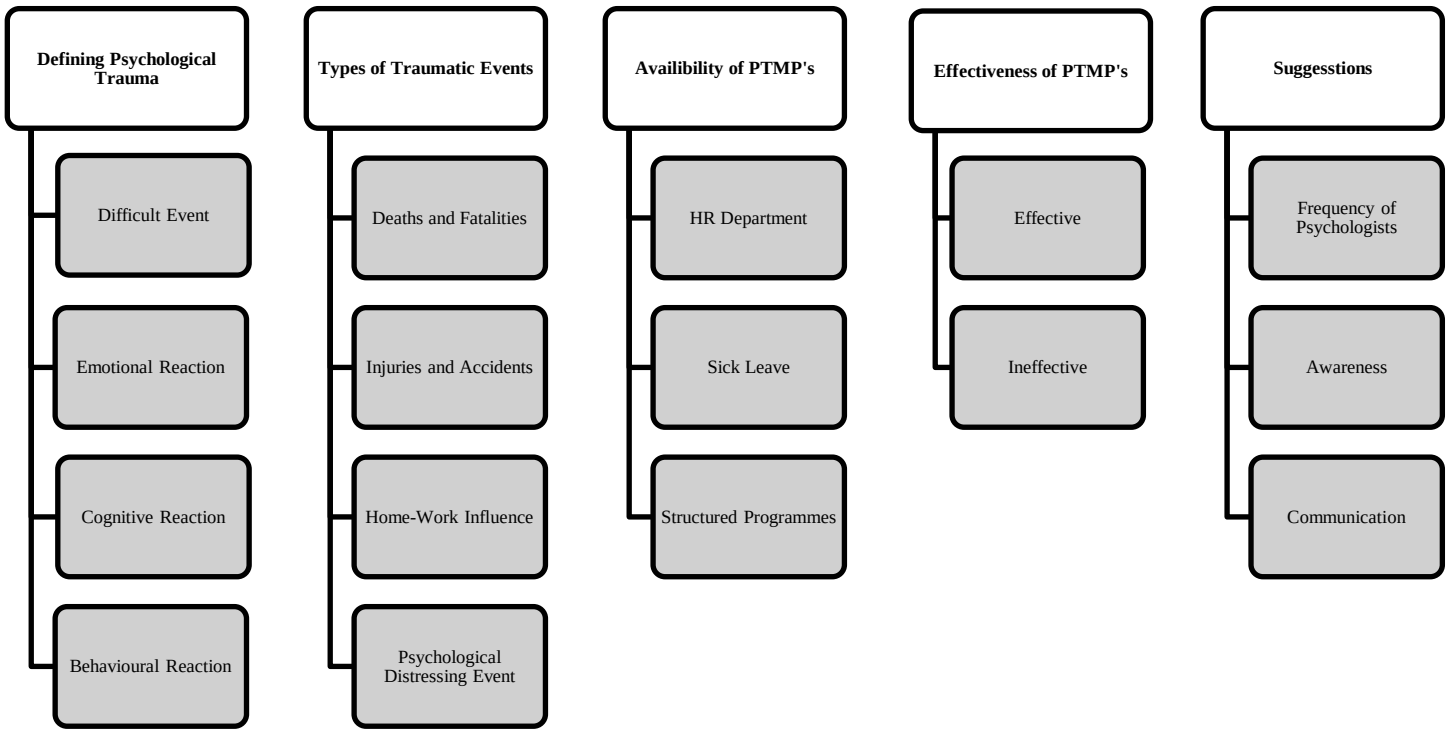

Figure 6: An illustration of the categories and themes regarding the findings

The findings are shortly discussed next based on each objective of the study.

Specific objective 1: To review how psychological trauma and psychological trauma management is conceptualised in the literature

The aim of the first objective was to determine how both literature and employees in the mining industry regard psychological trauma and the management thereof in the form of PTMP's. The researcher therefore spent a lot of time researching the topic of PT and PTMP's. Literature revealed a very well conceptualised definition of PT by the American Psychiatric Association (2013) stating that PT refers to an emotional reaction that occurs after a specific traumatic event has taken place such as an accident, natural disaster or a life-threatening experience. Greenberg et al. (2010) defined PTM as a support process to ensure that those who have been exposed to a traumatic event or are suffering from psychological distress due to traumatic events are assisted and encouraged to seek help.

After conducting semi-structured interviews with employees in the mining industry about the subject of PT and PTM, it was important to keep in mind the environment they work in and their job content when establishing a working definition for PT and PTM in the mining industry. Participants defined PT as a difficult event that could occur to a person either directly or indirectly and has emotional and psychological consequences. It can be seen as a serious accident that happens suddenly and unexpectedly and could make a person fear for their own or someone else's life and it bothers them to such an extent that they can't cope and need help. Hoffman (2012) agrees that natural disasters, bullying, human-error incidents, accidents and even death can occur in the workplace. McCann and Pearlman (1990) also support the participant's definition of PT by stating that PT is "an experience that is (a) sudden, unexpected or non-normative, (b) exceeds the individual's perceived ability to meet its demands, and (c) disrupts the individual's frame of reference and other central psychological needs and related schemas" (p. 10).

When focussing on PTMP's, participants defined this concept as programmes and professional help provided to them by their workplace, in order to assist individuals who have experienced a traumatic event. Greenberg et al. (2010) agreed with participants that PTMP are aimed at encouraging support and helping refer those not following a normal recovery process to formal sources for help and support.

Specific objective 2: To explore the experiences of psychological trauma among employees at the mine

The second objective was to explore how employees in the mining industry experience PT at the mine and participants answered with regards to the type of traumatic incidents they are faced with. Participants experienced PT in the form of serious accidents that lead to injuries or fatalities such as rock fall accidents, vehicle accidents and falling pipes. Spiers (2015) stated that trauma can be caused by a wide range of events such as accidents and extreme natural disasters. Their personal traumas also emerged from this objective as they stated that they experience PT in the form of the loss of a loved one, attacks at homes and illnesses, such as a stroke. They also experienced PT through retrenchments as this causes a tremendous amount of uncertainty and stress on how they will get by without a job. LeBlanc et al. (2011) granted that acute stress and traumatic situations could in some instances be directly related to each other.

Participants also mentioned the negative thoughts they experience after these events and they realised that the mine should do something to address these issues. Campfield and Hills (2001) indicated that the survivor of a traumatic event might want to identify whether their fear of this catastrophic event happening again is real or non-real and want to stop having negative thoughts around the incident.

Specific objective 3: To enquire how the current trauma management programme is experienced at the mine

The aim of the third objective was to enquire how the employees in the mining industry experience the current trauma management programmes at the mine. It was evident from the study that the mines do provide certain help and assistance to employees. Van der Kolk and McFarlane (2012) indicated the importance of having an effective PTMP available in any workplace affected by traumatic incidences in order to help employees deal with their traumatic stress. Participants indicated that the mine provides exposure to doctors and psychologists for multiple session treatments and assistance, but it sometimes is insufficient as participants wants more support from the mines. Participants are granted sick leave and some mentioned programmes such as external wellness centres and EAP. According to Terblanche (2007) the

Employee Assistant Programme (EAP) assists employees with solving their personal problems regardless of the causes thereof. It thus seems that these programmes are not specifically aimed at helping employees in the mining industry and the extent to which they experience trauma. The Human Resource Department of the mine was another resource that employees could make use of in order to help them, although they could only refer employees to professional help.

Specific objective 4: To enquire how employees value the effectiveness of a psychological trauma management programme at the mine

Objective 4 was aimed at investigating how employees value the effectiveness of a PTMP at the mine. It was evident that the majority of participants found the current available PTMP's and assistance to be ineffective. Lateef (2005) indicated that following the law, it is important that a well-developed, effective PTMP is implemented at the onset of a traumatic incident. Some indicated that they don't receive any help, they do not trust the help they get and the people that the mine provides can't relate to them. In terms of PTMP's such as EAP and external wellness centres, they do not feel that telephonic counselling is effective and would want face-to-face communication with a person in order to solve their traumas. They emphasised the importance of privacy and confidentiality, which they might not be experiencing at the mines at the moment. Financially most blue-collar employees can't afford to see a psychologist and the mine does not pay that for them. They need a psychologist to be available and accessible at all times and they also need encouragement and support from their supervisors, HR and other managers.

A few employees did however feel that they have received effective help through their traumatic experience or that they have seen fellow employees feel better after getting help from professionals outside of the mine. Some employees indicated that they have seen fellow employees take time off time from work and go to multiple psychologist sessions and when they get back they look as though they are healed and feel better.

Specific objective 5: To enquire what recommendations can be made regarding the current psychological trauma management programme at the mine

The aim of the last objectives was to give the participants the opportunity to make recommendations regarding the current PTMP's at the mine. Participants wanted the mines to speed up to process from when the traumatic event occurs to when they receive help as the trauma might become worse the longer a person has to wait to deal with their emotional and psychological trauma. The majority of participants indicated the importance of having an on-site psychologist or PTMP's available and accessible, which they can access as frequently as they need help and guidance.

They stressed the importance or HR, managers and supervisors to communicate with them and encourage and support them to seek help and guide them to where they can find help after a traumatic event has taken place. They want management to be more pro-active in supporting them and the most important is to create awareness and keep employees informed on possible PTMP's and help and guidance. Most employees indicated that they think there is a place they can seek help, but they are not sure where and how to get hold of them.

3.2 Limitations

The sample size was small, but this was a qualitative study and the aim was to explore PT and the management thereof. Themes and subthemes were extracted and data saturation was achieved. The sample of this study was diverse in terms of job description as it included HR officials, safety managers, machine operators, training officers and plant coordinators. Another limitation is that the study was conducted at two mines, one coal mine and one platinum mine in the North West Province. A limitation that was noted in this study relates to the use of English and Afrikaans in the semi-structured interviews as not all participants were equally fluent in either of these languages. A pilot study was however conducted before data collection commenced in order to adjust questions and make it more understandable where necessary. Some participants were uncomfortable at the beginning of the interview due to uncertainty, but once the purpose of the interviews, as well as informed consent, confidentiality and the fact that they can withdraw at any time were explained to them, they became more comfortable

with the process. Information and research on managing PT in the mining industry, both nationally and internationally, were very limited.

3.3 Recommendations

3.3.1 Recommendations for the organisation

From the research and findings it is clear that it is crucial for the mining industry to invest in developing a PTMP specifically for mining-related traumatic events. It is also important to make sure not only the HR manager, but also the different section managers and supervisors buy into the PTMP's and the purpose thereof in order to ensure that they encourage and allow employees to participate and seek for help and assistance. The mining industry should put in time and effort to make the process quicker for employees to get professional help and communicate the importance of it to them. The most important part is that once a PTMP is implemented, employees are informed and made aware of the PTMP.

3.3.2 Recommendations for future research

A recommendation for future research would be to include more mines and also to include different types of mines, for instance gold mines, coal mines, diamond mines, etc. in order to get a more differentiated view on trauma management in the mining industry. It is also recommended that future researchers on this topic make sure that they have the relevant interpreters present when doing the interviews in order to break down language and culture barriers. The researcher also recommends that this topic should be researched further and more in depth.

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ANNEXURE A

Below is a representation of the interview schedule and information booklet utilised during the semi-structured interviews. The booklet contains:

1. Front page, including the title of the study and a space for the participant's name, surname and company
2. Index
3. Introduction explaining the purpose of the study as well as confidentiality
4. Principles for participation and informed consent
5. Biographical information
6. Interview questions

The Experience of Psychological Trauma and the Management thereof in the Mining Industry

Interview Booklet

Name & Surname:

Company:

INDEX

Introduction

This study will contribute to current literature involving psychological trauma management in the South African mining industry. The focus will be on both the individual and organisational aspects in the South African mining industry. Industrial/organisational psychologists need to be able to plan, develop and apply theories, paradigms, models and principles of the psychology field to matters connected to the work-related issues in order for them to comprehend, adjust and improve individual, group and organisational behaviour, well-being and efficiency. Contributions in terms of rich contextualised descriptions and experiences of psychological trauma and the perceived effectiveness of a psychological trauma management programme will be made. The mining industry will have a better understanding on psychological trauma management and obtain greater knowledge on the way in which psychological trauma is currently being managed in the mining industry. It will enable this industry to re-evaluate the policies and systems they have in place to manage psychological trauma. This will enable management to manage psychological trauma better on an organisational level. The individual will therefore also have a better understanding and greater knowledge on the concept of psychological trauma management and what they can expect from the services they can make use of to help them through trauma. This will enhance the well-being of these employees and the organisation will ultimately benefit from it.

The results of the interviews are strictly confidential and will only be utilised for research purposes. Participant's identities will be protected at all times.

The projects adhere to all ethical prerequisites to perform research at NWU. The registered ethics project number is NWU-00084-10-S4.

Thank you for your participation.

Sincerely,

Tenise van Niekerk &
Mr. Bouwer Jonker

Principles for participation

You are invited to participate in the above mentioned research project based on the following principles:

1. Participation is voluntary and no pressure may be placed on you to participate in this project.
2. You may not be bribed to participate in the project. It may be that you yourself may not derive any benefit from the project, but that the knowledge that will be acquired through the project will be to the benefit of others.
3. You are free to withdraw from the project at any time without disclosing any reason. You may also request that your data is not used further in the project. You are kindly requested to not withdraw from the project without proper consideration of the project.
4. By agreeing to participate in the project, you also grant permission that the data that is generated by the project can be used as seen fit.
5. You are encouraged to put any questions that you might have pertaining to the project to the project head/leader at any time.

Consent

I, _____ (Full names and surname), the undersigned, have studied the preceding information pertaining to the project. I was offered the opportunity to ask any questions or to discuss relevant aspects with the project head. I hereby declare that I am participating in the project voluntarily.

_____

SIGNATURE

Biographical Information

These questions below concern your biographical background information. Please answer all the questions. Write your answers in the appropriate space or mark your answers with an "**X**" (where applicable):

Today's date: _____ (year / month / day)

1. **Gender:** Male ☐ Female ☐

2. **Year of birth:** ☐

3. **Ethnicity:** White ☐ African ☐ Coloured ☐ Indian ☐

   Other, please specify _____

4. **Language:**

Afrikaans	☐	English	☐	Sepedi	☐	Sesotho	☐
Setswana	☐	siSwati	☐	Tshivenda	☐	IsiNdebele	☐
isiXhosa	☐	isiZulu	☐	Xitsonga	☐		

   Other, please specify _____

5. **Highest qualification obtained:**

Lower than grade 10 (Std 8)	☐	Technical College diploma	☐
Grade 10 (Std 8)	☐	University degree	☐
Grade 11 (Std 9)	☐	Post-graduate degree	☐

Grade 12 (Std 10) ☐ Other, please specify: ☐

Technicon diploma ☐

6. **Please rate your English ability:**

Poor ☐

Moderate ☐

Good ☐

Excellent ☐

7. **Please provide your job description in which you are currently working?**

8. **How many years have you been working at the mine?**

9. **What is your household situation?**

Married/living with a partner, without children ☐

Married/living with partner, with children ☐

☐

Single or divorced, without children

Single or divorced, with children ☐

Living with parents, without children ☐

Living with parents, with children ☐

Other, please specify: ☐

Interview Questions

These questions will be asked to you during the interview. Please answer the facilitator as thoroughly as possible. Please note that all interviews will be recorded for data capturing purposes.

QUESTION 1

- What do you regard as psychological trauma?

QUESTION 2

- What type of traumatic incidents are you faced with at the mine?

QUESTION 3

- Are you aware of any psychological trauma management programme at the mine?

QUESTION 4

- Do you regard the programme as effective?

QUESTION 5

- What recommendations can you make concerning psychological trauma management in the mine?

QUESTION 6

- Is there any other thing you would like to add regarding trauma, trauma management or trauma management programmes in the mining industry?

Thank you very much for completing this booklet, it is highly appreciated.

END OF INTERVIEW BOOKLET