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**THE IMPACT OF WORK ENVIRONMENT HAZARDS ON THE SELF-ESTEEM AND
HAPPINESS OF EMPLOYEES: A CASE OF BULAWAYO POWER STATION**

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CHAPTER ONE

1.1 Introduction

The primary purpose of this study is to understand the effects of work environmental hazards on the happiness and self-esteem of workers in the energy sector. The problem statement will highlight the significance of the study, hypothesis, assumptions of the study and the research methodology. Moreover, this study will look into previous studies that were carried out by other researchers, thus reviewing literature where such research was conducted. The delimitations will determine the boundaries within which this study is going to be concluded, adding on the limitations anticipated in conducting this study will also be highlighted.

1.2 Background of the study

Working environment hazards are a serious threat to the physical and mental health of employees throughout the world (Marmot & Wilkinson, 2006). The hazards include chemicals, biological agents, physical factors, adverse ergonomic conditions, allergens, a complex network of safety risks and various psychosocial factors (Concha-Barrientos et al, 2004). Numerous studies from the general health field have endeavored to identify the top working environment hazards and their effects on worker physical health. For example, a study conducted by Lu (2008) on occupational and health problems among workers in export processing zones identified the following five top hazards: ergonomic (72.2%), heat (66.6%), overwork (66.6%), poor ventilation (54.8%) and chemical exposure (50.8%). The hazards were associated with the following illnesses: gastrointestinal problems (57.4%), backache (56%), headache (53.2%) and fatigue/weakness (53.2%). Research has also documented the impact of working environment hazards on the family dynamics and economic wellbeing of employees (e.g., Williams, 1989; Nocon and Booth, 1991; vander Sluis et al., 1998; Carr, 1999).

It is only recently that research interest has focused on the impact of working environment hazards on the psychological well-being of employees (Ahasan et al., 1999; Concha-Barrientos et al., 2004; Glass & Singer, 1972). Results of such research tend to suggest that working environment hazards negatively affect the psychological well-being of employees. For example,

Ahasan et al. (1999) observed that in some African countries heat precipitates irritation and aggressive behavior among employees. However, (Glass & Singer 1972) note that limited evidence is available on the impact of working environment hazards on the psychological well-being of employees, hence more research is needed.

While on work-related attachment at Bulawayo Power Station (BPS) where coal is used to generate electricity the researcher noted that the process presented with hazards such as noise, chemical spillages, slips and falls, heat and fly ash. However, the psychological impact of these environmental hazards on employees at this organization has not been thoroughly investigated.

1.3 Statement of the problem

Western research associate working environment hazards with negative psychological consequences on the part of employees. Evidence of the impact of working environment hazards on self-esteem and happiness of employees is scant in the African context which is fraught with hazards. Amongst other hazards employees in African countries including Zimbabwe are exposed to noise, chemical spillages, slips and falls, heat and fly ash. The physical health consequences of working environment hazards have been thoroughly investigated and appropriate interventions have been put into place to alleviate the negative consequences. In contrast, little attempt has been made to investigate and document the impact of working environment hazards on self-esteem and happiness of BPS employees. Resultantly no interventions have been developed to improve the self-esteem and happiness of BPS employees. It is against this background that the present study is being proposed.

1.4 Significance of the Study

- The study findings would be beneficial to several stake holders. For example, BPS employees would be aware of their self-esteem and happiness levels, and if need be they may endeavor to improve their self-esteem and happiness by seeking psychological therapy.

- The employers will have an insight into the self-esteem and happiness of their employees and probably attempt to improve their psychological wellbeing by designing and implementing programs which are meant to improve workers self-esteem and happiness.
- Study findings could assist policy makers to formulate appropriate Health and Safety policies which would enhance the self-esteem and happiness of workers in the Energy sector including BPS.
- The study will advance the international dialogue on the impact of work environment hazards on the self-esteem and happiness of employees in organisations by providing evidence from Zimbabwe.
- The study could prompt other researchers to further investigate issues related to self-esteem and happiness of employees in toxic work environments.

1.5 Objectives

- To determine the level of self-esteem of employees at BPS.
- To establish the happiness level of employees at BPS.
- To make recommendations for appropriate interventions.

1.5 Hypotheses

H_0 : Employees' self-esteem will not differ due to personal demographics (e.g., age, gender, work experience, tenure and position).

H_1 : Employees' self-esteem will differ due to personal demographics (e.g., age, gender, work experience, tenure and position).

H₀ : Employees' happiness will not differ due to personal demographics (e.g., age, gender, work experience and position).

H₁: Employees' happiness will differ due to personal demographics (e.g., age, gender, work experience and position).

1.7 Assumptions

- In order to make this research possible, the researcher assumes that all data to be collected and used in this research is truthful and correct.
- The researcher further assumes that they will be maximum cooperation from participants and they will respond truthfully and honestly to the subject in question.
- It has also been assumed that the sample chosen was a true representative of the target population and the instruments used are valid and measured desired construct.

1.8 Purpose of the Study

The purpose of this research is to survey and describe self-esteem and happiness of employees at BPS with the view to make recommendations for appropriate interventions.

1.9 Delimitation

This study is going to be confined to the Operations and Maintenance departments at Bulawayo Power Station whose employees are exposed to work environmental hazards on a daily basis. In other words, the study targets men and women of various ages and positions in these particular departments.

1.10 Limitations

The accuracy of the study findings will be limited by several factors. First, the study will be conducted in one geographical location thereby limiting the generalizability of the study findings to situations which will be not included in the study. Second, the small study sample will make it difficult for the researcher to generalize findings to the population of the study. Third, data for the study will be collected using a self-report questionnaire making it difficult for the researcher to eliminate participant bias. Fourth, self-esteem and happiness are personal and sensitive issues therefore it is possible that participants might not disclose all the expected information thereby limiting the researcher's' understandings of the phenomenon under investigation.

1.11 Definition of terms

- **Working environment-** pertaining to a place of employment ,it involves the physical geographical location ,the immediate surroundings of the workplace ,equipment materials processed or used and the activities of an employee while engaged in the performance of his work.
- **Hazard-** it is a potential of a substance, person, activity or process to cause harm.
- **Happiness** –an intelligible state of wellbeing, which involves moral contentment
- **Self-esteem** –it entails a sense of personal efficacy and a sense of personal growth .It is the integrated sum of self-confidence and self-respect, the conviction that one is competent to live and worthy of living.

1.12 Chapter Summary

This chapter intended at introducing the study by providing all relevant information and gives an orientation to the reader with the contents of the research. The chapter outlined among others the statement problem, significance of the study, the research objectives and the purpose of the

study. This study is organized in five chapters. Succeeding this chapter one which is an introductory chapter is chapter two in which theoretical framework is presented that reviews previous literature and empirical studies. Chapter three describes the research methodology and also discusses the methodology of spanning the test .The research methodology of this study materialized both primary and secondary data. Therefore, the research is derived from the journals, academic books, articles and field research. Chapter Four presents and interprets the findings of the study. Overwhelmingly, Chapter 5 will summarise all work done in the study and provide conclusions and recommendations on findings contained in Chapter Four.

Chapter 2

Literature Review

2.1 Introduction

Literature review refers to critical analysis of past studies in the area under study in order to reveal research progress and the outstanding issues which need to be addressed. This chapter first discusses the concepts self-esteem and happiness. Thereafter, it analyses past studies on the impact hazardous work environment on self-esteem and happiness of employees. Furthermore, the study presents the theoretical framework which guides the present study. Finally, it reveals the knowledge the researcher intends to fill.

2.2 Self-Esteem Self-esteem was defined by (Rosenberg, 1965) as the assessment made and maintained by individuals about themselves. Similarly, McCrae and Costa (1988) maintain that self-esteem is an individuals' self-perception of his/her abilities, skills and overall qualities that guides and/or motivated specific cognitive processes and behaviors. The cited definitions show consensus that self-esteem is self-appraisal of one's abilities and perceptions which could have significant psychological consequences on employees. For example, a study conducted by (Jex, 1999) demonstrated that self-esteem can predict health and well-being of employees in work organisations. However, contemporary research may need to clarify the effect of self-esteem in daily work life as very little is known about this issue to date.

Research evidence largely cross sectional and self-report in nature provides some intuition into the person who develop a strong and positive organisation self-esteem. A relationship between global self-esteem and organisational based self-esteem (OBSE) has been proven to be highly substantial ,as work is a major life activity that has major effects on both global self-esteem and (OBSE).In support of this assertion observations from American industry samples have revealed a positive and significant relationship between global based self-esteem and organisational based self-esteem (Jex & Alaqua 1999).(OBSE) has also been detected to have a significant relationship with global self-esteem in the Middle East that is countries such as Egypt ,Saudi Arabia , within a group of Mexican workers (Thornand LeMaster ,1998) and in a sample of engineering consultants.

Similarly self-esteem is often viewed as a global psychosocial construct in empirical research, but some literature focuses on its multidimensional characteristic that incorporates different components of self-evaluation (Kats, Rodin & Devins 1995). Some of these specific sub components include for example body appearance self-esteem, social self-esteem, achieving self-esteem and identification self-esteem (Kats et al, 1995). For this research we conceptualize self-esteem as a global, relatively stable, measurable trait that can be used to characterize individual differences in response to work environment hazards.

2.2.1 Self Esteem and Work Environment Studies

Coppersmith, (1967) made an observation that self-esteem indicates the extent to which the individual believes him/herself to be capable, significant and worthy. In a bid to understand self-esteem and the working environment existing literature acknowledges the works of (Pierce, Gardner, Cummings & Dunham 1989) who introduced the concept of organisational based self-esteem *Organisational Based Self Esteem*. (OBSE) is defined as the degree to which an individual believes him/herself to be capable, significant and worthy as an organisational member. It reflects the self-perceived value that individuals have of themselves as important, competent and capable within their employing organisations. Results from their studies indicate that employees with high (OBSE) have come to believe that they are worthy and needed at their place of employment. Consistent with (Korman, 1976) view of self-esteem, people with strong (OBSE) have a sense of having satisfied their needs through their organisational roles.

Research done in the German oil industry has unearthed that while organisational based self-esteem is highly stable in a similarly stable work environment changes in the latter can produce changes in (OBSE) (Pierce et al, 1989). Gardner, (1988) observed that it is because (OBSE) is potentially changeable that organisations may affect it by changing its likely antecedents. Moreso scholars have reasoned that individuals form a self-concept around work and that their organisational experience play a powerful role in determining their level of self-esteem. Furthermore the literature on the origins of global self-esteem suggests that self-esteem is affected by several forces, forces similar to those that give rise to self-efficacy (Bandura, 1982). Research carried out in the UK by (Dunham, 1990) has further exposed that these

determinants can be categorized as first ,the implicit signals sent by the environmental structures and conditions to which one is exposed to ,secondly the messages sent from significant others in one's social environment and thirdly the individuals feeling of efficacy and competence derived from his/her direct and personal experiences. Building upon this work (Pierce, et al 1989) reasoned that the determinants of self-esteem at work are similar and yet grounded in one's work and organisational experiences.

Speaking to the role of the work environment to the self-esteem of workers (Korman, 1971) studies on the mining sector in Belgium noted that in mechanistically designed social systems people tend to develop low levels of self-esteem .Mechanistic organisations achieve a high level of system-imposed control through a hostile working environment surrounded by high levels of dust, noise and immense heat. Such environments promote the development of belief systems that are consonant with the inherent mistrust in the abilities and willingness of people to self-regulate. Building upon Korman's work (Pierce,1999) studies in Indonesia construction companies theorized that any form of system-imposed behavior control or an environment characterized of pollutants and toxic substances carries with it an assumption about the incapability of individuals to self-direct and self-regulate .By way of contrast complex job designs ,non-routine technologies ,organically designed and controlled working environments lead to higher levels of self-esteem ,employees tend to view themselves as important to the organisation and worthy to be associated to the organisation as a whole ,moreso such organisations tend to provide employees with greater opportunities to self-regulate and express themselves in their organisational roles .

Complex jobs naturally allow employees a high level of self-control and self-direction, thus it can be expected to have a positive effect on employees self-esteem. Several researchers have explored the relationship between a hazardous working environment and (OBSE). In each of these investigations a relatively strong and positive relationship has been observed both within North Americans and several other cultures. Specifically (Tang & Peng 1997) hypothesized and observed a relationship between a hostile working environment that is jobs characterized by noise, heat, dust and (OBSE) as did (Pierce, et al 1989).Consistent with observations between job complexity and (OBSE) (Chatopadhyay & George 2001) found a positive relationship ($r = .49$)

task interdependence which increases job complexity and (OBSE) within the compute manufacturing industry in Canada. Lee (2003) also reports a relationship between participatory management practices toward safety policies and self-esteem of employees at work. Consistently (Vechioo,2000) observed a negative relationship ($r = -.46$) between a sense of lacking control of the working environment and self-esteem suggesting that coming to feel that one is unable to control work environmental forces such as heat adversely affects one (OBSE).

Riordan et al (2001) found in their study of new organisational members a positive relationship between the experience of a good job-self fit working environment and self-esteem after three months of employment. Similarly providing employees with a work environment that facilitates the safeguarding of their health and self-worth in all likelihood will contribute to successful task performance and heightened self-esteem .Pierce et .al (1993) reports a positive relationship between a good working environment and (OBSE).Perceptions of adequacy of skills and training ,information ,work procedures and availability of resources were all correlated with (OBSE).Consistent with the perspective on the origins of self-esteem within the work context (Bruckner ,1988) we conclude from these studies that work environment and management practices attempts to control hazardous working environments give rise to opportunities for self-direction and self-control which are positively associated with (OBSE).

2. 2.2 How Self Esteem Is Measured (literature)

Throughout the history of research on self-esteem there are existing concerns that the concept is poorly defined and therefore badly measured (Blascovich & Tomaka 1991) .Similarly (Jackson, 1984) noted that after thirty years of intensive effort what has developed on self-esteem is a confusion of results that defies interpretation. One of the chief critics of self-esteem research (Wylie, 1974) blamed the area's difficulties in lack of rigor in experimentation and proliferation of instruments to measure self-esteem. In support of his views, the above scholar notes that a number of self-esteem instruments and many of the scales correlate poorly with one another. Purely the existence of a number of idiosyncratic and casual definitions to a term which is widely used in everyday language and heavily loaded on social value has contributed to the chaos of

defining and measuring self-esteem. Therefore it is illusive that how a construct is defined has implications for how it is measured.

Research available posits that the majority of self-esteem measures have not performed adequately and it is likely for them to measure different constructs as the correlations between these scales varies from zero to (.4) (Wylie,1974).Furthermore through literature it has emerged that some measures are better than others. This is consolidated by the review conducted by (Crandall,1973) ,who reviewed thirty-three self-esteem measures in detail and judged four to be superior ,these which are Rosenberg Self Esteem Scale (RSES) (Rosenberg ,1965), the Janis-Field Feelings Scale (JFS) (Janis & Field 1959),the Cooperman Self Esteem Inventory ,(Coppersmith,1967) and the Tennessee Self Concept scale (Fitts,1964).The Rosenberg Scale measures global self-esteem while the others are multi-dimensional and measure various affective qualities of self-concept. In a research by (Demo, 1985) of eight measures of self-esteem including projective, interviews, self-reports and peer ratings he found that Rosenberg and Coppersmith scales performed best in factor analysis.

The Revised Janis-Field feeling of Inadequacy Scale (JFS) is a twenty-three item test developed in the year 1959 to be used in attitude change research (Janis & Field 1959).The multi-dimensional scale measures self-regard ,academic abilities ,social confidence and appearance (Fleming &Watts 1980).The split half reliability estimate by Janis and Field was (0.83) and the reliability was (0.91).Additionally ,a thorough review of this scale was conducted by (Robinson & Shaver 1973)who identified (JFS) as one of the best for use with adults. Similarly (Heatherton & Wyland 1991) have recommended the (JFS) scale for studies in which researchers wish to examine multi components of self-esteem.

Following, is the Rosenberg Self Esteem scale (RSE) (Rosenberg, 1965) which is viewed as the widely used measure of global self-esteem (Demo, 1985).It was used in 25% of the published studies reviewed by Self-esteem scholars such as Blascovich and Tomaka in assessing other self-esteem scales. The (RSE) is a ten item Guttman scale with a high reliability alpha of (.92), (Rosenberg, 1979) reported that the scale is more correlated mostly to with mood measures. However though Rosenberg's scale has received much credit criticism exists, (Carmen & Zeller

1974) identified one potential problem with the (RSE) they identified separate positive and negative factors. Those questions that were worded in a negative directions have on the negative factor and those that were worded in a positive manner evaded most heavily on the positive factors thereby suggesting a response set (Heatherton & Wyland 1991).

Finally there is the State of Self Esteem Scale (SSES) (Heatherton & Poliviy 1991).The (SSES) is a commonly used measure in self-esteem, to laboratory manipulations at is sensitive it and is sometimes labelled “current thoughts” to minimize experimental demands. It consists of twenty items that are tap momentary fluctuations in self-esteem. The scale has acceptable internal consistency (.92) and is responsive to temporary changes in self-evaluation (Crocker, Cornwell & Major 1993).Psychometric studies have revealed show that the (SSES) to be separable from mood (Bagozzi & Heatherton 1994).In assessing when this scale can be used (Heatherton & Wyland 1991) state that the decision to use a trait or state measure of self-esteem depends on whether one is interested in predicting long term outcomes or the immediate effects associated with feelings about self .

Blascovich and Tomaka (1991) careful evaluation on numerous measures of self-esteem led them to infer that no perfect measure exists .In their work they recommended a revision of the Janis –Field Scale as one of the better measures of self-esteem. They noted however that the Rosenberg scale is the mostly used in research as it is not specific to any dimension or trait but focuses on all aspects of self-esteem (Heatherton & Wyland 1991).

2. 3 Happiness

In outlining the aspect of happiness, it is paramount to firstly give a background assessment of wellbeing and subjective wellbeing .Ryan and Deci (2001 p.142) define wellbeing as, “the optimal psychological functioning and experience”. Consistent with this view (Field & Buitendah 2011) state that well-being is not simply the absence of mental illness, it is something over and above the simple dichotomy of mental illness and its absence. Subjective wellbeing (SWB), refers to the ways individuals evaluate how happy they are or how good their quality of life is using their own subjective perceptions of happiness (Ryan & Deci 2001). Similarly,

Uchida (2004 p.61) defines Subjective wellbeing as “an overall cognitive appraisal of the quality of one’s own life”. It is clear that the above definitions are in agreement that subjective wellbeing is an overall construct of individual happiness and therefore it is impossible to factor out happiness as an independent construct to wellbeing.

The present study uses the term happiness as it includes the concepts of wellbeing and subjective wellbeing (SWB).Uchida et al (2004 p.61) define happiness as “ a high ratio of positive to negative feelings”. Therefore a positive and affective emotional and psychological state characterizes happiness.

Two perspectives to happiness exist in literature these are the hedonic and eudemonic respectively .Although having similarities ,these perceptions exist independently of one another Ryan ,Hata and (Deci,2008).The hedonic view on wellbeing tries to maximize pleasure and minimize pain ,the pursuit of pleasure is considered the way of achieving happiness (Field &Buitendah 2011) .On the other hand ,the eudemonic perspective states that happiness comes from identifying ones virtues and living accordingly (Ryan & Deci 2001).Consistently it goes on to view happiness as different to simply experiencing pleasure by positing that well-being calls upon people to live in accordance with their daemon or true self (Ryan & Deci 2001).Happiness according to the eudemonism is a process rather than a state also arguing that outcomes even though they do not bring immediate pleasure can promote happiness (Ibid 2001).There is existing controversy from critics such as (Kahnemen,2000) who argues that people cannot evaluate how happy they really are. From this outlook it is clear that happiness is a concept that studies of well-being should measure.

2. 3.1 Happiness and Work Environment Studies

The context of work and organisation as a whole now accommodate notions of positive psychology and well-being studies (Money, Hillenbrand & Da Camara 2008).Research done by (Money,2008) has revealed that work through the management of occupational hazards could significantly lead to employees leading more engaged ,pleasurable and meaningful work lives. These in turn would benefit the organisation as a whole and the individual employee. In closing

his research (Money et al 2008) reached a conclusion that happiness acts as a casual mechanism that brings about many positive states within the workplace.

A study conducted by (Gavin & Mason 2004), showed that happiness and positive state of people at work contribute to increased organisational success and commitment. Furthermore investigations by (Oswald, Proto & Sgrol 2000) in the United Kingdom (UK) and Germany exposed that happiness makes employees more productive, and one of the variables which promotes employee happiness is a safe work environment. They provided evidence in three different styles of experiment, randomly selected individuals were made happier by controlling of heat and noise levels in their work stations. The treated individuals had approximately 12% greater productivity and commitment. From these studies and results from experiments they agreed that there is an existence of a causal link between human wellbeing and he work environment.

Consistent with the view of the above researchers (Isen & Reeve 2005) in their study in Indonesia Coal Plant industry measured the effects of coal dust as an environmental hazard. From their assertions they agreed that positive wellbeing induces employees to change their allocation of time towards more interesting tasks, furthermore happy employees retain similar levels of performance thus increasing commitment through overall wellbeing. Complementing these findings (Fisher, 2010) suggests that happiness at work leads to various positive organisational outcomes.

Building upon this notion studies done by (Diener et al 1999) shows that happy workers are intrinsically more productive .His research was guided by interview questions which asked ,*How would you rate your happiness at the moment ?Please use a 7 point scale ,where 1 is completely sad, 2 is very sad ,3 is sad ,4 is neither happy nor sad ,5 is fairly happy ,6 is very happy and 7 is completely happy* (Diener,1999).From his findings he observed that happiness is a very profound variable in employee productivity and overall wellbeing. However employee happiness was quite significantly low because of the dissatisfaction of the employees at their worksite. When the same scale was used for the second time after employees watched a humorous video clip their happiness measures was 60% higher than the previous results.

Moreso proponents of employee wellbeing argue that worker quality of life and performance are hindered by strain in the workplace. Research conducted by (Brim, 1992) further supports existing literature on employee happiness and the hazardous working environment. He noted that when demands of the environment fall below the resources, individuals experience strain or boredom that hinder quality and quantity of performance as well as their happiness at work. This research is further cemented by the stress perspective that states that a healthy work force means the absence of strain or boredom (Edwards, Caplan & Van Harrison 1998).

Line of research on employee happiness and the working environment has also been directed on work quality of life and performance which originates with the behavioral, cognitive and health benefits of positive feelings and positive perceptions (Isen, 1987). Warr (1999) argues that the presence of positive emotional states and positive appraisals of the worker and his/her relationship with the workplace environment accentuates worker performance and quality of life. Consistently (Harter, Schmidt & Keys 1992) goes on to further research as they carried out a study on the relationship between employee workplace perceptions and psychological outcomes, the results showed that the presence of positive workplace perception and feelings are associated with higher business –customer loyalty ,productivity and most importantly employee wellbeing which is characterized by employee happiness.

Furthermore, (Audio & Sosik 1999) surveys around Europe have reflected that, upcoming generations of employees clearly show a majority of employees desire greater meaning and personal development from their work and suggest many workers view their work as a calling to be enjoyable, fulfilling and socially useful .Consolidating this view (Spectors,1997) suggested that most satisfied employees are more cooperative ,more helpful to their colleagues, more punctual and time efficient ,show up for more days of work and stay with the company longer than dissatisfied employees.

Investigation by (Wright & Bonnet 1997) in Australia reflects perspective of the happy – productive worker which clearly links emotional wellbeing with work performance. Employees who report experiencing a greater balance of positive emotional symptoms over negative

emotional symptoms report to be happier and satisfied with their jobs compared with employees who show negative emotional feelings.

2. 3.2 How Employee Happiness Is Measured (literature)

The Gallup Workplace Audit (GWA) has recently set up survey questions which are becoming the most used to assess worker/employee satisfaction .The questionnaire is designed has twelve statements, with six response questions 5= strongly agree 1=strongly disagree, 6= do not know/does not apply option score .The (GWA) items are measures of antecedents to positive affective constructs such as job satisfaction and theoretically positive emotions such as happiness (Harter, Schmidt & Keyes 2002).

Most workplaces in Europe are frequenting the use of Fredrickson's broaden and build model ,this model describes how positive emotions have connected to our most basic emotional needs in the workplace. In considering workplace attitudes that relate most highly to employee well-being, (Fredrickson, 1998) outlines happiness, amusement /elation, interest and curiosity as four positive emotions at work. Studies by (Geller, 1995) have used this model in support of its influence on employee happiness and how it helps organisations to predict the happiness level of employees. To consolidate their findings they have put across that positive emotions occur through daily experiences and predisposed traits giving an example of conscientiousness which has a positive relationship to workplace engagement and it is likely the interaction of traits and daily experiences that ultimately influences the frequencies of positive emotions.

The Oxford Happiness Questionnaire has prevailed in studies of personal happiness conducted by positive psychologists in the late 1980s .Hills and Argyle (2002) have recently developed a 29 item Oxford Happiness Questionnaire (OHQ).The (OHQ) has been set as an improved version of its predecessor the Oxford Happiness Inventory by (Argle ,Martin & Crossland 1989).The scale to the others credit was improved by changing the response format from 0-3 multi-choice scoring format to a more widely used Likert Scale. However , they merely indicate that the Oxford Happiness Inventory was “devised as a broad measure of personal happiness, mainly for in-

house use in the Department of Experimental Psychology of the University of Oxford in the late 1980s". Although the purpose of developing the OHQ as to disseminate a valid measure Wellbeing for future research, the authors neglect to define or provide a theoretical framework of Subjective Well Being .More importantly, the items selected for the final version have been assessed to be potentially problematic.

2. 4 Interventions on Self Esteem and Happiness and How It Can Be Improved

Self-esteem and Happiness at work can be improved by the integration of the organisation as a whole. Employers must be able to communicate better with their employees, at most those at high risk of occupational hazards .Connection with the organisation gives employees a better feeling of belonging and worth (Gregory,2007).The same scholar carries on support that a healthier work environment shows that employees are being respected and their opinion on issues concerning their health matters by so doing their wellbeing is improved and lesser accidents occur.Geller (1996) is of the opinion that, prevention strategies need to address a myriad environment behavior and the person factors that contribute to each injury. Thus critically examining and redefining industrial safety research to improve long term and broad-based impact has important implications for reducing morbidity and also increasing the quality of life among industrial worker (Geller, 1996).

Research available has given an insight on improving employee wellbeing by adopting the three (3) Es policy which are engineering, education and enforcement to guide safety related interventions (Geller,1996).In focus of improving happiness and self-esteem the three Es focus on developing strategies that decrease the probability of an employee engaging in at-risk behaviors. Secondly educating and training employees regarding equipment, environmental hazards policies and procedures. Lastly enforcing the policies and procedures related to operating equipment, wearing proper personal protective clothing and handling well of specific hazardous substances.

Furthermore the engineering of human factors also contributes to wellbeing of employees improving their self-esteem and happiness. A case of America ,the Great Factory Act was passed in Briton in 1844 and by 1850 industrial engineers where improving the physical working conditions by increasing ventilation ,improving lighting and proving guarding for dangerous moving machinery (Gretner,1975).Industrial safety research has suggested that injuries occur as a result of excess energy between body and the working environment (Haddon,1968).Therefore ,the continuous effort by organisation regarding the wellbeing of employees at work should be guided by continuous advancing of safety and equipment in the workplace.

The formulation of human factors programs has been proven to assist with the interventions of employee well-being in work environments.Geller (1998) sites that a typical; program begins with developing a task force of representatives from various levels and specialties within an organisation. The team may then develop Occupational Hazards survey or a type of specific environmental audit for assessing the interaction between employee and his/her environment (Geller,1998).Similarly to this view (Guastello,1993) echoes that audits are complete specific recommendations and are used for reducing or eliminating the hazard or at risk behavior .Consistently with these findings (Geller,1998) after reviewing occupational safety interventions ,humans safety programs have had an average reduction of 52% on occupational injuries.

Recent available research is noting the existence and implementation of the Behavior Based Safety (BBS) as an attempt of improving self-esteem and happiness at work .(BBS) interventions attempt to motivate employees to observe each other and provide proactive feedback regarding safety. Consequently assessing whether the employees feel confident in their abilities to perform the tasks required of them. As such the implementation of such programs has been accompanied by increased employee satisfaction, more so it assists in determining employee's current state of self-esteem, happiness and self-efficacy (Roberts & Geller 1995).

Moreso the emergence of a more positively oriented psychology in turn has resulted in the concerns of employee happiness appearing increasingly in psychological literature and particularly in Organisational Psychology (Money, Hillenbrand & Da Camara 2008).The

dynamic model of wellbeing is an example of organisational Psychologist effort to explain how happiness at work can be improved .It posits how an individual's personal resources ,their health resilience combined with the context of their organisation system ,that is the work environment allows an employee to function well and resultantly have a positive experience of work.

2.5 Theoretical frame work

This research is guided by Maslow's Hierarchy of needs theory which clearly shades light on how self-esteem and happiness are paramount at any work environment. However there are some theories which attempt to explain self-esteem and employee happiness.

2.5.1 Maslow's Hierarchy of needs

Under this theory Maslow suggests that everybody has a series of needs and these needs can be organized into a hierarchy of priority. Maslow also stated that if one desires to motivate an individual there is need to know which of their needs have been satisfied (Maslow, 1989). Once this information has been attained then a decision can be reached on which need has to be satisfied in order to motivate your subject. Maslow asserts that needs at the bottom of the hierarchy must be met first and that a person is unable to focus on the needs at the top level until the bottom level needs have been satisfied or attended to. When an individual's physiological needs have been met, they will be unable to move onto safety needs, once safety needs have been met the individual can move onto social needs and so on. Under this theory Maslow states that as people continuously strive for personal achievement, the need for self-actualization is ongoing and will never be satisfied. According to the theory the Physiological needs are basic survival needs such as food, clothes, shelter and sexual satisfaction. In the work environment employees need to get remuneration and ample time to cater for and establish frequent and efficient supply or satisfaction of their needs. Failure for these needs to be met may lead to the display of apprehension in the workplace. Safety needs encompass the need to feel safe within one's environment or the one they are existing at a particular time. As this includes emotional as well as physical safety, the need to be free from anxiety is part of every employee's needs. Employees need safe working conditions and clear work procedures to reduce stress and

anxiety such that the absence of safety in the workplace may contribute to employees being unhappy with their work environment due to the various existing hazards such as heat, stake emissions and dust.

Social needs are centered on companionship; they include the need for love, friendship and belonging. For employees to be able to meet this need they must have a feeling of self-worth and self-regulation in an organisation .Since (OBSE) and happiness can be improved through the interaction of employees in the work areas , it is imperative that social needs be met because lack of positive work relationships, team work and work social events that encourage team building result in individualism and hence employees become hostile towards one another as they strive for their own interests and safety eventually self-esteem is lowered and dissatisfaction manifests.

Esteem needs focus on things that make a person feel better about themselves, the need for self-respect, status and recognition from others .when one is at work they expect to enhance their careers and as such opportunity for this to occur need to be made available. Therefore it is generally believed that employees who have higher self-esteem have many benefits than those who do not. (Branded, 1994) further supports this view when he made an observation that those who have high self-esteem are presumed to be psychologically happy and healthy, whereas those with low self-esteem are believed to be psychologically distressed and perhaps even depressed (Tenner & Affleck 1993).

Self-actualization is about excelling in one's life, as such employees need to be challenged and stimulated through the responsibilities they are given as well as being given room for development in order to reach their potential. Absence of this may lead employees to seek employment somewhere else where they can be able to reach their potential or they can engage in uncivil behaviors whilst they are in the workplace.

2.5.2 Bandura's Social Learning Theory

From a social cognitive view, the combination of safety training and safety education could increase employees' self-efficacy and shape their outcome expectancies if they had quality training and believe they can have input in the safety process. Thus, "social cognitive psychology

construes cognition as a part of social acts” (Barone, et al., 1997, p. 11). This research is narrowed to self-efficacy theory (Bandura, 1977, 1986, 1997). Self-efficacy, originally defined as a person’s belief in his or her ability to perform a specific behavior to produce an outcome (Bandura, 1977), has since been expanded by Bandura (1997 p.3) to refer to “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainment”. Throughout life, people strive to gain control of the various aspects of their environment. Individuals try to gain control over desired outcomes or attainments and achieve control over the undesirable events. From a social cognitive perspective, people are exposed to various interdependent circumstances every day that is reciprocal causation, determine the best approach to these situations, assess their perceived competence that is self-efficacy to carry out their intentions , determine if the behavior they perform will produce the desired outcome and finally decide the importance of obtaining the outcome .

Safety-related education occurs in industrial settings almost reflexively (Petersen, 1996). From a social cognitive standpoint this can have a variety of effects. For instance, typical safety education sessions focus either on giving employees information regarding hazardous conditions or use scare tactics to warn employees about dangerous safety-related situations. According to Bandura, neither method would alter employees’ self-efficacy. To have the greatest impact on employees’ self-efficacy for specific safety-related topics, “a shift in emphasis is required, from trying to scare people into health to providing them with the tools needed to exercise personal control over their health habits” (Bandura, 1997, p. 280).

Therefore, to have an effect on employees’ safety, happiness, self-esteem and job performance, self-efficacy- safety education needs to focus on providing employees with training to give them the needed skills to perform their work tasks safely. While a typical safety education session might not impact employees’ self-efficacy, it could influence their outcome expectancies.

2. 6 Knowledge Gap

Following the studies which have been done on hazardous working environment and its impact on self-esteem and happiness many researchers focused on employee wellbeing as a whole in relation to employee productivity and less on happiness and self -esteem independently.

Moreso, many of these studies focused on single occupations with a continuing emphasis on Europe and their technologically advanced industries whereas this research will focus primarily on Zimbabwe as an African state. How it is affected and the response of the employees to work environment hazards from their own perspective and not the collective world view. As noted, although available studies have furthered the researchers' understanding of emotional management, occupational hazards and the consequences forthwith, they have shortcomings in failing to identify the specific conditions under which workers are impacted by the hazardous work environments directly on their self-esteem and happiness. Furthermore the role of age, gender and workplace status is not clearly addressed, on how it can vary on the level of impact on self-esteem and happiness or if the relationship is purely utopian. The researcher therefore seeks to have more tangible and empirical evidence towards this phenomenon.

Most importantly, self-esteem and happiness studies have been carried out in the United States of America, and Canada, state that workers become psychologically distressed by the emotional demands of their work environment, however these studies are limited in their generalizability as they are based on single occupations and organisations. Also one may see it fit to say that the studies carried out on work environment effects were done in European countries and setting and as such systems may not be similar to Africa and Zimbabwe respectively.

2. 7 Chapter Summary

The review of literature offered the researcher knowledge of previous findings in similar studies noting the gaps and weaknesses in the previous research methods. The researcher managed to give an overview of self-esteem and happiness respectively also looking into various ways others scholars have sought to measure these variables so as to give a quantifiable and yet empirically correct analysis. The theories guiding this research have also been stated clearly and supported by existing studies. Lastly, shortfalls in literature were also noted especially how most of them were based on western cultures and the ways in which the researcher seeks to add more value to existing literature .

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This Chapter aims to explore the research methodology used by the researcher in the study. Research methodology has been defined as the tools used in conducting a research (Coolican, 2009). From another point of view, research methodology can be referred as the application of scientific procedures toward acquiring answers to a wide variety of research questions. Therefore, in this instance it seeks to specify the methods and the procedures used to conduct a study on the impact of the working environment on the self-esteem and happiness of employees at Zimbabwe Power Station (ZPC) in Bulawayo. Furthermore, focus is directed to the research design, target population, sample population, research instrument, data collection procedures, and data presentation and data analysis procedures.

3.2 Research Approach

3.2.1 Quantitative Approach

The study is principally quantitative in nature and used a quantitative research approach of descriptive statistics. Burns and Grove (1993) provided that a quantitative research is a formal, objective, systematic process to describe and test relationships and to examine cause and effect interactions among variables. From a different standpoint (Edmonds & Kennedy 2011) describe a quantitative research as a type of educational research in which the researcher decides what to study, asks specific narrow questions, collects quantifiable data from participants, analyses these numbers using statistics and conducts the inquiry in an unbiased objective manner. On the same footing (Sibanda, 2009) drew from his study that a quantitative research approach emphasises the numerical gathering of data and generalizing it across a widespread group of people. In this study the research used quantitative research approach because the methods has a lot to offer when we need to explore people's feelings, or ask participants questions pertaining on their experiences

(Punch, 2011). In conducting a research on the impact of the work environment on the self-esteem and happiness of employees the researcher adopted obtainable valid questionnaires on self-esteem and with the help of the supervisor the researcher edited the Oxford happiness Questionnaire to best suit the findings of the research. The use of questionnaires paved relatively easier way for the researcher to collect data from a large sample and also it is a flexible design in which the impact of the working environment can be explored and assessed in quantitative form. The findings collected from questionnaires were analyzed using statistical methods.

The significance of using quantitative research approach includes the following; it allows testing and validating already constructed theories about how and why phenomena occur, it provides precise, quantitative numerical data, data collection using some quantitative methods is relatively quick for example telephone interviews and questionnaires, it is useful for studying large numbers of people and usually data collection and analysis is relatively less time consuming since the research can make use of statistical software for data analysis. The researcher opted to use quantitative research approach in answering the question, what is the impact of the work environment on the self-esteem and happiness of employees? , as well as to address any other questions related to the safety of employees at work.

3.3 Research Design

3.3.1 Descriptive Survey

According to (Kirk & Miller 1986) research design is the plan's structure and strategy of investigation conceived as to obtain answers to research questions and to control variables. In another view, research design is the specifications of methods and procedures for acquiring information needed. It is the overall operational pattern or framework of the research project that stipulates how and which information to be collected from which sources by means of what procedures. The researcher opted to use a quantitative research design in order to acquire information which is relevant to the study. Moreso, the use of quantitative research paradigm taps into the richness and complexity of a variety of experiences by attending to the actions, interactions and social context of life (Crewel, 2004). Coolican (2009) reviewed that studies which are concerned with describing the characteristics of a particular individual or at a group

are called descriptive research studies. According to (Creswell, 1994) descriptive surveys are non-experimental designs that measure the characteristics of a sample at one point in time. In this research descriptive surveys were used so as to be able assess and evaluate the phenomena prevailing or being focused on. The ultimate purpose of using descriptive survey as a research design was to obtain information which can be analyzed, patterns extracted and comparisons made.

Surveys are usually used in research to collect quantifiable data from respondents in order to measure, examine, analyse and generalize the findings. Furthermore they have become generally accepted as a scientific and accurate way of collecting data to quantify gathered information (Zikmund, 2003). In an attempt to add on to his earlier research (Zikmund & Babine 2010) agree that a survey is a research technique in which responses are collected through structured instruments from a sample in a manner whereby the behavior of respondents is observed and described in an appropriate way. Sudan, Lewis and Thornhill (2012) further postulate that, surveys are linked to deductive logic and are a regular method of collecting data in research by employing a questionnaire that collects data from a sample followed by statistically analyzing the data. Information from surveys can be collected in several ways, through telephone calls sending a questionnaire by post or face to face or using other data collection methods. This research will make use of questionnaires whose main reason from the perspective of (Hague 2002) is to obtain information from the respondent in a logical manner and follow a certain order that allows respondents to record facts, comments or attitudes.

A widespread method of collecting data for surveys is using the Likert scale (Zikmund, 2003). These are used for measuring attitudes which require respondents to choose a statement from a number of statements which range from “strongly agree” to “strongly disagree” (Saunders, Lewis & Thornhill 2007). A response is chosen from a set of statements which allows the researcher to perform a statistical analysis. The choice that the respondent makes means that they agree with the statement they have chosen which allows them to express their feelings. The researcher adopted a four (4) point Likert scale in her study instead of a seven (7) point scale as

the lesser the scales there is a reduction in levels of frustration among respondents and increases the rate and quality of responses (Prayag, 2007).

3.4 Target Population

A population is defined as all possible affiliates of a category, from which a sample is drawn (Coolican, 2009). According to Leedeey, (2001) target population refers to a set of individuals or entities to which generalisations of the findings are to be made. From another view, target population refers to a group selected from population in a study or an investigation. The population for this study was taken from Bulawayo Power Station (BPS). The research targeted 600 employees who are currently operating the Bulawayo Power Station Plant with age ranging from 20 years to old age.

3.5 Sample Size

A sample is taken from the target population being researched .If the sample chosen by the researcher is adequate it will have the same characteristics of the population (Zikmund, 2003) and the finding are usually used to make conclusion about the population (Field, 2009).Furthermore, (Coolican, 2009) speaks of a sample size in terms of items selected at random from a population and used to test hypothesis about the population. In a general view, the sample size simply means a selected group of subjects intended to be a representative of the whole. In this study, the sample size constituted of sixty (60) employees in the Operations and Maintenance departments. This decision was reached on the basis of (Saunders, Lewis & Thornhill 2009) findings which state that the larger the sample the more likely that the generalizations are an actual reflection of the population.

3.6 Sampling Procedure

In this study purposive sampling was used. Purposive sampling, is sampling done with a purpose in mind usually where the researcher has one or more specific predefined groups they are seeking to work with .The researcher makes the selection choice on the basis of those who are most representative for the issues involved in the research. The researcher, chose the Operations and Maintenance department purposively as they were the most prone to work environment hazards. Purposive sampling seemed more appropriate to the research as it allowed the

researcher to reach the target population quickly by simply focusing on the people who meet the criteria for being in the sample in this case, employees who are more prone to work environment hazards. The purposive sampling technique has the following advantages that also made it preferable to this study; it is less expensive, consumes less time and least rigorous.

3.7 Research Instrument

Research instruments can be defined as tools used for collecting information and data from participants in a study (Coolican, 2009). In this study, the researcher used questionnaires to obtain information from employees in the Operations and Maintenance department.

Questionnaires are often designed for statistical analysis of the responses given by participants. Leedeey, (2001) described a questionnaire as a document containing questions designed to get information appropriate for analysis. Similarly, (Coolican, 2009) asserts that a questionnaire is a research instrument consisting of series of questions and other prompts for the purpose of gathering information from respondents. Since the researcher was dealing with a large sample the use of questionnaire as a research instrument increasingly became more appropriate. Questionnaires were also decided upon because of the following;

- i. They ensured a high response rate as questionnaires were distributed to respondents to complete and were collected personally by the researcher.
- ii. They require less time and energy to administer.
- iii. They offered the possibility of anonymity because subjects were not required on the completed questionnaire.
- iv. There was less opportunity for bias as they were presented in a consistent manner.
- v. Most of the items were closed which made it easier to compare the responses to each other.

Two questionnaires were used by the researcher to collect data, the Rosenberg Self Esteem scale and the Oxford Happiness Questionnaire. In order to conduct a research on the impact of work environment hazards on the self-esteem and happiness of employees the researcher adopted obtainable valid questionnaires on self-esteem and happiness. The Rosenberg self-esteem scale

(RSE) was first formulated by (Rosenberg 1965) .The (RSE) is a ten item Guttman scale with a high reliability alpha of (.92) (Rosenberg 1969) .The Oxford happiness questionnaire (OHQ) was developed by (Hills & Argyle 2002) .The (OHQ) is a 29 item score questionnaire which has been set as an improved version of its predecessor the Oxford Happiness Inventory. With assistance from the supervisor the (OHQ) was edited to best obtain valid responses which can be quantified and analysed for usable results.

3.8 Data Collection Procedures

The researcher obtained a research letter from the Midlands State University's department of Psychology that the researcher used to seek permission from Zimbabwe Power Company Head office to conduct a study at Bulawayo Power Station. Secondly the researcher acquired informed consent from the participants to fully engage in the study. The questionnaires were filled in the Administration office at Bulawayo Power Station (BPS).

3.8.1 Pre-testing

Pre testing refers to a trial administration of an instrument to identify flaws of the research instrument .In this study a questionnaire is used as a data gathering instrument, therefore it is necessary to determine whether questions and directions are clear to subjects and whether they understand what is required of them. This process is referred to as pretesting of a questionnaire (Polit & Hergert 1995).

3.8.2 Storage of Data

Data must be stored in a secure place to avoid tempering and distorting of relevant information .As such it must be kept in secured storages which can only be accessed by the researcher .The computer with password and protected access.

3.9 Ethical Considerations

The American Psychological Association (APA) has aided through provision of ethical guidelines that should be observed in conducting studies involving human subjects, (APA, 1982). In this study the following ethical guidelines were observed;

3.9.1 Informed consent: Participants consent was obtained before they completed the questionnaire, (Burns & Grove 1993) defines informed consent as the prospective subject's agreement to participate voluntarily in the study which is reached after assimilation of essential information about the study. The subjects were informed of their rights to voluntary consent or decline to participate or withdraw participation at any time without penalty. Subjects were informed about the purpose of the study, the procedures that would be used to collect the data, and assured that there were no potential risks or costs involved.

3.9.2 Confidentiality and privacy: Confidentiality is about not disclosing or sharing information given in confidence with unauthorized people. When subjects were promised confidentiality, it implies that information provided by subjects will not be publicly reported in a way which identifies them (Polit & Hungler 1995). In this study for the purpose of confidentiality, questionnaires were conducted behind closed doors, not revealing subjects identity when reporting or publishing the study.

3.9.3 Anonymity: anonymity is defined by (Burns & Grove 1993) as a situation whereby subjects cannot be linked even by the researcher with his or her individual responses. In this study anonymity was maintained by not disclosing the subjects name on the questionnaire and the use of numbers to refer to participants. In addition, all information which could possibly lead to the identification of the participants was not included in the study.

3.9.4 Voluntary participation: Operations and Maintenance personnel from Bulawayo Power Station in this study volunteered freely to participate and were well informed of their right to

withdraw from the study at any point. At their withdrawal all data collected on them to be destroyed in their presence.

3.10 Data presentation and Analysis procedures

Luck, (1987) referred data presentation as the means whereby the data analysis and findings are placed in an organized and permanent form. It is systematic record of research that would serve as further reference for the organization. In this study, the data gathered by the researcher was presented using frequency tables, graphs, and charts. These were opted for as they are more uniform in presenting data and therefore easy to comprehend and draw conclusions from.

Data analysis was done using the Statistical package for Social Sciences (SPSS) version 18.0. The Data analysis involved descriptive statistics which encompasses the following; means, frequency and correlations.

3.11 Chapter Summary

The purpose of this chapter was to outline the research methodology preferred in this study. This included explaining the procedure used in selecting the target population, population sample, research instruments, describe data collection procedures, ethical considerations and provide an explanation of the statistical procedures used in data presentation, interpretation and analysis.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The chapter presents, analyses and interprets the data gathered for the purpose of the study. The Statistical Package of Social Sciences (SPSS) version 18.0 was used to analyse data. Specifically, descriptive and inferential statistics were used in the analysis.

4.1 Response rate

The table below 4.1 shows Questionnaire Response rate, the breakdown of the responses from the selected departments participating in the research. Sixty questionnaires on self-esteem and happiness were distributed and fifty-seven were returned ($n = 57$). Three (3) were unable to respond resulting in a 91% response rate.

DEPARTMENT	QUESTIONNAIRES DISTRIBUTED	QUESTIONNAIRES RETURNED	RESPONSE RATE %
Maintenance	27	27	100%
Operations	33	30	91%
TOTAL	60	57	91%

4.2 Participants' Gender

Table 4.2 shows participants Socio-demographic characteristics, that of the 57 participants, 38 (66.7%) were male and a total of 19 (33.3%), were females. Therefore it is evident that more males than females participated in the study.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	38	66.7	66.7	66.7
Valid Female	19	33.3	33.3	100.0
Total	57	100.0	100.0	

Table 4.3 Participants' Length of service

Table 4.3 shows participants length of service, depicting that in the range (0 – 5) years, (**n=32**) employees, (6 -10), (**n=7**), (11 - 15) years (**n=5**), (16-20) years (**n=1**) and finally 21 years and above in service (**n=12**). It can therefore be concluded that most participants working in hazardous environments have served the organisation for 5 years who make up (56%) of the total sample whereas the range 6 years to 20 is the least represented contributing (1.75%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0-5	32	56.1	56.1	56.1
Valid 6-10	7	12.3	12.3	68.4
Valid 11-15	5	8.8	8.8	77.2
Valid 16-20	1	1.8	1.8	78.9
Valid 21+	12	21.1	21.1	100.0
Total	57	100.0	100.0	

Table 4.4 Participant’s Educational level

Table 4.4 shows that, the majority 43.9 % (**n=25**) of respondents at the worker level had certificates, 32% (**n=18**) had Diplomas, 22% (**n=13**) had Degrees and Only 1.7% (**n=1**) had a Masters degree

	Frequency	Percent	Valid Percent	Cumulative Percent
CERTIFICATE	25	43.9	43.9	43.9
DIPLOMA	18	31.6	31.6	75.4
Valid DEGREE	13	22.8	22.8	98.2
MASTERS DEGREE	1	1.8	1.8	100.0
Total	57	100.0	100.0	

Table 4.5 Relationship between Happiness and Gender

The results on the table presented above between variables Gender and Happiness score show a weak positive correlation $r = (.165)$.

Pearson Product Moment

		HAPPINESS SCORE	GENDER
HAPPINESS SCORE	Pearson Correlation	1	.165
	Sig. (2-tailed)		.221
	N	57	57
GENDER	Pearson Correlation	.165	1
	Sig. (2-tailed)	.221	
	N	57	57

Fig 4.1 Shows Happiness of employees regarding their Gender. A quick glance on the diagram shows that females are slightly happier than males at work. Males made up 66.7% of the sample ($n = 57$) whilst females made up 33.3 % ($n = 57$). Out of a possible Happiness score of 68, the mean Happiness score for males was 35 whilst females scored a mean of 40.

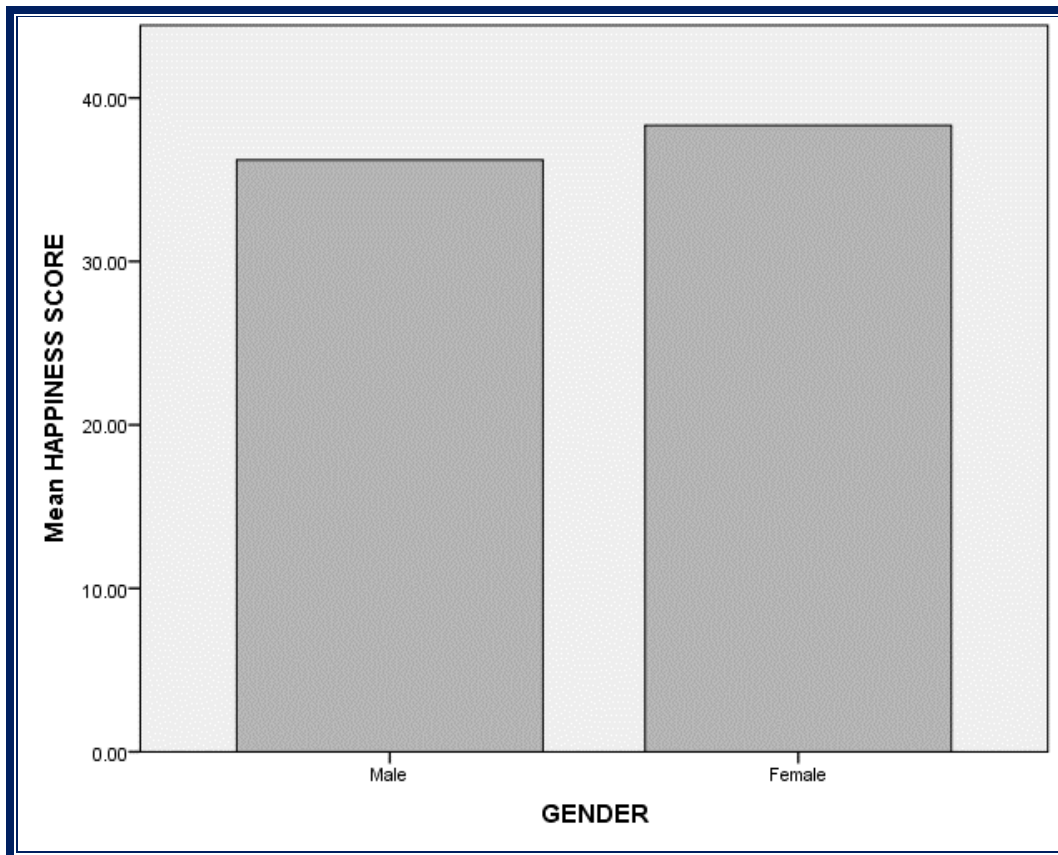


Table 4.6 Relationship between Happiness and Age

Table 4.6 interprets the results on the relationship between Happiness and age. There is a moderate negative relation between Happiness and age which is characterized by $r = -.474$. Therefore, the alternative hypothesis is accepted, that as age increases happiness decreases.

Pearson Product Moment

		AGE	HAPPINESS SCORE
AGE	Pearson Correlation	1	-.274 [*]
	Sig. (2-tailed)		.039
	N	57	57
HAPPINESS SCORE	Pearson Correlation	-.274 [*]	1
	Sig. (2-tailed)	.039	
	N	57	57

Fig 4.2 Happiness Score and Age

From the diagram presented it is clear that happiness between the ages of 25 to 30 years is significantly high, slightly drops and remains constant from the age 30 to 45 years. However there is a drastic fall in the range of 45. Therefore it is noted that as age increases happiness also decreases significantly.

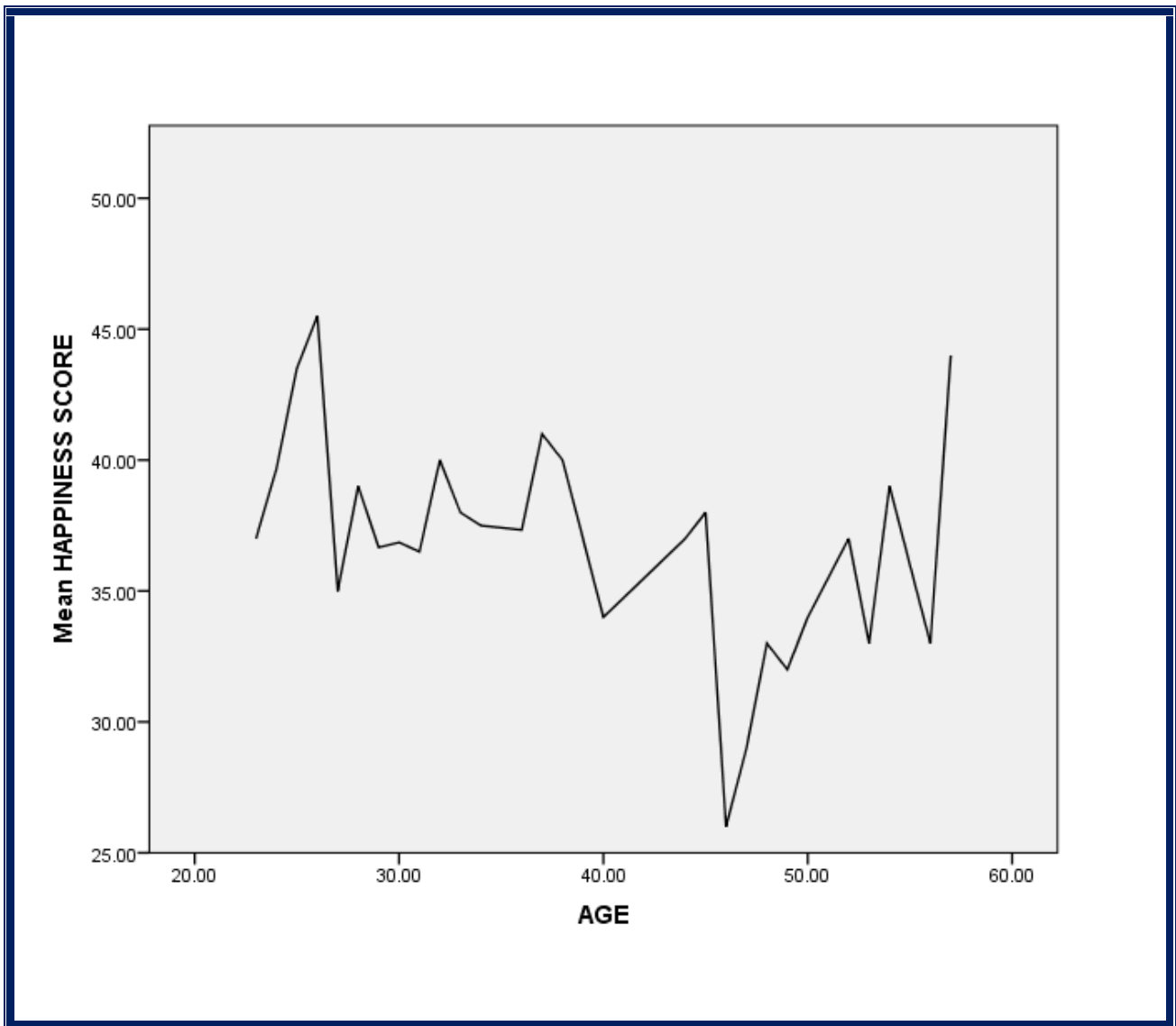


Table 4.7 Relationship between Happiness and Education.

The table alludes that there is a moderate positive correlation $r = (.567)$ between employees Happiness at work and their level of education. Therefore the degree of association between happiness and education shows that as education attainment increases, happiness also increases.

Pearson Product Moment

		HAPPINESS SCORE	EDUCATION
HAPPINESS SCORE	Pearson Correlation	1	.567
	Sig. (2-tailed)		.215
	N	57	57
EDUCATION	Pearson Correlation	.167	1
	Sig. (2-tailed)	.215	
	N	57	57

Fig 4.3 Happiness score and Education

Fig 4.3 shows Happiness of employees regarding their level of Education. An observation can be made that as attainment of education increases, Happiness also increases. In a chronological order happiness increases to the highest level of education. The mean score of Happiness for those with certificates is 35, Diploma is 37, Degree is 38 and finally Master's Degree is on 40.

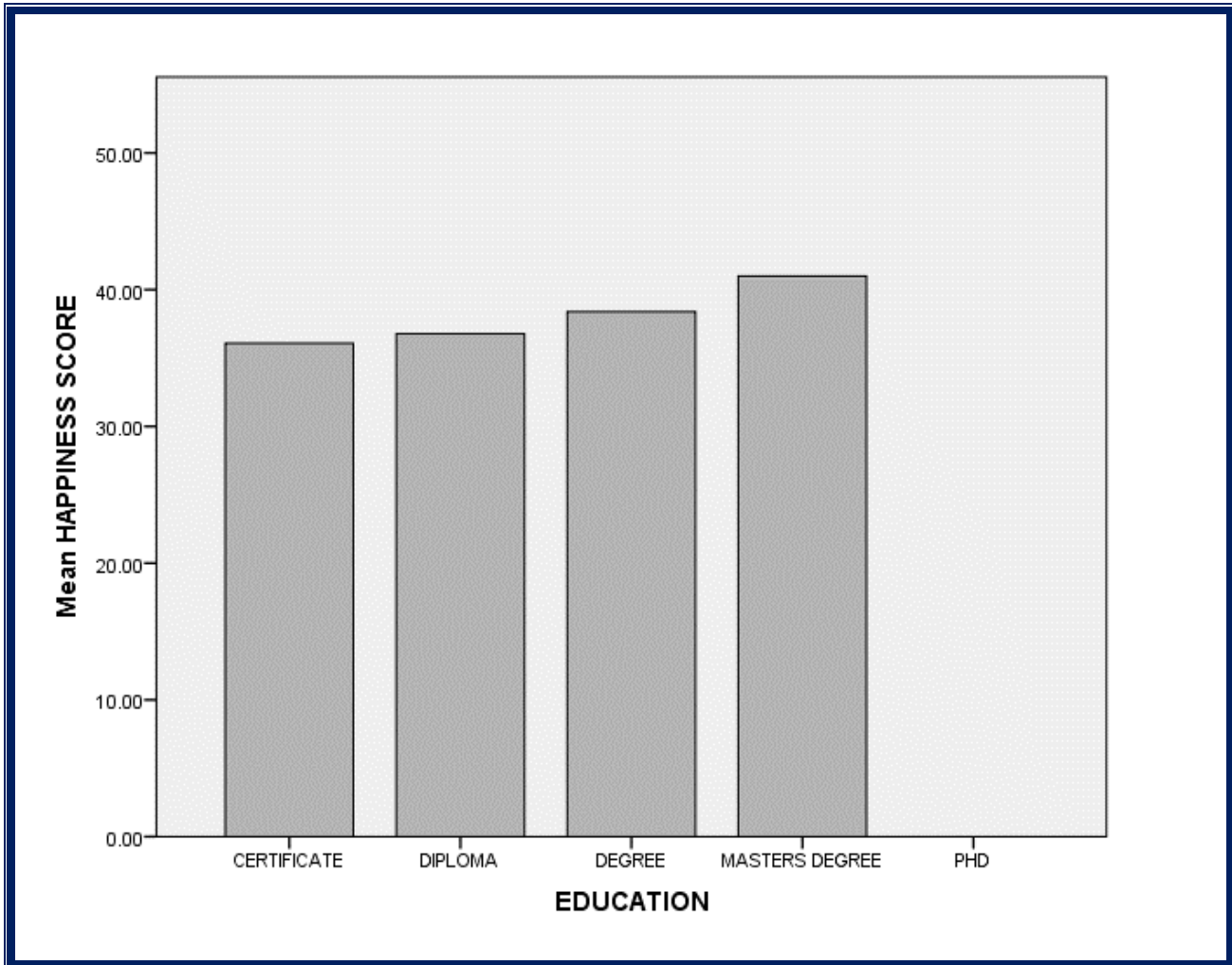


Table 4.8 Relationship between Happiness and Position.

Table 4.8 shows that between variables position at work and Happiness score there is a weak positive correlation $r = (.072)$.

Pearson's Product moment

		HAPPINESS SCORE	POSITION
HAPPINESS SCORE	Pearson Correlation	1	.072
	Sig. (2-tailed)		.593
	N	57	57
POSITION	Pearson Correlation	.072	1
	Sig. (2-tailed)	.593	
	N	57	57

Fig 4.4 Happiness score and Position

Fig 4.4 shows Happiness of employees regarding their Position. The diagram presented shows that workers have generally low happiness scores than the management in the same work environment as they are. Although the sample had ($n = 53$) workers and ($n=4$) Management - representatives of the same departments, the happiness scores for Managers were higher compared to those of their subordinates.

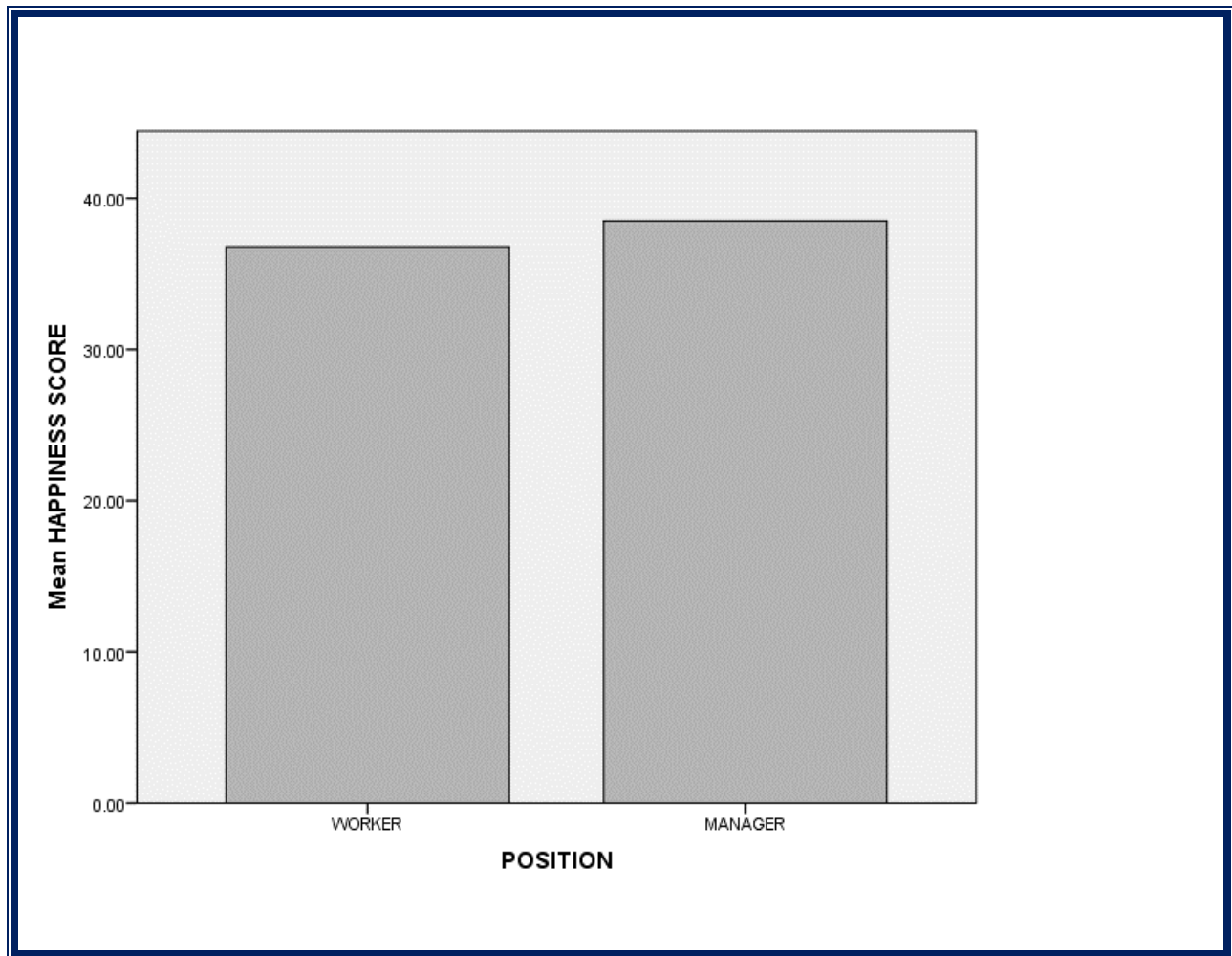


Table 4.9 Relationship between Happiness and Tenure

Table 4.9 shows that there is a moderate negative correlation $r = - (.301)$ between the period of employment and Happiness score. It is plausible to accept the alternative hypothesis as a negative relationship exists between tenure and happiness. As years at work increase, happiness of employees decrease.

Pearson Product Moment

		HAPPINESS SCORE	TENURE
HAPPINESS SCORE	Pearson Correlation	1	-.301 [*]
	Sig. (2-tailed)		.023
	N	57	57
TENURE	Pearson Correlation	-.301 [*]	1
	Sig. (2-tailed)	.023	
	N	57	57

Fig 4.5 Happiness score and Tenure

Fig 4.5 shows Happiness of employees regarding their Tenure. The diagram reveals that employees who have been in service in the organisation for (0- 5)years crossing over marginally to (16 – 20) years have higher happiness scores compared to those who have served their departments for 21 years or more

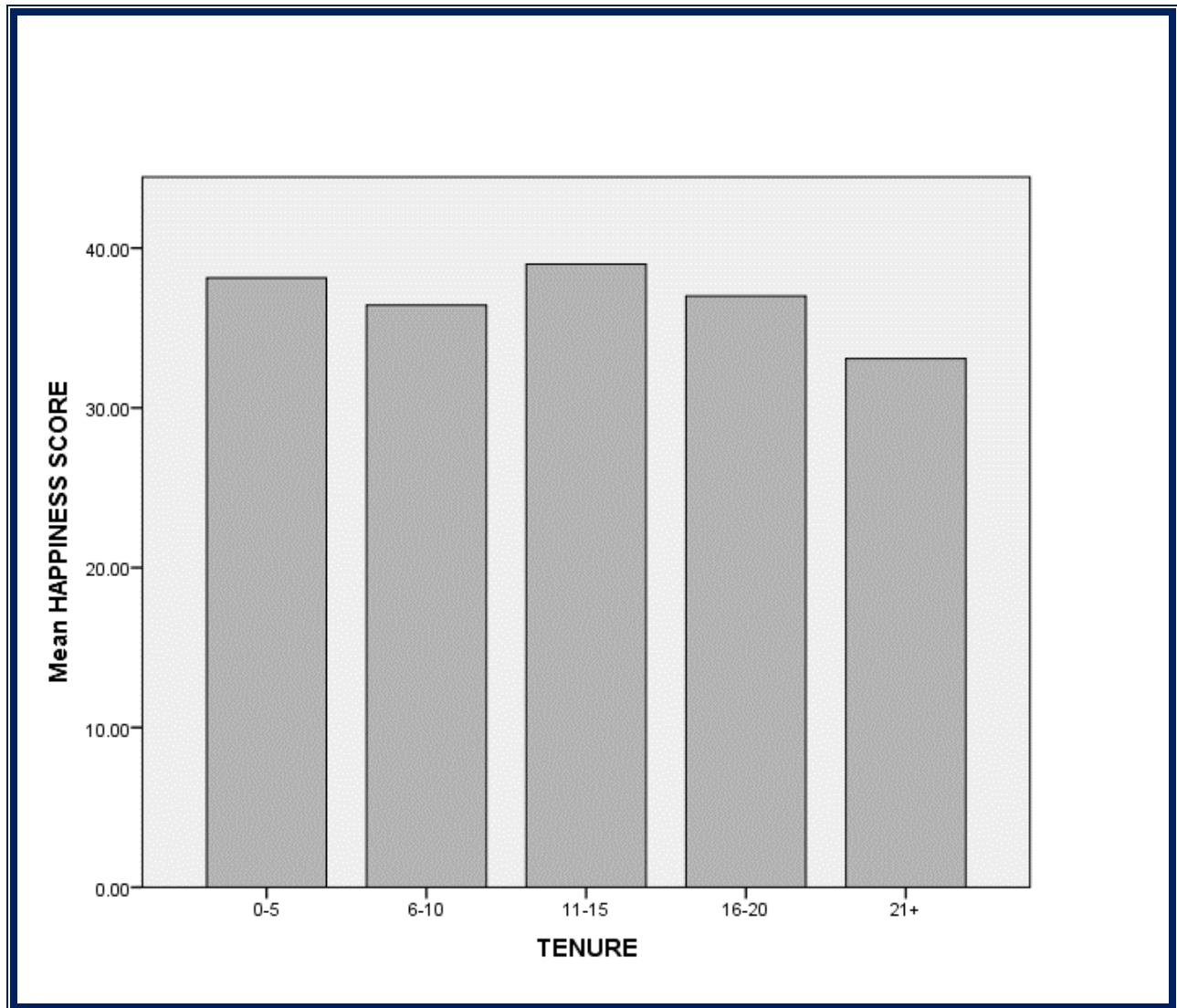


Table 4.10 Relationship between Self Esteem and Gender

In respect to Self-esteem at work the table shows that there is a weak positive correlation $r = (.016)$ between self-esteem scores and an employee's gender.

Pearson Product moment

		SELF ESTEEM SCORE	GENDER
SELF ESTEEM SCORE	Pearson Correlation	1	.016
	Sig. (2-tailed)		.905
	N	57	57
GENDER	Pearson Correlation	.016	1
	Sig. (2-tailed)	.905	
	N	57	57

Fig 4.6 Self-esteem score and Gender.

Fig 4.6 shows self-esteem score of employees regarding their Gender. From the diagram presented, females have a slight advantage on self-esteem at work as compared to their male counterparts. Females having a mean score of 23 here as Males are on 22.

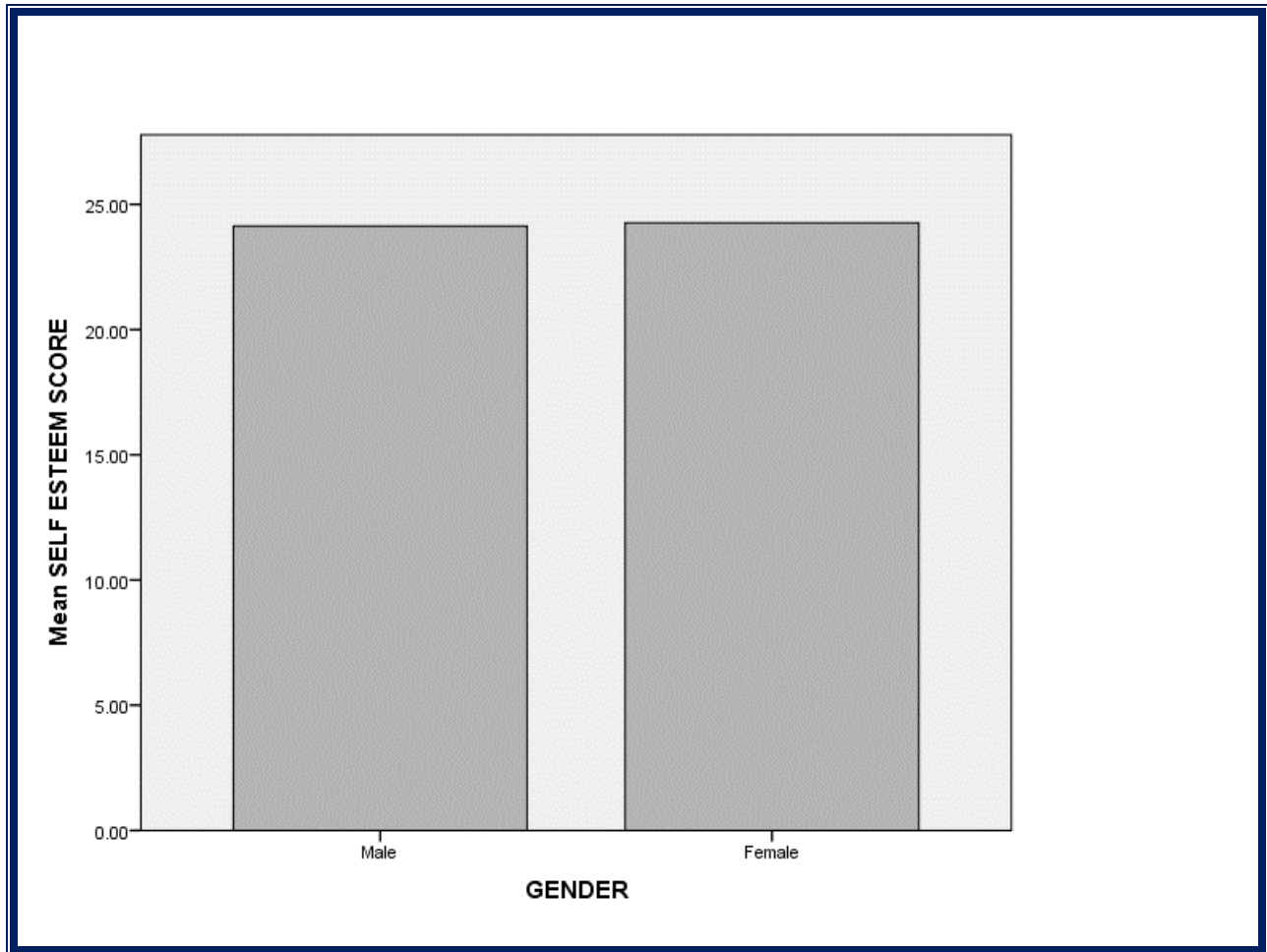


Table 4.11 Relationship between Self Esteem and Position.

Table 4.11: Pearson correlation between Self-esteem score and Position .A positive correlation between Self-esteem score and Position held at work exists evidence by $r = (.131)$.The position that one holds at work determines their level of self-esteem, thus the alternative hypothesis is accepted.

Pearson Product Moment

		SELF ESTEEM SCORE	POSITION
SELF ESTEEM SCORE	Pearson Correlation	1	.131
	Sig. (2-tailed)		.332
	N	57	57
POSITION	Pearson Correlation	.131	1
	Sig. (2-tailed)	.332	
	N	57	57

Fig 4.7 Self -esteem score of employees regarding their Position.

The diagram fig 4.7, clearly shows that Management has higher self-esteem, than general workers in hazardous work environments. The mean for Workers out of a possible 30 points from the Rosenberg self-esteem scale is 22 whereas Management mean is on 25.

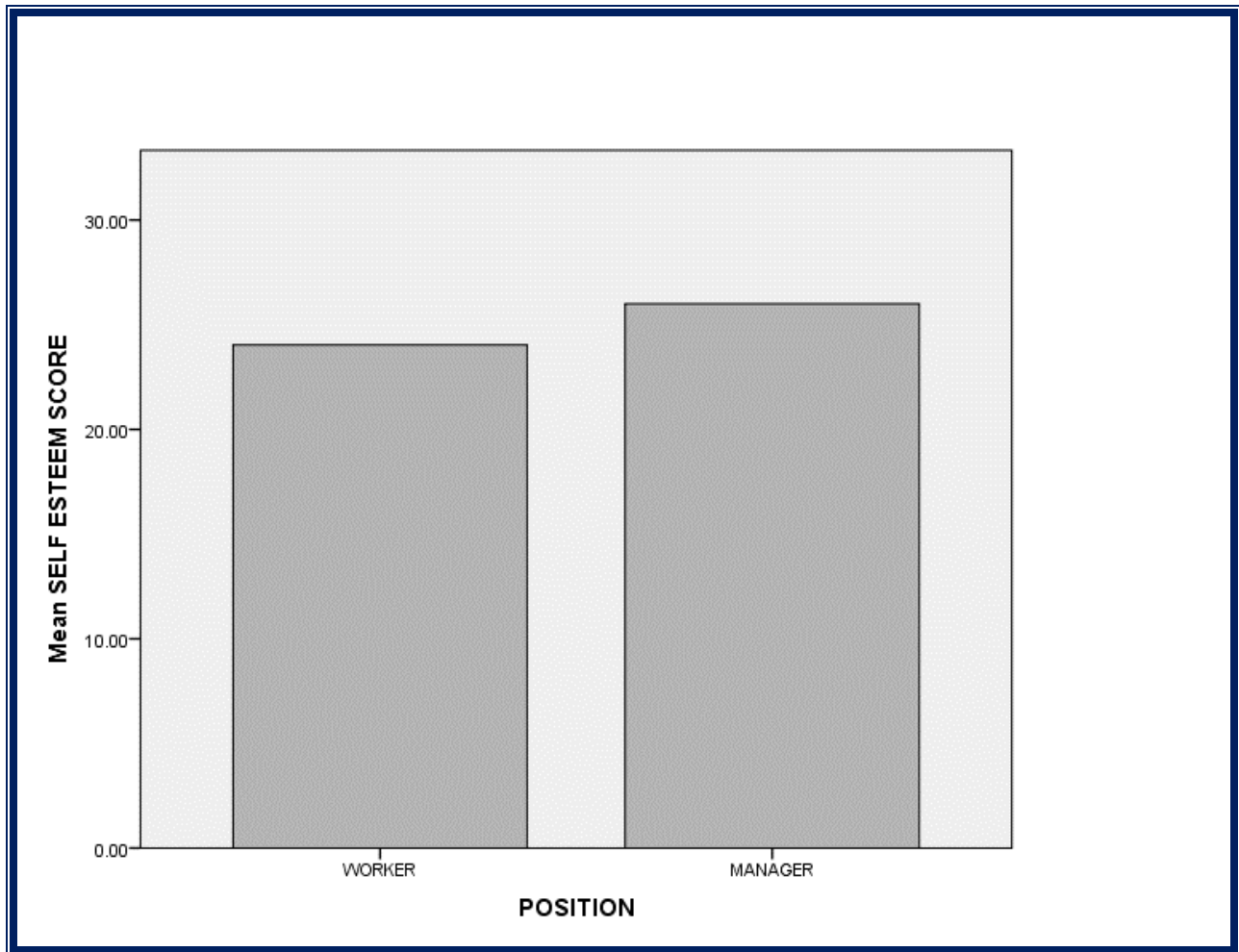


Table 4.12 Relationship between Self-esteem and Tenure.

Table 4.12 shows that, a strong negative correlation between Self-esteem score and years spent at work exists evidence by $r = - (.568)$.The correlation obtained between self-esteem and tenure represents a relationship between the two variables, as years spent at work increase conversely self-esteem decreases ,thus the alternative hypothesis is accepted.

		SELF ESTEEM SCORE	TENURE
SELF ESTEEM SCORE	Pearson Correlation	1	-.568
	Sig. (2-tailed)		.614
	N	57	57
TENURE	Pearson Correlation	-.068	1
	Sig. (2-tailed)	.614	
	N	57	57

Fig 4.8 Self-esteem score and Tenure

Fig 4.12 shows self -esteem score of employees regarding their Tenure. The diagram depicts that self-esteem scores remained marginally constant from ranges (0-5), (6-10) and (11-15) however (16-20) falls way below average from the rankings on the presented data.

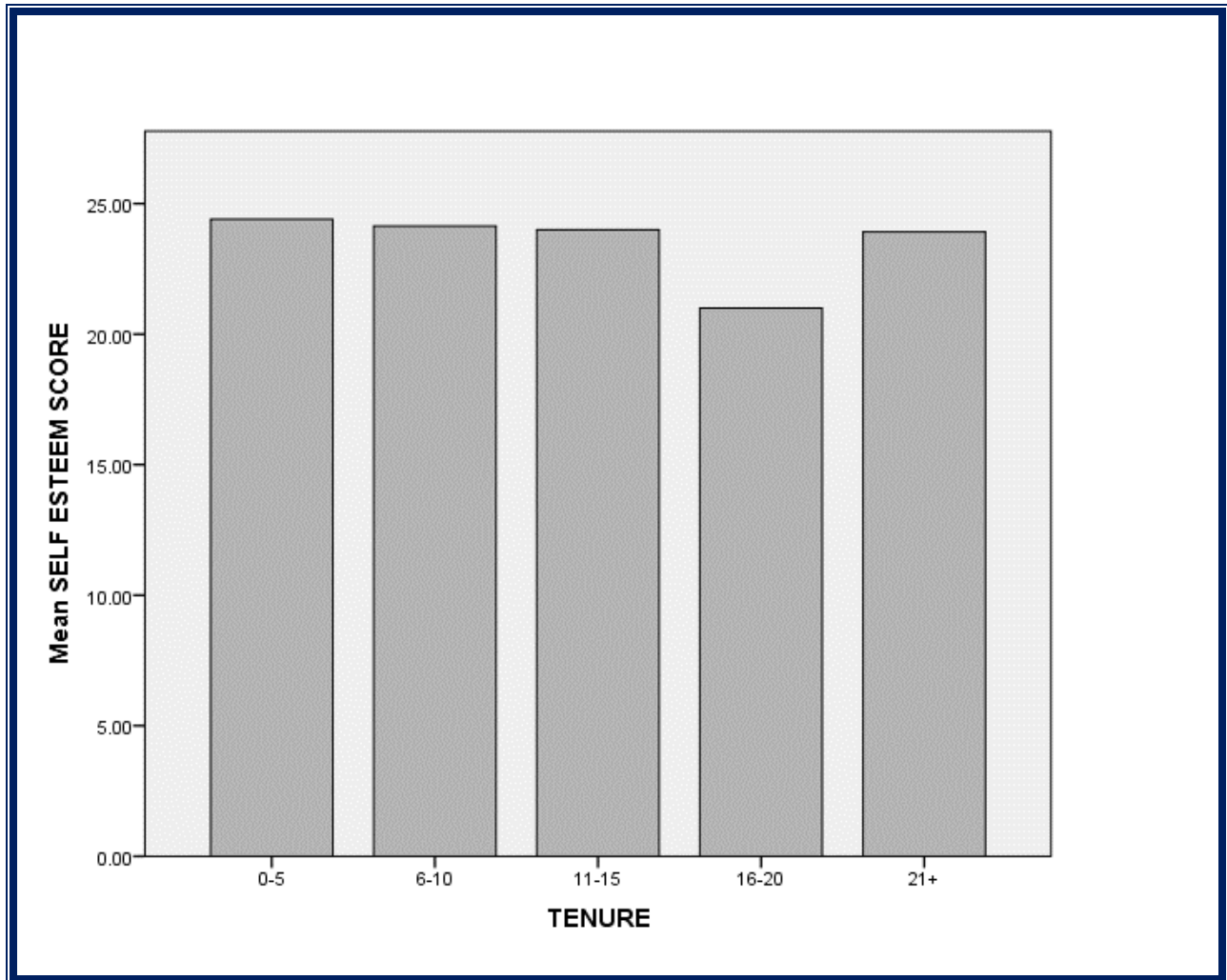


Table 4.13 Relationship between Self-esteem and Education.

Table 4.13 Pearson correlation between self-esteem score and education shows a weak positive correlation between Self-esteem score and Education held at work exists evidence by $r = (.124)$. The variables systematically vary in the same direction showing a relationship exists, as education increases self-esteem increases thus the alternative hypothesis is accepted.

Pearson Product Moment

		SELF ESTEEM SCORE	EDUCATION
SELF ESTEEM SCORE	Pearson Correlation	1	.124
	Sig. (2-tailed)		.358
	N	57	57
EDUCATION	Pearson Correlation	.124	1
	Sig. (2-tailed)	.358	
	N	57	57

Fig 4.9 Self-esteem score and Education

Fig 4.9 shows self -esteem score of employees regarding their education. It has been made coherent from the diagram above that employees with Certificates scored the least on the self-esteem questionnaire. However, self-esteem shows a gradual rise from the level of education one accomplishes.

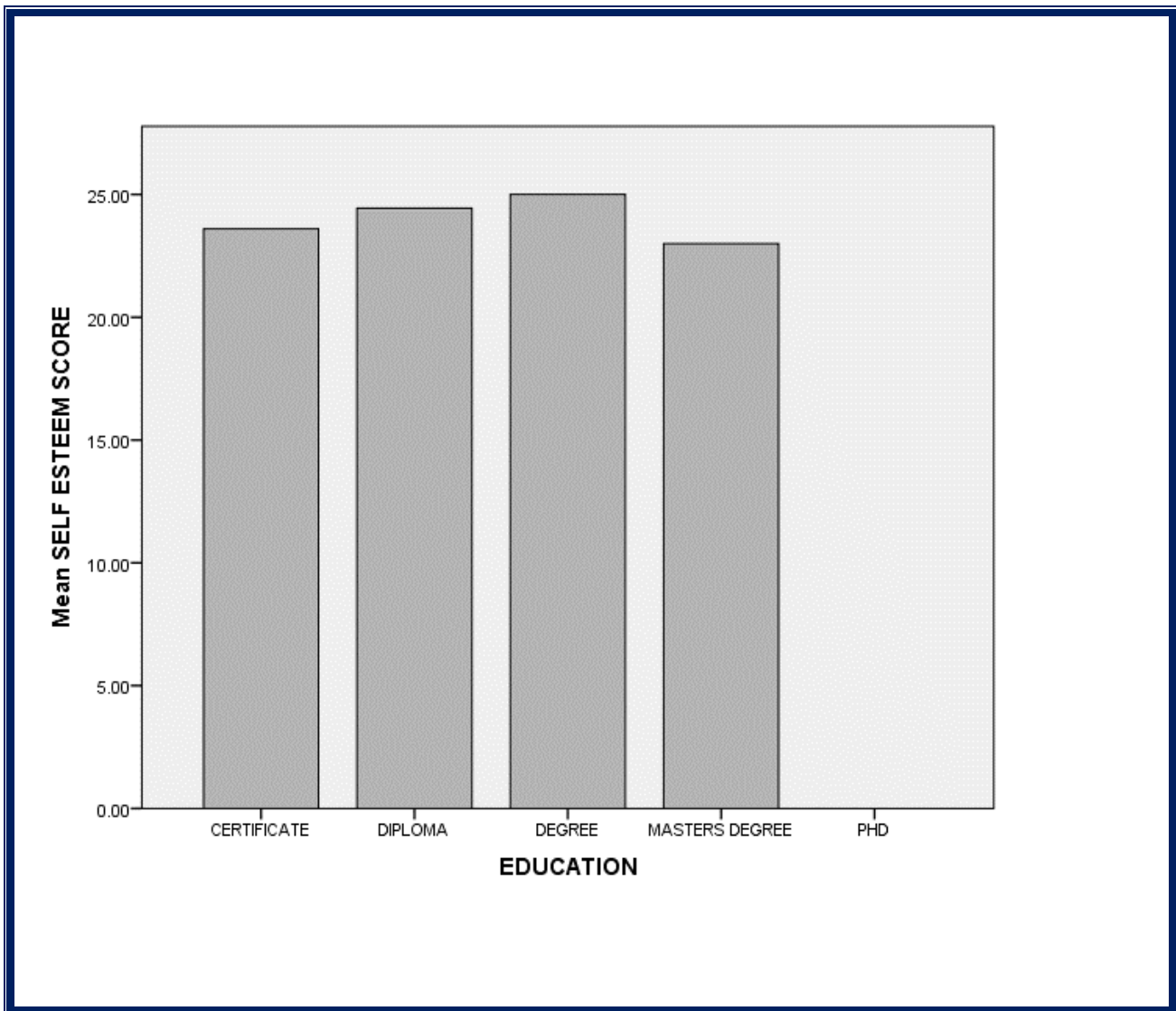


Table 4.14 Relationship between Self Esteem and Age.

Table 4.14 Pearson correlation between self-esteem score and age shows that, a modest negative correlation between Self-esteem score and an individual's age exists evidence by $r = -.166$. The alternative hypothesis is accepted that as employee age increases, inversely self-esteem decreases.

Pearson Product Moment

		SELF ESTEEM SCORE	AGE
SELF ESTEEM SCORE	Pearson Correlation	1	-.466
	Sig. (2-tailed)		.218
	N	57	57
AGE	Pearson Correlation	-.166	1
	Sig. (2-tailed)	.218	
	N	57	57

Fig 4.10 Self-esteem score and Age

Fig 4.10 shows self-esteem score of employees regarding their Age. From the diagram it is quite self-esteem between the ages of 25 to 30 years is ominously high, slightly drops and remains constant from the age 30 to 45 years. However there is a drastic fall in the range of 45. Therefore it is noted that as age increases self-esteem also decreases significantly.

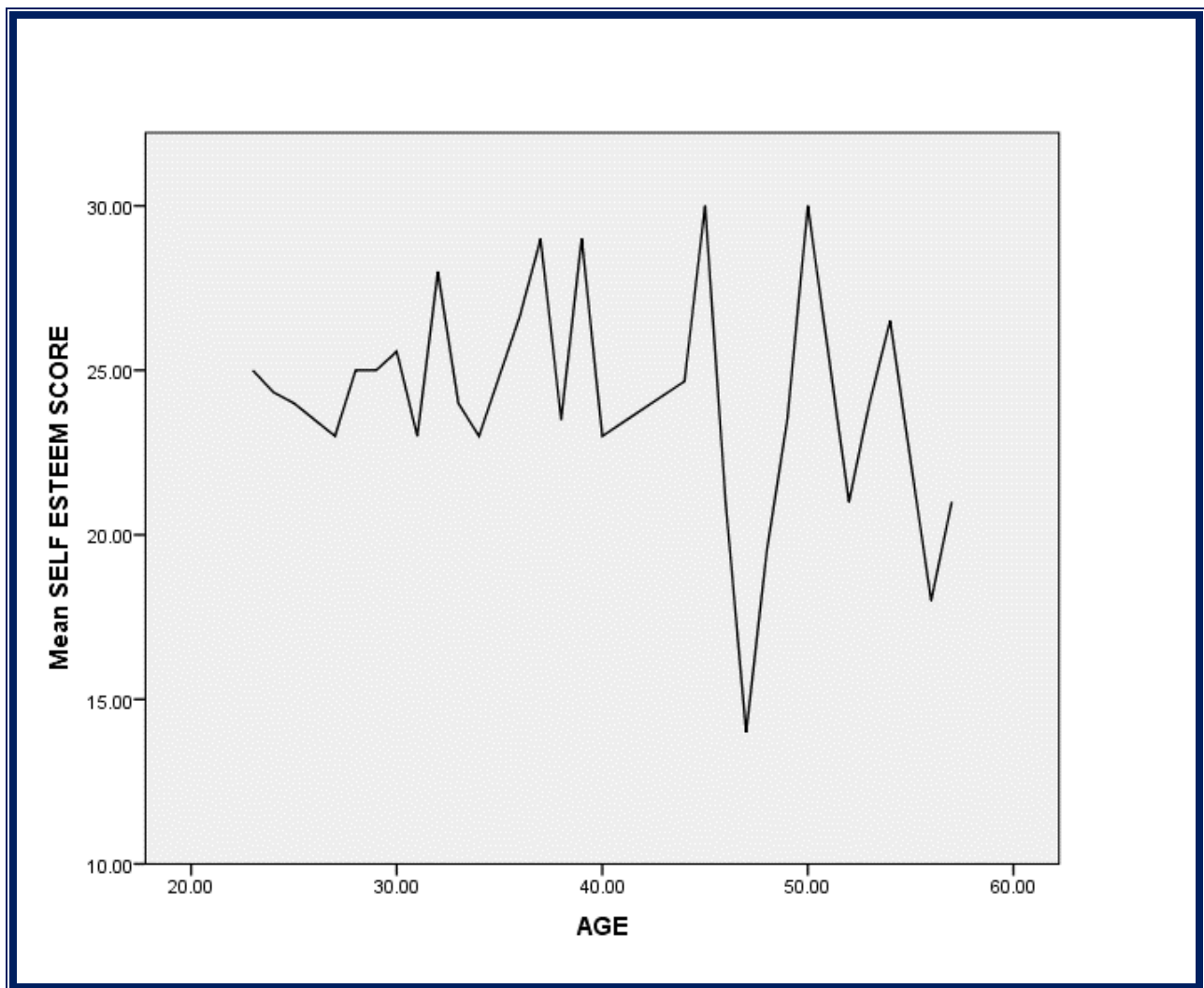


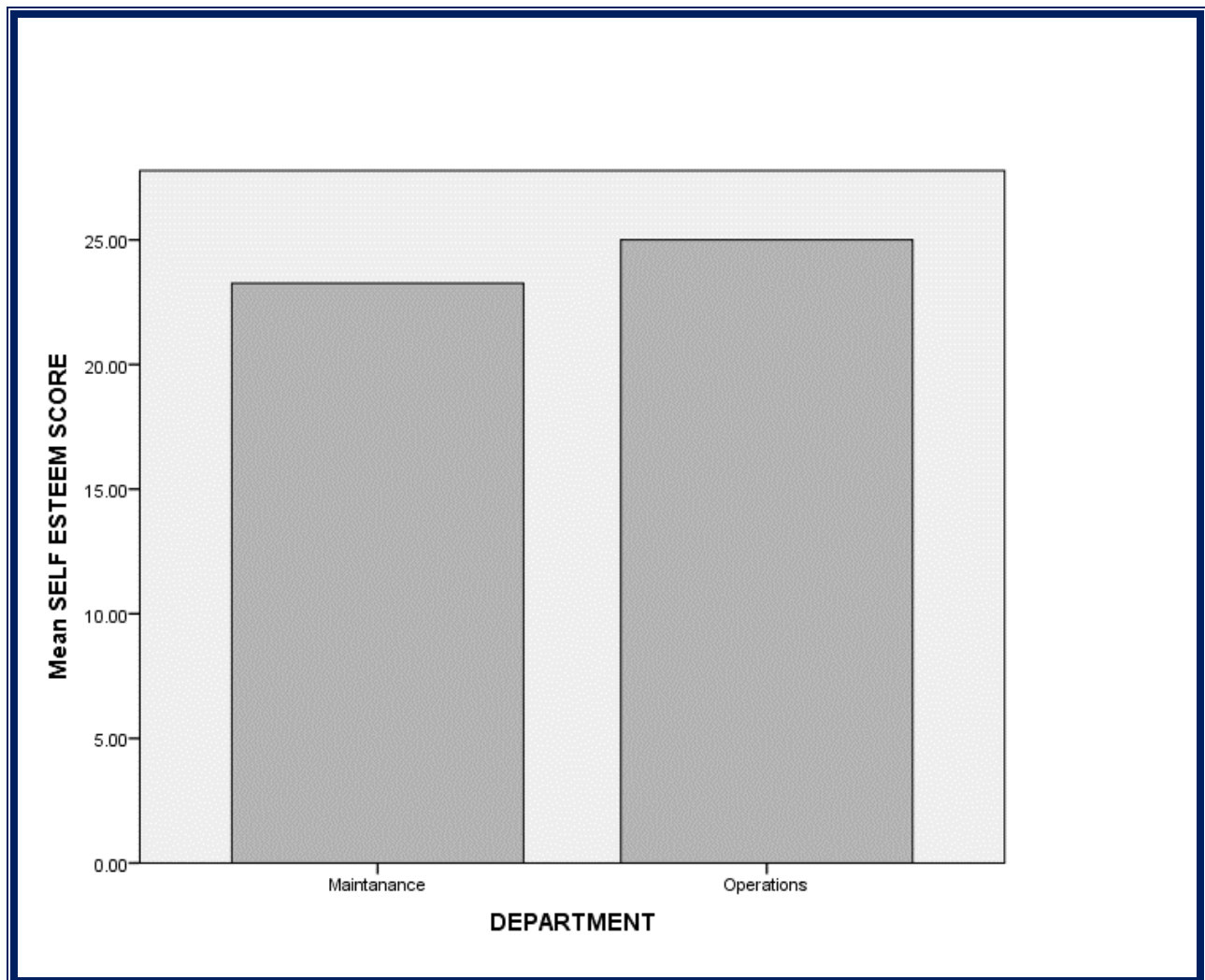
Fig 4.11 Happiness score and department

Fig 4.11 shows Happiness score of employees regarding their Department. The departments chosen for this research worryingly are on the same range on the Happiness scale, both marginally scoring an average of 36 from a well possible 68.



Fig 4.12 Self-esteem score and Department

Fig 4.12 shows Self-esteem score of employees regarding their Department. From the graph one can conclude with no reasonable doubt that Self-esteem scores vary slightly amongst departments. The maintenance department scored the least self-esteem score with a mean of 22 where on the other hand the Operations department staff members have a mean score of 25.



4.3 Chapter Summary

This chapter main's thrust was to present and analyse data best suited to the research objectives in a comprehensive statistical manner. Brief descriptions were also provided for better understanding of the contents. Discussions, conclusions and recommendations drawn from the study will be contained in the next section.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This Chapter presents the discussion of the research findings. It also draws conclusions and recommendations from the relevant literature, pertaining to the impact of work environment hazards on the self-esteem and happiness of employees. The conclusions were obtained from the findings and results obtained from the previous Chapter. The researcher also made recommendations for different stakeholders to whom the study was of significance to.

5.2 Discussion of Results

The researcher focused on exploring an understanding the impact of work environment hazards on the self-esteem and happiness of employees. In this regard, the research hypothesis were used as a guide to the discussion and used as sub-headings. The research Hypothesis were;

H₀ : Employees' self-esteem will not differ due to personal demographics (e.g., age, gender, work experience, tenure and position).

H₁ : Employees' self-esteem will differ due to personal demographics (e.g., age, gender, work experience, tenure and position).

H₀ : Employees' happiness will not differ due to personal demographics (e.g., age, gender, work experience and position).

H₁: Employees' happiness will differ due to personal demographics (e.g., age, gender, work experience and position).

5.2.1 Personal demographics associated with employees' Happiness

Personal characteristics associated with employees' happiness under hazardous working environment include employee's gender, age, work experience, position, tenure and education. From the research findings females scored higher happiness scores than males. Although females makeup 33 % of the research sample their happiness mean was $x = 40$ compared to males $x = 35$ the scores reflected that females are happier than males at work. It can therefore be inferred males are more susceptible to hazardous work environments than females. These findings are in line with (Oswald 2001) argument that , males naturally have helping behavior and may offer to take jobs that have holistic conditions such as heat and dust where females may take the "back sit". Nolen-Hoeksema and Rusting (1999) also confirmed these finding from their research where they reported that, a number of studies have found that women report experiencing greater happiness than men. Similarly, recent statistical analysis in European industries by economists of large data sets also found women to be happier than men (Oswald 2001).

The differences between happiness scores and employees' age was statistically significant. From the research findings it was established that happiness between the ages of 25 to 30 years is significantly high, slightly drops and remains constant from the age 30 to 45 years. However there is a sudden fall in the range of 45. Pearson product correlation showed that ($r = - .474$), showing an inverse that as employee' age increases, happiness decreases. These findings support (Money 2008) studies which revealed that depression from various work facets such as retirement plan and occupational hazards toil on their remaining work life has a great interplay with an employee's happiness at work .Similarly (Oswald 2001) asserts that the management of work environment hazards could significantly lead to employees leading more engaged, pleasurable and meaningful work lives despite of their age.

In focusing on the relationship between happiness and education, an observation was made from the data obtained that education is a significant factor in the happiness of employees at work from the results, ($r = .567$). From the research findings it was observed that, in a chronological order happiness increases to the highest level of education. The mean score of Happiness for

those with certificates is 35, Diploma is 37, Degree is 38 and finally Master's Degree is on 40. Therefore employees who attained high levels of education had the highest scores on the happiness scale. The researcher also established that compared to those who had Certificates, employees with at least a Degree or Master's Degree had better happiness scores. These findings are consistent with the outcomes of Brim (1992) studies from where he finds that if the demands of the environment fall below the coping resources individuals experience strain or boredom that hinder quality and quantity of their performances as well as their happiness at work. A possible explanation to this outcome is that employees who are more educated have better coping resources than those are not. The research is further cemented by the stress-perspective that states that a healthy workforce means the absence of strain or boredom. Thus it can be ascertained that employee's level of education increases their knowledge concerning the consequences of work environment hazards which may lead to injury and an overall effect on their wellbeing.

Adding on, it was established that workers had generally low happiness scores as compared to management in the same work environment as they were. These findings are supported by (Lee 2003) studies which concluded that, it can be assumed that management enjoys exemption to some strenuous tasks were they delegate their subordinates to attend to the jobs, thus general workers are highly exposed to work environment hazards than their managers. The same researcher goes on to add that management enjoys better and longer periods of training than general workers as such through training management is able to adapt to their working environments than general workers. Similarly, studies by (Lu 2008) offer a possible explanation to these findings that level of education can be a factor on the differences of happiness scores between manager and worker. As the current study showed that management had attained Degrees to Masters Level they are then able to monitor and control their happiness through various coping strategies. It can therefore be concluded that position can affect an employee's happiness at a work environment characterized of work hazards.

Furthermore, the research established that most employees were generally unhappy this was also highlighted by the Pearson correlation of ($r = -.301$). It was also discovered that those employees who had served the organisation for twenty one years and above (21+), were the least happy. Happiness levels dropped significantly in the tenure ranges of (16-20) and (21+) this shows that work environment hazards have a much greater impact as years progress at work. The researcher also observed that most employees who are in the range (0-5) had better happiness scores, a possible explanation may be due to the factors of excitement in venturing into a new job, therefore they are still adapting to their work environment. In line with employee happiness and tenure the researcher also established that employees who had served the organisation for (21 +) were not proportionally represented in the research compared to the other ranges. This may be a consequence of dissatisfaction of the working environment causing employees to leave before their retirement. Similar to (Gavinson & Mason 2004) findings, that happiness and positive state of employees at work contributes to increased commitment and organisational success. Taking from the above researchers findings it can be directly associated to the present findings that for better commitment and retainment of staff the working environment hazards can be controlled and/reduced.

5.2.3 Personal demographics associated with employees' Self –esteem

From the research findings, it was established that there is a weak positive relationship between position at work and self-esteem. Precisely 45 out of 57 workers had high self-esteem where only 8 had a medium score and none had a score below the average. On the other hand management representatives all scored high on the self-esteem scale as compared to the workers. These findings are consistent with the outcomes of (Riordan,2000) research which found that working class men have considerably less power than do middle and upper class men thus due to perceptions of lower masculinity, working class employees have generally low self-esteem. Literature available also reveals that lower occupational status and, income workers tend to have low self-esteem than their managers who have with high jobs characterized by high autonomy, high prestige and low rationalization and have high levels of self-esteem. From this finding a

conclusion can be reached that self-esteem and position at work exist independently of each other, however due to the existence of working environment hazards workers may fail to self-regulate and self-direct thus causing a decline in their feelings of self-worth.

Assessing the findings on self-esteem and age there is a modest negative correlation of ($r = -.466$). Therefore it is noted that as age increases self-esteem also decreases significantly. From the outcomes on self-esteem and age it was established by the researcher that as age is a determinant of self-esteem. Self-esteem between the ages of 25 to 30 years is ominously high, slightly drops and remains constant from the age 30 to 45 years. However there is a drastic fall in the range of 45 then there is a peak in scores from the age of 50 to 60. Also eminent from the research findings is that later ages become happier at work. This finding is supported by the maturation perspective that suggests that as an individual ages they become more accepting of who they are (Oswald 2001). Thus this perspective predicts stable or increasing levels of self-esteem in later life.

Findings from the self-esteem questionnaire established that there is no significant relationship between self-esteem and gender. Although females had a slight advantage on self-esteem, both males and females scored high on the self-esteem scale. The research findings are supported by (Korman 2000) studies who asserts gender aside, any system of imposed behavior control or an environment characterized of pollutants and toxic substances comes with it an assumption about the incapability of individuals to self-direct and self-regulate. These findings are in line with the current research findings that working environment had an effect on both males and female's ability to self-regulate and thinking positively of themselves.

From the research on the relationship between self-esteem and tenure, it was discovered that there is a strong negative relationship between an employee's self-esteem and the time they have spent at work where ($r = -.568$). It was also inferred that employees in the tenure range of (16-20) and (20+) had low levels of self-esteem compared to those who had spent lesser years at work. Thus the research found that as tenure increases self-esteem decreased. These findings are supported by (Spectors, 1997) who suggested from his research that most satisfied employees are more cooperative, more helpful to their colleagues, more punctual and time efficient, show

up for more days of work and stay with the company longer than dissatisfied employees. Similarly (Rosenberg,1989) alluded that individuals who have high perceptions of self-worth and self-esteem are thought to cope better with stress and to be motivated to work longer with their organisations.

In assessing the results on self-esteem and education the results ($r = .124$) show that there is a weak positive correlation between self-esteem and education. In the research sample (25) had certificates (18) had Diplomas (13) has degrees and (1) had a Master's degree with the diversity of educational achievement the self-esteem amongst participants remained proportional. In supporting these findings Rosenberg (1989) asserts that self-esteem is not a cause of school performance, however it is because educational achievement is such an important marker of social status, therefore increases in educational attainment will affect self-esteem and not the converse.

5.3 Conclusions

Based on the findings of the study a number of conclusions were drawn. The study established that:

- There were various factors that come into play concerning the impact of a hazardous working environment on the self-esteem and happiness of employees. This study found out that the following factors such as the personal demographics of an employee (employee's gender, age, tenure, position and education) may be predeterminants of employees' self-esteem and Happiness in a work place characterized by work environmental hazards such as dust, heat and noise. The research also found that, most of the employees at Bulawayo Power Station, workers and managers alike are unhappy, this is from the major agreement from their responses that their work environments are unsafe and affect them on a daily basis.
- The main cause of employee dissatisfaction and inability to self-regulate in their work environments is because the hazards are not well controlled or maintained.94% (n =54) strongly disagreed to the question '*are the hazards in your environment properly*

planned, controlled and managed to reduce your exposure and pose to serious health risk?'. The safety, health and environmental policy is in place but there was no functional department responsible for the monitoring and inspection of current and potential hazards at the time of the study.

- Happiness acts as a casual mechanism that brings about many positive states within the workplace. However due to dissatisfaction employees are not performing to their best abilities hence not in line with organizational goals. When asked '*When you are happy in your work climate do you think you can be more beneficial and productive in your area?*' 83% of the participants strongly agreed. Therefore, the management of occupational hazards could significantly lead to employees leading more engaged, pleasurable and meaningful work lives. These in turn would benefit the organisation as a whole and the individual employee.
- Furthermore, the research noted that the self-esteem of employees is also affected by the work environment hazards. The researcher observed a negative relationship between a sense of lacking control of the working environment and self-esteem suggesting that coming to feel that one is unable to control work environmental forces such as heat adversely affects one (OBSE). Although employees self-esteem scores were high in the questionnaires provided (n=57) 30 respondents agreed that they lack a sense of control of the hazards within their work stations. It was also established that the organisations is shortcoming in providing employees with a work environment that facilitates the safeguarding of their health which in turn contributed to futile task performance and low (OBSE).
- Employees who have aged and those who have been in the organisation for a longer time frame are a concern as both of their scores on self-esteem and happiness were significantly low. The researcher also observed that they were not adequately represented in the research sample, which leads to insinuations that employees are leaving the organisation before retirement and dissatisfaction may be the major cause. This further

shows that they are at greater risk of acquiring chronic diseases or even abandoning the organisation if the work environment hazards are not controlled or monitored.

- Although there was no loss of life or disabling injuries experienced at ZPC Bulawayo power station due to working environment hazards. Responses from the participants warn of a tip of an iceberg accident causation in the making if the root causes are not addressed.

5.4 Recommendations

- To implement *Engineering Controls*- B.P.S management should minimise employee exposure, by either reducing or removing the hazard at the source or isolating the worker from the hazard, these may include eliminating toxic chemicals and substituting with non-toxic chemicals, or enclosing work processes or confining work operations and installing general and local ventilation systems.
- To implement *Work Practice Controls*-The organisation should alter the manner in which a task is performed, followed by changing work practices to follow proper procedures that minimize exposures.
 - inspecting and maintaining processes and control equipment on a regular basis.
- To implement *Administrative Controls*- management must control employee exposure by planning and organising tasks in ways that minimize the exposure level to hazards
 - responsible personnel must procure appropriate personal protective equipment (PPE) for all employees working under hazardous working environment, to be effective (PPE) must be individually selected, properly fitted, periodically refitted and consciously and properly worn.

- Implementation of the Behavior Based Safety (BBS) as an attempt of improving self-esteem and happiness at work. (BBS) interventions attempt to motivate employees to observe each other and provide proactive feedback regarding safety.
- The organisation adopts and fully implements an occupational safety, health and environmental management system such as Occupational Health and Safety Assessment Series (OSHAS), Environmental Management Systems (EMS) or any, provided it is recognised by the Regulatory Authority so as to assist in the hazard identification and risk assessment in securing the safety and health of its employees, as well as the environment through cleaner production technology. Resources need to be availed sustainably to achieve zero accidents.
- The organisation conducts regularly, preventive, oriented safety health and environmental programs to all employees at all levels including management and employees in order to address the various training needs. They need to have the requisite knowledge and skills, cognitive abilities and sufficient knowledge of standards and regulations in order to judge deviation from norm based professional judgement and to design appropriate control measures. In that framework a culture of prevention is sustainable provided the team shares and upholds the same values towards the best practice premised on zero tolerance.
- Workers should be given adequate rest periods to be spent in a more comfortable environment.
- Management must develop a working plan to implement safety and health inspection program, in order to identify potential hazards in various work stations, send employees to regular checkups and have a trained professional to interpret the results so that workers are aware of deteriorations in health and seek medical advice promptly if need be.

- Counseling and education to both management and the employees who are susceptible to work hazards on how best to cope with hazards in their work environment.

5.5 Chapter Summary

The chapter gave the conclusions and recommendations in ameliorating the work environment hazards associated with the self-esteem and happiness of employees at (ZPC) Bulawayo power station and can be applied to other similar fossil fuel power stations throughout the world experiencing the same problem. Therefore power companies need to focus on prevention and to become proactive in reducing hazards associated with the work environment. The findings confirmed most of the predictions made by the researcher on self-esteem and personal demographics and on happiness and personal demographics. The results helped the researcher compile the discussion above relating it to the researched literature review.

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PhD
ROSENBERG SELF-ESTEEM SCALE

Strongly agree Agree Disagree Strongly disagree

- | | | | | |
|--|-------|-------|-------|-------|
| 1. I feel that I am a person of worth, at least on an equal plane with others. | ..... | ..... | ..... | ..... |
| 2. I feel that I have a number of good qualities. | ..... | ..... | ..... | ..... |
| 3. All in all, I am inclined to feel that I am a failure. | ..... | ..... | ..... | ..... |
| 4. I am able to do things as well as most people. | ..... | ..... | ..... | ..... |
| 5. I feel I do not have much to be proud of. | ..... | ..... | ..... | ..... |
| 6. I take a positive attitude toward myself. | ..... | ..... | ..... | ..... |
| 7. On the whole, I am satisfied with myself. | ..... | ..... | ..... | ..... |
| 8. I wish I could have more respect for myself. | ..... | ..... | ..... | ..... |
| 9. I certainly feel useless at times. | | | | |
| 10. At times I think that I am no good at all. | | | | |

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APPENDIX 2: HAPPINESS QUESTIONNAIRE

MIDLANDS STATE UNIVERSITY DEPARTMENT OF PSYCHOLOGY

QUESTIONNAIRE SURVEY: THE IMPACT OF WORKING ENVIRONMENT HAZARDS ON THE SELF ESTEEM AND HAPPINESS OF EMPLOYEES A CASE OF BULAWAYO POWER STATION

This Questionnaire has been designed to analyse the impacts of the working environment on the Self-esteem and Happiness of employees at ZPC Bulawayo Power Station. The results are for academic purposes and will not prejudice anyone who takes part in the survey.

Date.....

Questionnaire No.....

SECTION A: GENERAL INFORMATION

1. Department Maintenance Operations
 Quality Risk/Loss Control

Other specify.....

2. Gender Male
 Female

3. Position/Level Manager
 Worker

4. Length of employment at ZPC 0 – 5 years
 6 – 10 years
 11 – 15 years
 16 – 20 years
 Above 21 years

5. Highest level of education Certificate Diploma
 Degree Degree Masters
 PhD

INSTRUCTIONS: Please answer the following questions by checking the appropriate box. Choose the option which best represents your ‘current’ and most relevant work situation (i.e. the work role where you spend most of your time and with who you have most contact).

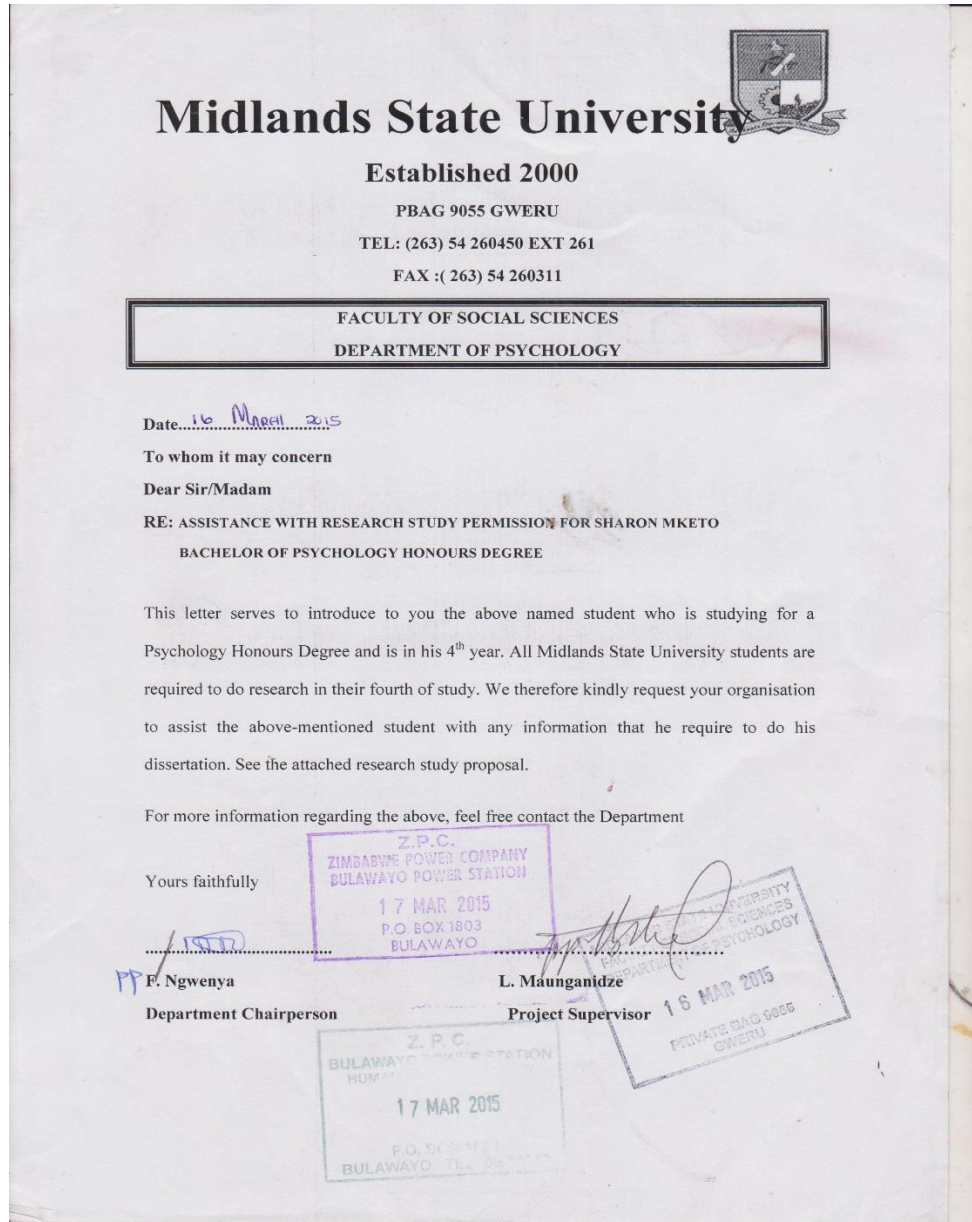
0= Not at all 1=Slightly 2=Moderately 3=Very 4=Extremely

WORK RELATED HAPPINESS QUESTIONNAIRE

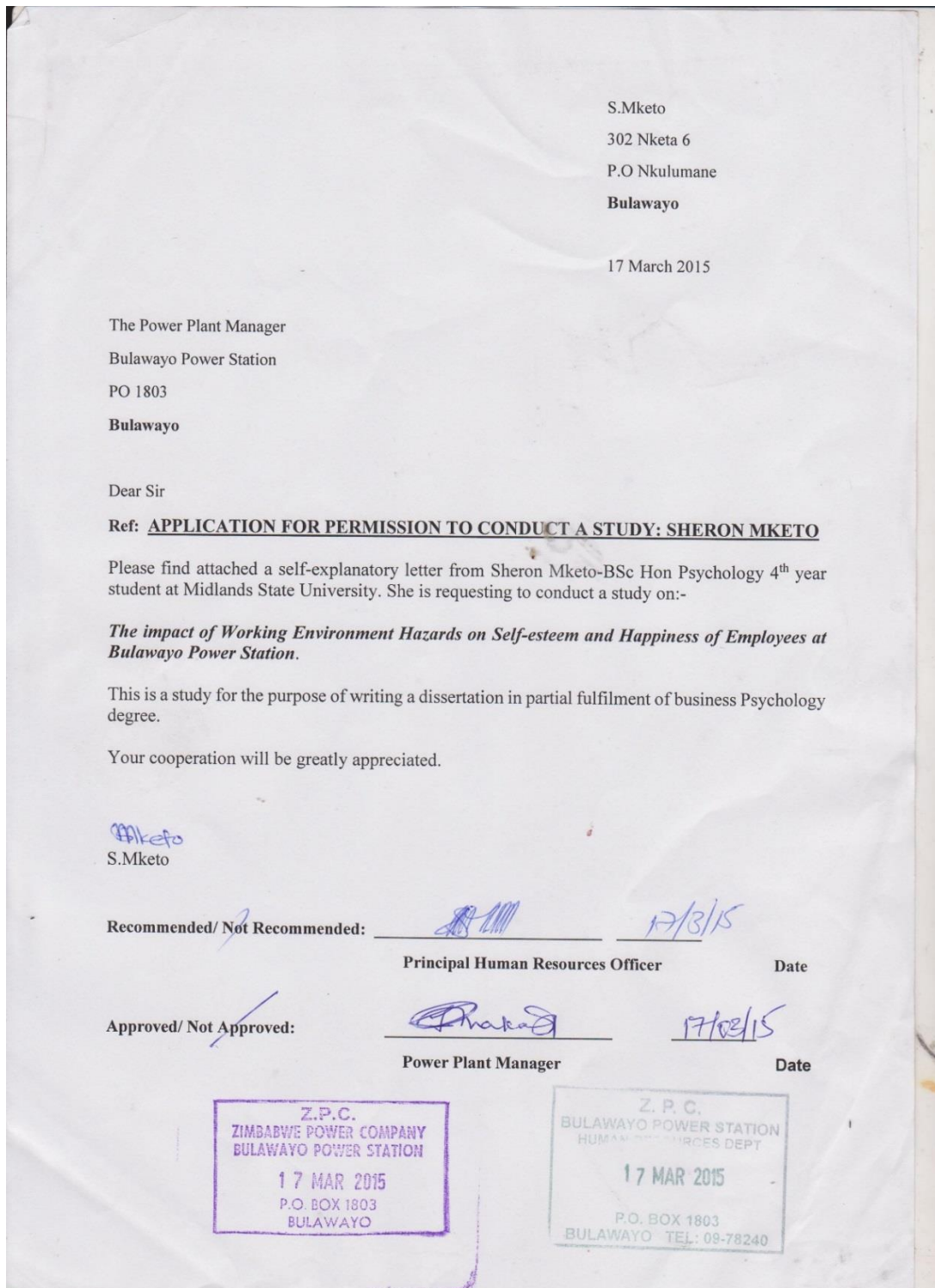
1.	Do you feel happy at work	0	1	2	3	4
2.	Are you always committed and involved even when your health is at risk?	0	1	2	3	4
3.	Does the company do an excellent job of keeping you informed about matters affecting your wellbeing	0	1	2	3	4
4.	Is the environment at your workplace conducive for putting your best efforts?	0	1	2	3	4
5.	Is your morale heightened when your wellbeing is catered for?	0	1	2	3	4
6.	Do you feel capable and effective in your work on a day to day basis?	0	1	2	3	4
7.	When you are happy in your work climate do you think you can be more beneficial and productive in your area?	0	1	2	3	4
8.	Do you feel like the levels of dust, noise, and heat and accident risk affect your feeling of personal judgment and of specific positive evaluation?	0	1	2	3	4
9.	Do you feel you have some level of independence at work?	0	1	2	3	4
10.	Are the hazards in your environment properly planned, controlled and managed to reduce your exposure and pose to serious health risk?	0	1	2	3	4
11.	Do you feel comfortable in your own work space?	0	1	2	3	4
12.	Do you understand the impact of dust, heat and noise to your health?	0	1	2	3	4
13.	Are you sometimes stressed about going for health checkups?	0	1	2	3	4
14.	Do you get assistance in interpreting results of a medical checkup?	0	1	2	3	4
15.	Are you motivated to work after you have discovered that your health is at stake? (Pneumoconiosis)	0	1	2	3	4
16.	Do you experience aggressive behaviors towards your work colleagues or anybody changes such as (increased heartbeat, sweat, irritation) when there is heat or noise or dust or a combination of all.	0	1	2	3	4

17.	When learning that one person was a victim of a hostile work environment such as noise or dust, does it increase your environmental worry?	0	1	2	3	4
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**APPENDIX 3: PERMISSION TO CARRY OUT RESEARCH AT (ZPC) BULAWAYO
POWER STATION**



APPENDIX 4: APPROVAL TO CONDUCT RESEARCH AT (ZPC) BULAWAYO



APPENDIX 5: AUDIT SHEET

Date	Activity	Supervisor's Comments	Supervisor's Signature	Student's Signature
	Proposal	Rework		
	Proposal	Proceed		
	Chapter 1	Rework		
	Chapter 1	Proceed		
	Chapter 2	Rework		
	Chapter 2	Proceed		
	Chapter 3	Rework		
	Chapter 3	Proceed		
	Instrument	Rework		
	Instrument	Proceed		
	Chapter 4	Rework		
	Chapter 4	Proceed		
	Chapter 5	Rework		
	Chapter 5	Proceed		
	First Draft	Rework		
	First Draft	Submit		