

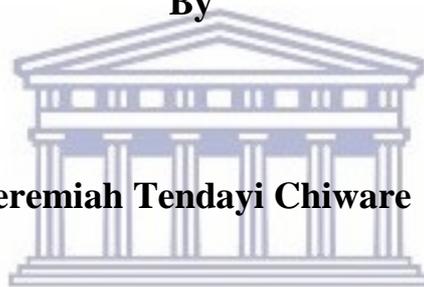


**UNIVERSITY of the
WESTERN CAPE**

**An investigation of the relationship between bullying and physical
activity at one high school in the Western Cape**

By

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**UNIVERSITY of the
WESTERN CAPE**

**A full thesis submitted in fulfillment of the requirements for the
degree of**

MAGISTER EDUCATIONIS

University of the Western Cape

Supervisor: Dr. Trevor Moodley

2018

DECLARATION

I declare that the present study: An investigation of the relationship between bullying and physical activity at one high school in the Western Cape is my own work that has not been submitted before for any degree or examination in any other university and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Jeremiah Tendayi Chiware

May 2018

Signed: J.T.Chiware



Dedication

This thesis is dedicated to the following persons:

To my late parents Samuel and Grace Chiware who always encouraged me from youth to do the best for myself in education.

To my wife Doreen who cared for me and supported me throughout this process and to my children; Tendai, Jerry, Grace and David for their encouragement to complete this study.



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Most importantly I thank God for being my pillar of strength and wisdom in carrying out this study. It is also fundamental to note that the completion of this work was a result of numerous people who assisted me in one way or another.

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- A word of gratitude too goes to the statisticians Robert Mukuna and Mr Latief in helping me with the SPSS programme and in the statistical analysis of collected data.
- My gratitude too is extended to my proof readers Daniel Angaama and Dr Ola. The workshops held by the University's Faculty of Education helped me greatly in shaping my research and that I highly appreciate.
- A word of gratitude also goes to the developers of the OBVQ and PAQ-A for permitting me to carry out this research based on their standardized questionnaires although they were slightly modified to suit the context.
- Lastly my gratitude goes to members of my family in particular my wife Doreen for the unwavering support during the numerous challenges I faced in the process of completing this study.

Abstract

According to Morrison (2007), bullying is considered a critical issue in the Western Cape Schools as well as in South African schools in general. This phenomenon of bullying can affect learners in schools and may lead to several problems such as low esteem, poor academic performance, depression, absenteeism and eventually dropping out of school. In addition, numerous studies in psychology have revealed that physical activity has positive effects on learners, (Ajay, 2011; Shaffer, 2002). This is because it increases self-esteem in learners, boosts confidence and builds the physical, social, emotional, moral and intellectual composition in an individual. This study will aim (1) to determine the relationship between bullying and physical activity among South African learners in one high school in the Western Cape, (2) to measure the frequency of bullying at that high school, (3) to measure the frequency of bully-victimization in the school among South African learners in that high school in the Western Cape, and (4) to establish the level of physical activity by the learners in the high school. This study used a quantitative method and a descriptive survey as research design. The participants were mostly black South African adolescent learners, aged between 14 and 20 years. Quantitative data was collected from a final sample size of 133 participants (N=133) (male: 56 males (42.1%) and: 77 females (57.9%) females) from the selected high school in the Metro East District of the Western Cape. Modified standardized questionnaires, namely the Olweus Bully-victim Questionnaire (OBVQ) and the Physical Activity Questionnaire for Adolescents (PAQ-A) were used to collect data. The data was analyzed using a Statistical Package for Social Science (SPSS) version 24 (IBM Corp, 2016). Descriptive data analysis using percentages and tables, analysis of variance (ANOVA), multivariate analysis of variance (MANOVA), correlation and multiple regression analysis were used in order to establish the frequency of bullying and physical activity, their relationship as well as the effects of the variables age, gender and grade on them. The study revealed that there was some bully victimization and perpetration in the school and that most of the victims were young, mostly females and in lower grades. The study also revealed that participation by these victims in physical activities was constrained as most bullying took place in the playground. Finally the study revealed that there was no relationship between levels of physical activity and the variables: gender, age and grade for both the victims and perpetrators of

bullying although these variables influenced bullying and bully-victimization in the school. Interestingly a significant difference was found between levels of physical activity and high school phases of the perpetrators of bullying. Conclusions, limitations and recommendations were also given in this study.



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List of Key Words

Adolescence

Aggression

Bullying in schools

Bully

Bully-victim

Bullying perpetrator

FET

GET

High Schools

Learners

Physical Activity



Abbreviations and Acronyms

NCS - National Curriculum Statement

CAPS - Curriculum and Policy Statement

LO - Life Orientation

GET - General Education and Training

FET - Further Education and Training

PES - Physical Education and Sport

PE - Physical Education

SPSS- Statistical Package for Social Science



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CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 Introduction

Schools are institutions that promote learning and in the process mould individuals that are not social misfits. Learning, as posited by Field (2007), takes place in a conducive and peaceful environment. The school environment, together with the school curricula are crucial components of a sound educational system. Thus at the dawn of democracy in 1994, the South African government built many schools to promote education. Recent studies have however shown that compared to other countries' academic performance, South Africa's results were poor (Christie, 2008). In its Business Tech report of 2015, the Boston Consulting Group (BCG) noted that although South Africa spends more money on education than most countries in Africa, it had the worst academic outcomes. Similarly, among countries in the Southern region, the best academic performance in South Africa was graded as average in comparison by Christie (2008). Further, she contends that whilst poverty and poorly functioning schools are some but not all of the contributory factors for the poor performance by some schools, there exist other contributory factors as well.

Bullying, violence and gangsterism which are rampant in some schools, could also be contributing to the poor academic performance in South African schools. Success or failure of students at school, as reported by Christie (2008) is partly a reflection of personal biography, individual capacities and choices. Apart from its functional role, the school is seen as an agent of socialization (Christie, 2008). Success may well be the result of personal effort and failure maybe a reflection of personal trouble. Various surveys conducted on bullying in Western Cape schools, districts and nationwide placed bullying at the foundation of violent acts in schools (Dawes, Alexander, Ward, & Long, 2006; Maree, 2005 and Morrison, 2007). These surveys have shown that bullying prevails in many schools across South Africa. Studies indicate that aggressive behaviours resulted from the effect of substance abuse, gangsterism and violent offences (Dawes, Long, Alexander & Ward, 2006; Elliasov & Frank, 2000; Lewis, 2010; Reddy, Panday, Swart, Jinabhai, Amosun, Vande & Borne, 2003). Bullying is a life threatening issue that can be ignored at the children's peril, (Coloroso, 2003). This is so because thousands of children go to school every day filled with fear and trepidation. Others feign sickness and eventually drop out of school altogether (Coloroso,

2003). Coloroso (2003) describes bullying as a learned behaviour that could be examined and changed. As such, education systems all over the world seek to eliminate bullying and promote harmony in schools through punishing the bully in one way or another (Christie, 2008). In South Africa, some lessons in Life Orientation (Life Skills) subject addresses this issue.

1.2 Motivation for pursuing the study

Bullying, school violence and gangsterism are some of the challenges faced by some learners at school. Olweus (1994) describes bullying as an aggressive behaviour, which is psychological in character. A greater proportion of school children and adolescents across the globe often experience bullying at some time (Sarento, Garandeu & Salmivalli 2015, p.204). Squelch (2000) made a similar observation that bullying occurs at all schools whether rich or poor, state (public) or independent (private). Her observation suggests that a high percentage of children in South African schools are being bullied. Whilst different forms of punishment can be meted out to students who bully, belong or anticipate joining gangs or engage in violent activities in schools, it may not be enough to deter them from continuing with such behaviour.

The school is a place of purposive human activity, conformity and new experiences (Christie 2008). Schools offer unique personal experiences and memory while they are capable of applying varied forms of interventions to counter the challenges that learners may face. Christie (2008) further notes that the primary purpose of a school is to provide an environment where teaching and learning take place. Various literature reports on the benefits of physical activity, agree that more physically active children endorse higher quality life than their less active peers (Jansen, Gushing and Elledge, 2013; Bailey & Richard, 2006; William and Strong, 2005). Pepler and Craig (2011) maintain that healthy relations that emanate from physical activity are trusting, supportive and devoid of the use of power and aggression. The literature on the benefits of physical activity (Bailey & Richard 2006; William & Strong, 2005) also suggests that physical activity may be one of the possible factors that could counter the prevalence of bullying. Hence, this study was motivated by the need to investigate if there was a relation between bullying and physical activity.

1.3 Problem statement

Problem statement contextualizes a study (Wiersma & Jurs, 2009). It aims at identifying current knowledge on the topic of discourse, gaps within this knowledge, and the set objectives of a proposed study (Merriam, 2009). An attempt is made here to establish these three.

Learners in high schools are faced with various psychosocial challenges such as bullying and violence which influenced their behaviour and academic performance (Omoteso, 2010; Dunne, Sabates, Bosumtwi-Sam, & Owusu, 2010; Mncube & Harber, 2013). Annually, about 700 000 to 900 000 learners are victims of bullying in South African high schools and 80% of these victims are males (Jimerson & Swearer, 2010). While bullying takes place mostly in the school environment (Castro *et al.*, 2007), children's home life, the school life, the community and culture play a role in influencing bullying tendencies (Bronfenbrener, 1977). On the other hand, Shaffer (2002) believes that physical activity, which encompasses play, offers children an opportunity to develop social skills such as the ability to cooperate. However, there is hardly any research about the link between bullying and levels of physical activity. With such narratives on bullying and physical activity, the researcher became keen to conduct this study that sort to find out if there was an association between bullying and physical activity among learners in one high school in the Western Cape.

1.4 Study aims and objectives

This study aimed to determine the relationship between bullying and physical activity among South African learners in one high school in the Western Cape. In an effort to achieve this aim, the following objectives were targeted:

- To measure the frequency of bully-victimization and bullying perpetration among learners in one high school in the Western Cape.
- To establish the level of physical activity among South African learners in one high school in the Western Cape.
- To investigate the relationship between bullying and physical activity at this high school in the Western Cape.

1.5 Study hypotheses

In this study numerous hypotheses and null hypotheses were formulated for bullying and physical activity as outlined below:

H1: There is a significant difference related to being bullied by others by age among learners in one high school in the Western Cape.

Ho1: There is no significant difference related to being bullied by others by age among learners in one high school in the Western Cape.

H2: There is a significant difference related to bullying others by age among learners in one high school in the Western Cape.

Ho2: There is no significant difference related to bullying others by age among learners in one high school in the Western Cape.

H3: There is a significant difference related to being bullied by others by gender among learners in one high school in the Western Cape.

Ho3: There is no significant difference related to being bullied by others by gender among learners in one high school in the Western Cape.

H4: There is a significant difference related to bullying others by gender among learners in the one school in the Western Cape.

Ho4: There is no significant difference related to bullying others by gender among learners in one high school in the Western Cape.

H5: There is a significant difference related to being bullied by others by grade level among learners in one high school in the Western Cape.

Ho5: There is no significant difference related to being bullied by others by grade level among learners in one high school in the Western Cape.

H6: There is a significant difference related to bullying others by grade level among learners in one high school in the Western Cape.

Ho6: There is no significant difference related to bullying others by grade level among learners in one high school in the Western Cape.

1.6 Theoretical framework

A theoretical framework, according to Cilliers, Davies & Bezuidenhout (2014, p.37), is intended to frame the research results. It serves as a roadmap, useful in the researcher's expedition of establishing trends and patterns as they seek to address the research objectives and obtain solutions to the prevailing issues. In other words, it is a specific collection of thoughts and theories that relate to the phenomenon that a researcher chooses to investigate. It is a snapshot of a particular topic that we select and describe in terms of specific and related theories. Thus, through a theoretical framework the researcher brings into focus specific theories, concepts and their assumptions because they are relevant to the topic. In an effort to support the investigation of the identified topic, a review of existing literature was made on the topic. The concepts of bullying and physical activity were also examined in relation to gender, age and grade of the participants. The theoretical framework underpinning the study was also examined. The latter will be discussed in this section.

Various studies have shown that the opportunity for students to have a positive school experience is negatively impacted by the prevalence of bullying (Omoteso, 2010; Dunne, Sabates, Bosumtwi-Sam & Owusu, 2010; Mncube & Harber, 2013). Educators and experts would agree that there is a collective desire for students to have a positive school experience both in and outside the classroom, but bullying can affect a student's ability to receive a sound general education. Regardless of how one may define bullying, it is a collection of unbecoming behaviours that prevent students from achieving a sense of wellbeing (Christie, 2008). Olweus (1993b) defines bullying, as when a student is exposed, repeatedly and over time, to negative actions on the part of one or more other persons (p. 9). The imbalance of power is one aspect that defines bullying. Based on the reviews of literature discussed in Chapter two, the researcher came to believe that bullying due to power imbalance could indeed exist by age, gender and differences in grade level among students in schools.

Thus this study is grounded in the power relations theory coined by Radtke and Stam (1994). Radtke & Stam (1994) described power as the ability of individuals and groups of people to impose their will on others coercively. This description is consistent with the findings of Olweus (1993) who pointed out that for bullying to take place, the power of the bully and victim needs to be asymmetrical with the bully enjoying the upper hand. Hence the power relations theory is the pivot for understanding bullying in this study.

Apart from understanding the power dynamics at play in bullying, the power relations theory is also used in this study to understand gender bullying in which the older and stronger learners bully the young (mostly young boys and girls). Hawley (1999) points out that children bully weaker children to gain, among other things, higher status among peers. The power relations theory is also used to understand to what extent the school authorities use powers embedded in their leadership role to punish perpetrators of bullying actions.

1.7 Methodology

1.7.1 Research paradigm

Clark (2002) affirms that post positivism offers a new way of thinking about science. This study aimed at investigating human experience with the hope of creating new knowledge. Eagleton (2003) notes that post-positivism are beneficial because it can address not part of aspects but the whole picture of a phenomenon under study. The focus of the study, according to Wilcott (1990) and in consonance with the views of Schratz and Walker (1993); Clark (2002); Eagleton (2003) and Ryan (2006)'s definitions of post positivism, positioned it within this research paradigm. Ryan (2006), posits that post-positivism is actually extra-positivist, because it provides vantage points outside positivism from which one can approach research.

1.7.2 The research approach

The research methodology used for this study was the quantitative approach. Kumar (2014) for any research, a researcher should work within and adhere to certain values regarding a research process and conclusions of a selected approach. According to Alzheimer-Europe (2009), the quantitative approach is generally associated with the positivist and post-positivist paradigms. According to Guthrie (2010), the quantitative methodological approach

involves the use of numbers and manipulation of observations for purpose of describing and explaining a phenomenon. This research is quantitative and is deductive in nature as it has hypotheses and research questions.

1.7.3 The research design

The research design for the study was the descriptive survey. According to O'Dwyer & Bernauer (2014) in a descriptive survey, data is collected on a phenomenon and that data is described. Kumar (2014) considers a research design such as the aforementioned as the road map of any study Thomas and Nelson (2005) contend that the use of descriptive survey research allows the researcher to determine the present practices, opinions or perceptions of a specified population. According to Gravetter & Forzano (2012) the purpose of descriptive survey research is that of describing people's responses to questions about behaviour and attitudes. This research design enabled the researcher to collect data on bullying and physical activities of participants and analyses the relationships by looking at the effects of the variables - gender, age and grade levels - on the participants.

1.7.4 Population and Sampling

1.7.4.1 Population and research site

The target group or population for this study were high school learners in the senior phase (SP) (Grades 8 & 9) and Further Education Phase (FET) (Grades 10-11) respectively at one identified school in the Western Cape. The exit level; Grades 12, were not included in the study due to their academic commitments in their final year of formal basic education. The school that was purposively selected is located in the Western Cape Education Department (WCED) quintile one implying that the school serves the poorest learners. Although the school is mostly surrounded by formal settlements, most of its learners come from the informal settlement opposite the school.

1.7.4.2 Sampling

The researcher used convenience sampling to select his sample from the population. According to O'Dwyer et al., (2014), selection is therefore mostly determined by availability and access to the study elements. (p.83).Consequently, the Grades 8-11 learners were conveniently selected according to availability and willingness to participate in the study. On sample size, Gravetter and Forzano (2012) suggest that the law of large numbers should be

applied, because they believe that a large sample is more representative of the target population. Thus, four classes, one from each grade were selected giving 150 potential participants, 17 of whom were eliminated due to missing data on questionnaires. The final sample size was therefore 133.

1.7.5 Data collection procedure

This study used adapted versions of two standardized questionnaires as its data collection instruments to investigate bullying and physical activity in the selected school in the Western Cape. The modified Olweus bully-victim questionnaire (OBVQ) and the Physical activity questionnaire for adolescence (PAQ-A) were administered to the 150 participants. These questionnaires were administered in succession to participants in each grade and class over a period of 4 days. Each grade/class was allocated a day beginning with the Grade 8s and ending with the Grade 11s on the fourth and last day of data collection. Prior to the administration of the questionnaires, consent had been sort from the school, parents and the participants. In addition, the researcher provided each participant with an information sheet, which he took time to explain to the participants. Each question was read and clearly explained to the participants before they responded to the questions.

1.7.6 Data analysis (SPSS and use of descriptive and inferential statistics)

Data was captured on the Statistical Package for Social Sciences: SPSS version 24 (IBM Corp, 2016). The captured data was then presented using descriptive statistics entailing the use of percentages, tables and other statistical measures. Tests of statistical significance such as level of significance, the t-test and the chi square tests were carried out particularly to test hypothesis and relationships. Inferential statistics helped the researcher in testing the hypotheses selected. Data was then analyzed and reference was made to the aims, objectives, and research questions. Discussions and conclusions were drawn after the analysis.

1.7.7 Reliability and validity

The OBVQ has reported psychometric properties, of validity and reliability. Previous studies report internal consistency (Cronbach's Alpha) of 0, 80 or higher. This means that the questionnaire has construct validity (Olweus, 2004). In the current study the internal consistency of the adapted OBVQ of 44 items was measured using Cronbach's Alpha and

was found to be acceptable with a score of 0.87. Previous research reports that the PAQ-A was moderately related to an activity rating of 0.73 supporting the convergent validity of the PAQ-A as a measure of general physical activity level for high school students (Kent , Peter , Crocker, Nanette & Kowalski 1997 p.342). In the current study the adapted PAQ-A used was measured using Cronbach's alpha and was found to have an acceptable internal consistency of 0.80.

1.7.8 Ethical considerations

For this research, the researcher noted that the issue of bullying was of a sensitive nature and therefore confidentiality of the information provided was of uttermost importance. Consequently, the researcher, in accordance with the University of the Western Cape ethical and professional guidelines as well as the code of ethics for social research (Babbie, 2005 p.61) ensured that the feelings, rights and privacy of the participants were fully respected. Guidance for this research was also attained from the supervisor and peers in workshops conducted by the University. Firstly the researcher attained permission to carry out the research from the University of the Western Cape ethics committee after which further permission was obtained from the Western Cape Education Department to carry out research in its schools. The Principal of the school in question was also approached for permission. Signed consent to conduct the research was also obtained from parents and learners through the research forms they filled.

Conclusively, this research was conducted according to the parameters set. The researcher went through the two administered questionnaires step by step together with the participants to ensure clarity and comprehension. All materials used in conducting the research were collected and stored safely to further ensure confidentiality.

1.8 Chapter outline

Chapter two presents a review of related literature and analysis of the power relations theory which help the reader to fully grasp the concepts involved in the phenomenon of bullying and physical activity in the context within which the research is situated.

Chapter three provides an explanation of the research paradigm, research approach, and the research design selected for the study. Research instruments, population and sampling

procedure are also provided in this chapter. Besides the data collection process, ethical considerations are also discussed in this chapter.

Chapter four comprise of the presentation, analysis of data, and a discussion of findings of the study. The data analysis and discussions are done in relation to the theoretical framework and literature review in Chapter two.

Chapter five provides conclusions drawn based on the research findings. Recommendations are also made for school authorities and teachers, parents/care givers as well as for future research.

1.9 Conclusion

A general orientation has been presented in this chapter, this includes an introduction, motivation of the study, statement of the problem, the aims and objectives of the study, hypotheses, theoretical framework, the methodology utilized, population and sampling, data collection procedure and analysis, psychometric properties of the OBVQ and PAQ-Q, ethical considerations and finally the outline of the chapters to be covered.

The next chapter presents an analysis of the power relations theory and a review of relevant literature which serves to help the reader to fully comprehend the concepts in this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A literature review is of paramount importance for any research as it serves important purposes such as giving direction to research and providing much needed detail pertaining to the topic under discussion. In this review apart from defining various concepts on bullying and physical activities, the researcher discusses a few previous studies related to the same concepts. Subsequently, the discussions in this chapter encompass a look at the concept of adolescence, factors that contribute to bullying behaviour and the effects of bullying. Age, gender and grade with regard to bullying and physical activity are also discussed. Furthermore, the prevalence of bullying and physical activity in schools is also given attention as well as the theoretical framework of the study, namely the power relations theory.

According to Du Plooy-Cilliers (2014), the review of related literature is intended to obtain a proper perspective of the current problem by engaging with the views of prior scholars on the topic of discourse and consequently identify relevant theories on the subject. This perception is in line with de Vos (2006) assertion that a literature review seeks to enhance the knowledge and understanding of the researcher concerning the nature and meaning of the problem at hand. The researcher's understanding is enhanced because literature review does not only provide the gateway to the relevant body of knowledge (Mouton, 1996; Hart, 1998; Du Plooy-Cilliers, 2014), it illuminate the link between current and not so current yet relevant studies to the research question (Maree, 2007) as well as place the study in context (Neuman, 2000).. In addition Maree, (2007) and Du Plooy-Cilliers (2014) add that literature review works as a tool to discover any relevant information that may influence the research being conducted and to identify knowledge gaps. A review of existing literature helps to avoid or reduce devoting effort to out-dated or irrelevant topics, or focusing on an already extensively researched area. Such an endeavor does not add to the body of knowledge (de Vos, 2006).

An effective literature review should be capable of creating a firm basis for knowledge advancement. Webster and Watson (2002) suggest that a literature review should facilitate

the development of theory, closing areas where a plethora of research exists, and uncovering areas in need of research. According to Du Plooy-Cilliers (2014), literature reviews are of many types, namely historical, thematic, theoretical and empirical. From the convergent.

Views highlighted above on the purpose of literature review, its importance then cannot be overemphasized. The research at hand looked at the theoretical arguments related to the research problem and sort to link theory to empirical evidence and as such is theoretical in nature. In this review, books, journals, databases and online sources will be used to present gathered information on bullying and physical activity. The conceptual framework guiding the study is discussed next.

2.2 Conceptual Framework

A conceptual framework refers to making informed decisions on which concepts relate directly to the topic under study (Du Plooy-Cilliers, 2014, p. 57). Concepts according to de Vos et al., (2006) are the terms designating the things about which science tries to make sense. In a conceptual framework, concepts are given meaning (Mouton & Marias, 1996, p.65). The researcher's conceptual framework is a theory as it seeks to discover, classify, explain and understand the concepts (de Vos et al., 2006, p. 35).

Bordage (2009, p.313) describes conceptual framework as a representation of how people think about problems or the degree of complexity on how things work the way they do. To Bordage (2009), a conceptual framework is derived from a theory with well-structured prepositions and principles established from experiments and observations. It helps the researcher in clarifying the nature of the problem and provides guidance when developing possible solutions (Bordage, 2009). However, as cautioned by Bordage (2009), it is common to encounter more than one conceptual framework applicable to a certain research problem, in such a situation, the researcher's ingenuity is employed in choosing the most appropriate framework which helps to address the problem.

In this section, the concepts of adolescence, bullying and physical activity will be examined before some underpinning theories on the subject are highlighted. Since the study participants were high school learners, in the adolescent stage of development, the concept of adolescence is analyzed first.

2.2.1 Adolescence

Various descriptions and definitions of the stages of adolescence have been given by authorities on child development. Adolescence is when a child is transiting from being a child to being an adult. Louw and Louw (2012, p. 278) describe adolescence as a developmental bridge between childhood and adulthood. In a physically resculpted body, teenagers maturing brains and changing chemistry go on to alter their emotions, perceptions, intellect and intellectl (Jack, Westman & Costello, 2011, p.227). Louw and Louw (2012) discovered that in some rural societies such changes occurring in adolescents are heralded by rituals, feasts and initiation rites. According to Boyes (2014), the adolescent stage is characterized by numerous risks, as individuals develop socially and emotionally. This stage is the one to which almost all secondary school learners belong. Louw and Louw (2012, p. 278) cautioned on demarcating the boundaries of adolescence owing to challenges in identifying the general characteristics of adolescence. They see adolescence as beginning at 11 to 13 and ending between 17 and 21 years. Macdonald (2003) defines adolescence as the age period from 10 to 19 years while Williams (n.d.) suggests that adolescence starts at 10 and ends around the age of 21. Jack, Westman, and Costello (2011) on the other hand take adolescence as the period between 12 and 18 years. Meanwhile, Lapidot-Lifler and Dolev-Cohen (2014) places adolescence between the ages of 13 to 18 years. Erikson (1968) identified three stages of adolescence as, early adolescence, mid adolescence and late adolescence. Williams (n.d.) went further to classify these stages as follows:

- Early adolescence 10-14 years
- Middle adolescence 15-17 years
- Late adolescence 18-21 years

William (n.d.) explains the categorization along developmental stages. To him, early adolescence tends to be a period of rapid body change, characterized by puberty. William (n.d.) points out that such changes cause anxiety, shyness and a need for privacy. Relationships with friends become more important and also that adolescents begin engaging in risky behaviour.

During middle adolescence, William (n.d.) points out that puberty passes but there is a greater interest in peer groups. During this period, the adolescent wants independence and relationships change, and just like in early adolescence, feel invincible. For some individuals, as noted by Eccles, (1993, p.90) early adolescence marks the commencement of a downward spiral which may result in dismal performance or dropping out of school. Jack, Westman, and Costello (2011) affirm to this possibility of being derailed in making progress in life. Things stabilize as individuals move into late adolescence which is the road to adulthood.

Erikson (1968) believes that adolescents seek identity and meaningful direction into adulthood. He proposes individual biology, psychology, social recognition and history as important approaches that can be used to understand adolescents. In an attempt to describe the problems that adolescents encounter in their growth, He coined the theory of identity in which he discussed ego identity and the eight stage life span sequence of psychosocial development. These stages will not all be discussed here. The researcher will only focus on some areas of Erikson's stages that relate to adolescents and the need for identity.

According to Erikson (1968) adolescents seek identity and he calls it ego identity. Ego identity often exists when one feels at home in their body, having a sense of knowledge and sense of direction, coupled with confidence of expected appreciation from those who count (Erikson, 1968, p.165). It refers to a situation when one consciously senses their uniqueness, having unconscious striving for continuity of experience. An optimal identity, according to Erikson (1968) is experienced as a psychosocial sense of social wellbeing. This is in consonance to Kroger (2006) submission on adolescence as a period of identity exploration when decisions are actualized through social context. Erikson (1968) conceives adolescences' ego identity as identity versus role confusion, the identity formation process, identity crisis and the phenomenon of psychosocial moratorium.

The first key concept on adolescence ego identity highlighted by Erikson (1968); identity crisis is also referred to as identity confusion. Identity crisis is a key turning point in the process of identity of an adolescent; it is a turning point in one's identity development. For identity as defined by Kroger (2006), is the entity which enables one to move with direction and effectiveness, to find meaningful outlets for the actualization of one's interests, talents and values within a social milieu (p.65). Identity formation process is the main pre-occupation of adolescences (Kroger, 2006). Crisis of identity versus role confusion during adolescence are stages where the individual moves from a focus of the 'I' to the 'We'. In

Erikson's (1968) eight - stage life span sequence of development tasks, identity versus role confusion is included. Role confusion comes to the fore during adolescence. The identity work of adolescents is commonly actualized through vocational and ideological undertakings and relational commitments to a long -term partner and friends. (Kroger, p.10) The adolescent during this period undergoes identity formation.

Erikson (1968) points out that the adolescent finds himself in a crisis of identity and goes on to say that the identity crisis is an important turning point in the life history of an individual. Identity-achieved individuals take a certain meaningful direction in life (Kroger, 2006, p.208). Adolescents endeavoring to formulate and establish their own identities may engage in bullying others at school or their classroom peers using online means (Lipidot-Lefler and Dolev-Cohen, 2014, p.14).

Development can only be achieved by taking a new direction. The community plays an important role in that direction and in support, Boyes and Chandler (1992) point out that the groups of identity-achieved individuals are more rational and logical in making decisions. Erickson (1968) points out that society gives time to adolescents to find their identities and their roles as adults through various experiments such as identifying with other people and hero figures. This period is referred to by Erickson (1968) as psychosocial moratorium. Eccles (1993) believes that encouragement of adolescents to carry out, out of school activities is known as one educational means that can be used to deal, for instance with aggression among learners.

For the current study, the researcher subscribes to the stages of adolescence as propounded by Erikson (1968) and supported by William (n.d.). These stages usually correspond to the following age ranges and school grades:

- Early adolescence 10-14years - Grade 8
- Middle adolescence 15-17 years - Grade 9 and 10
- Late adolescence 18-20/21 -Grade 11 and further

The concept of bullying is discussed next.

2.2.2 Definition of Bullying

There is almost a general consensus on the definition of bullying, its causes and effects and indeed how it could be prevented, although the methods of prevention may differ from country to country (Dore, 2015, p.26).

Dore (2015) views bullying as a deliberate action designed to cause pain and suffering to the target. It encompasses an intention to threaten, frighten or harm another person (Louw & Louw, 2012, p.261). In bullying, there is always a malicious intent to hurt and humiliate a victim either physically or psychologically or both (Dore, 2015, p.26).

Olweus (1994) explains bullying as repeated aggressive behaviour whereby there is intent to cause harm to other students. A student is being bullied or victimized when he or she is exposed, repeatedly and over time to negative actions on the part of one or more students. In order to use the term bullying, there should also be an imbalance in strength (an asymmetric power relationship): the student who is exposed to the negative actions has difficulty in defending him/herself and is somewhat helpless against the student or students who harass (Olweus, p.1173). Another element that distinguishes bullying from the rough and tumble of the school environment, reported by Dore (2015) is a deliberate intent to hurt, physically or emotionally, with a similar intent of humiliating and making the target suffer. Thus this view identifies repeated aggression as the hallmark of bullying as well as threats of future aggression. Further, bullying can be verbal, physical or social Coloroso (2003), Castro and Barbazan (2007) defines it as the repeated violence of others by the infliction of physical or psychological abuse. It can be perpetrated by individuals or groups who target another person who is defenseless (Castro & Barbazan, 1994). Hence Phillip & Cornell, (2012) describe bullying as unequal, coercive power in which a more powerful aggressor attacks a less powerful victim.

On the other hand, Rigby (2002) suggests the presence of a willful conscious desire to harm someone and putting them under stress as tantamount to bullying. In agreement to Rigby (2002), Coloroso (2003) expands further that it is through fear and threats of further aggression. He explains that bullying occurs in a cycle which includes the bully, the bullied and the by-stander. Coloroso (2003) maintains that bullying is learned and that if it can be learned, it can also be examined and changed.

Bullying is reported to be the most common and pervasive form of school violence (Dore 2015). Bullying consists of three main elements which are intent to harm, imbalance of power and threat of further aggression. Another element is that of terror that is used to strike fear into the hearts of the victims (Coloroso, 2003). The cycle of violence begins when the bullied child is rendered powerless and when there is no recrimination or retaliation. So it is true to say that bullying in schools is a global issue, impacting affected children's social, emotional and physical health (Cheng, Newman & Shell, 2010).

As earlier alluded to, bullying may involve a triangular relationship that involves the bully, the victim and the by-stander and as Dore (2014) put it, it is all about power, control and the need to dominate others and feel superior. Field (2007) sees bullying as a symptom of a dysfunctional social system. Genetics, temperament, mental illness, quality of parenting, influence of the school, peers and neighborhood are all factors that predispose a child towards aggressive behaviour as a perpetrator of bullying (Dore, 2015, p. 64). Persistent bullying creates high levels of stress and when there is no relief from this stress; the feelings of helplessness and hopelessness that characterize depression can easily take hold (Dore, 2015, p. 15). As such, victims of bullying exhibit challenges in adjusting socially and emotionally in relating with classmates as they feel lonely and as they encounter challenges in making friends (Cheng, Mbulo & Shell, 2010).

For the purposes of the current study Olweus' definition of bullying that will apply to this study is: A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students (Olweus, 1994,

p.173). Bullying is further described as aggressive behavior that is intentional, repeated over time and is characterized by an imbalance of power. It can be physical, verbal or social. It can also be classified as direct or indirect. Next, some of the different types of bullying are discussed.

2.2.3 Types of bullying

As earlier alluded to, Olweus (1994) identified three major types of bullying which are verbal, social and physical. Under these three, Field (2007), Dore (2015) and Coloroso (2003), identified numerous forms of bullying. De Wet (2005a; 2005b) identified physical, emotional, verbal, non-verbal, relational and sexual bullying. A study by Nansel, Overpeck

& Pilla (2001) of bullying behaviour of 15686 students from Grade 6 to 10 in the United States discovered that physical and verbal bullying among males was common and for female's verbal and rumours were most common. According to Dore (2015) in a recent survey conducted by Pondering Panda, 57% of school children questioned reported that they had been bullied and of these, 52% stated that they had been verbally bullied, while 26% reported that they had been physically bullied.

These various forms will be discussed under these main categories of verbal, physical, social/relational and gender. Cyber bullying which is a relatively new form of bullying will also be discussed.

2.2.3.1 Verbal bullying

According to Dore (2015), 77% of all bullying is verbal and is by far the most common and dehumanizing type of bullying. Similarly Rigby (1996, p.43) observed that verbal bullying is very common and is practiced by both boys and girls and constitute about 70% of reported cases of bullying at schools. A British study involving 23 schools found that direct verbal aggression was the most common form of bullying occurring with similar frequency in both sexes (Rivers & Smith, 1994, p.20). A study conducted by Wang, Iannotti & Nansel (2009) found that verbal bullying (53.6%) to be most prevalent among adolescents in the United States when compared with physical (20.8%), social (51.4%), and electronic (13.6%) types of bullying. In the Bergen study, Olweus (1994) found that girls often used more subtle and indirect ways of harassment such as slandering, spreading of rumours and manipulation of friendship relationships, for instance, depriving a girl of her "best friend". Nonetheless, harassment with non-physical means (words, gestures, and so on) was also the most common form of bullying among boys. In another study by Williams & Guerra (2007) it was found that females reported significantly more verbal/social and cyberbullying than male students.

Verbal attacks are meant to inflict embarrassment and humiliation on a victim and solicit laughter and embarrassment from others (De Wet, 2005a; 2005b; Dore, 2015). Previous studies have found that verbal bullying involves teasing repeatedly in hurtful ways as well as name-calling. Teasing is the most dangerous and long lasting form of bullying (Field, 2007, p.4). Belittling, name-calling, nagging, verbal threats, mocking, touting, racist and xenophobic insults are all meant to shatter one's self esteem, warp the self-image and undermine self-confidence to the point where many victims believe what the bully says they

are (Dore, 2015, p.27). According to Naidoo, Benn, De Vries & Taylor (2016) verbal bullying is characterized by name calling, mocking, insulting, and being humiliated.

2.2.3.2 Physical bullying

Dore (2015) points out that physical bullying is meant to inflict pain and discomfort on a victim. Wanga, Lannoti and Nansel (2009) found that verbal and physical bullying was prevalent amongst boys. A similar study by Wanga et al., (2009) also revealed that boys tend to engage in physical bullying more than girls. According to Lapidot-Lifler and Dolev-Cohen (2014, p.3), common features of bullies identified by various studies includes a tendency to show a need to dominate others, being assertive, and the need to control using force and demanding to have their wishes fulfilled at any cost. Dore (2015) noted that physical bullying such as kicking, hitting included punching, pushing, choking, biting, poking, spitting, scratching, pinching, hair pulling, ear flicking and the use of weapons such as sticks and stones. Most bullies are not wary of inflicting harm on their peers and do not take responsibility for their actions (Lapidot-Lifler & Dolev-Cohen, 2014, p.3). Sexual harassment can also be physical but sometimes verbal and it includes inappropriate touching, fondling, grabbing of genitals and breasts, pulling down pants, pinching and use of force to engage someone in a sexual act (Dore, 2015, p.28). In a Bergen study on bullying conducted by Olweus (1994) on Norwegian students, it was found that bullying by physical means was more common among boys. As earlier alluded to at the beginning of this section, this view as espoused by Olweus is confirmed by a similar research by Nansel et al.(2001) Findings on bullying indicate that physical bullying constitutes only a third of the types of bullying experienced at school (Coloroso, 2003, p.16; De Wet, 2005, p.715).

2.2.3.3 Relational or Social bullying

According to Dore (2015) previous studies indicate that relational bullying is more prevalent in girls than in boys. Wanga et al., (2009) view relational bullying as a form of indirect bullying as opposed to physical and verbal bullying which are direct forms. Relational bullying also known as covert or social bullying is the deliberate act of excluding, isolating, and ignoring, shaming, spreading false rumours, reducing the status of, breaking up friendship or damaging the reputation of a child (Dore, 2015, p.28). Crick and Grotpeter (1995) define relational bullying as the purposeful damage and manipulation of peer relationships leading to social exclusion. Relational or indirect bullying refers to social

exclusion by spreading malicious gossip or withdrawal of friendships (Wolke, Woods, Bloomfield, & Karstadt, 2000). In a study of bullying reported by Rigby (2007, p.34) which involved over 6000 boys and 2500 girls in 16 schools in Australia for ages ranging from nine to seventeen, it was discovered that the prevalence of indirect bullying was 5.8% for boys and 9.5% for girls. Bjo`rkqvist (1994) asserts that young children lack essential verbal skills, which results in aggressive behaviour being predominantly physical in nature. Once verbal skills and more importantly complex social skills develop, children will demonstrate more sophisticated styles of aggression such as relational aggression, usually in secondary school. The effects of isolation are devastating to the victim (Dore, 2015, p.28).

2.2.3.4 Gender bullying

Gender bullying refers to when boys bully girls and other boys who do not abide by the cultural practice to sustain male dominance at school (Bhana, De Lange & Mitchell, 2009, p.58). Jimerson and Swearer (2010) see gender bullying as involving sexual acts or demands such as sexual assault, rape, sexual harassment, commenting badly on someone's sexual orientation, as well as forcefully touching someone's private parts. Meyer, (2009, p.5) highlighted some of these gender bullying as defacing female images; grabbing breasts; pinching bra-straps; calling female learners slags or dogs; commenting on the size of a girl's breasts; and making statements like that is so gay. With gender bullying girls are mostly targeted due to ideological socialization processes.

Stromquist and Fischman (2009) reported adhering to tradition, sexual norms, dominant sex culture or male domination practices as some of the causes of gender bullying. It also includes inappropriate notes, taunting, spreading rumours, bad jokes and pictures. They explain that some children learn gender stereotypes and male domination practices which are socially constructed and influenced by power relations -which some learners use to hurt other learners- through socialization at home and school.

2.2.3.5 Cyberbullying

Modern technological developments have revolutionized the social milieu thereby influencing communication by adolescents and all ages, giving space to Cyber bullying (Lapidot –Lifler & Dolev-Cohen, 2014, p.1). A form of relational bullying, cyberbullying has emerged to be the latest form of bullying using modern technology such as cellphones and

internet (Mcguckin, Cummins, & Lewis, 2010, p.83; Monks & Coyne, 2011, p.7; Rogers, 2010, p.7). Cyberbullying is perpetrated by means of electronic venues including e-mail, instant messages, online gaming, websites, chat rooms, text messaging and social networking sites like Facebook and Whatsapp (Kowalski, Susan, & Limber, 2012). Hunter (2012) describes cyberbullying as a type of bullying that uses electronic media. The act, according to Hunter, (2012, p.6) can be perpetuated through emails, text messages, images accessed from phones or computers, webpages, blogs, and social networking such as face book.

According to Hunter (2012), cyberbullying is also called cyber-harassment if it involves adults. Cyberbullying started after the year 2000 and particularly after 2004 when Facebook was founded (Hunter, 2012, p.8). According to Hunter (2012), cyberbullying involves sending of hurtful messages and comments to others, spreading rumours about a person, making physical threats through messages, impersonating on line and posting hurtful photos on line.

Various studies such as that conducted by Wanga et al. (2009) discovered that in most cases boys are the perpetrators of cyberbullying while girls were often the victims. Barlett and Coyne (2014, p.475) established that cyber bullying is often experienced during children's development as they become acquainted with the use of technologically sophisticated means of communication to harm others, normally as they reach late childhood to early adolescence. Some authorities argue that although cyber bullying is a recent phenomenon, it is not as prevalent as traditional bullying. Previous studies have established that cyberbullying is less common when compared to traditional methods of school bullying such as physical, verbal and relational bullying (Lapidot-Lifler & Dolev-Cohen, 2014, p.1).

Recent studies show that the phenomenon of cyber bullying is still new in relation to the traditional forms of bullying. Although it would appear that there is clear demarcation between cyber bullying and traditional bullying, prior studies lack consistency in the conclusions concerning how the two correlate (Kowalski, Susan, & Limber, 2012, p.S18). However in a study conducted by Kowalski, Susan, and Limber (2012) on 931 grades 6 to 12 learners, it was concluded that there was an overlap between involvement in cyber bullying and traditional bullying. With increasing aggressive behaviours being experienced in the society today, bullying seems to take a new form, making it more common in society. Certainly such a societal development is a cause for concern (Lapidot-Lifler & Dolev-Cohen, 2014, p.10). It is therefore evident that cyber bullying is the continuance of

conventional face-to-face aggression which has been transmitted through the social media networks. Rather than two separate phenomena, face to face bullying and bullying in the cyberspace may be viewed as a single phenomenon, expressed in two different social spaces in which young people gather and interact: the physical space and cyberspace (Lipidot-Lefler & Dolev-Cohen, 2014, p.12).

2.2.3.6 Factors that contribute to bullying behaviour

Almost similar explanations have been given by various authorities in the field of child development on the factors that contribute to bullying. It rang from effect of the child's body changes to the role played by the family, community and school (Jack, Westman & Costello 2011; Thornberg & Knutsen, 2010). De Wet (2005b) identified three types of bullies as the aggressive bully who directs his aggression to any person regardless of authority, the anxious bully who has a poor self-image, uncertain and has few friends and lastly the group adherents who are passive bullies that surround the aggressive bully to protect themselves from acts of bullying. Coloroso (2003) identify two major reasons why bullies bully others and the reasons are namely: in-born temperament and environmental influences (nature vs. nurture influences). Majority of the studies on bullying have been carried out using primary school children. Sentse, Kretschmer, and Salmivalli (2015, p.4) agrees on investigating bullying, victimization, and social status in the early adolescent years. Most studies on bullying point to depression and low self-esteem, the family, individual traits, the school environment and the community as factors that influence bullying behaviour among adolescents. A number of these factors are discussed next.

a) Depression and low self esteem

According to Sadek (2011) marginalized youths that have emotional problems such as low self-esteem and prior victimization are often bullies. In a study carried out by Thornburg and Knutsen (2010) on the causes of bullying among Grade 9 learners, it was found that the bully felt insecure, with low self-esteem, without self-confidence, had psychological problems and had a weak mind leading to the need to find recourse in bullying others. This is in line with social positioning theory whose proponents suggest that a bully is compelled by the need to display, enhance or maintain power, status or authority or they may be compelled by the desire to avoid being bullied, harassed or being socially excluded (Thornberg & Knutsen, 2010, p.183). Contexts which uphold higher status hierarchies and higher levels of children

bullying others, like the lack of protection for victims which reinforces bullying attitude, provide a fertile ground for bullying (Sarento, Garandeu & Salmivalli, 2015, p. 212). Reijntjest and Vermande (2013) while echoing the same views, further state that high levels of bullying are prevalent in areas of high social status, marked by supposed popularity.

According to Thornberg and Knutsen (2010, p.183), the bully is motivated by the need to feel better by enhancing their confidence and self-esteem. Therefore, the bully seeks to control others and acquire social status among their peers (Louw & Louw, 2012, p.262). Reijntjest and Vermande (2013) contend that personal benefits without significant associated costs may accrue for the bullies. Louw and Louw (2012) further point out that bullies are generally more popular among their peers than children who are merely aggressive. Similarly, Sentse, Kretschmer, and Salmivalli (2015) conclude that the key to bullying often stems from the need to attain social status in the peer group.

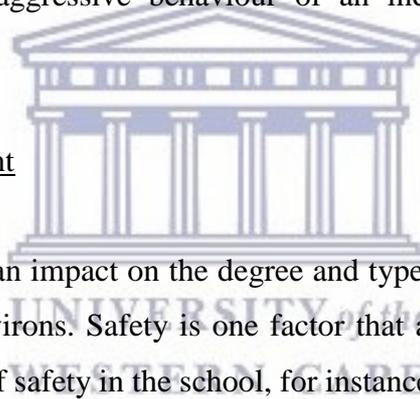
b) The family

According to Thornberg and Knutsen (2010) there are several reasons that exist for bullying. These include poor parenting where there is much conflict at home, divorce, abuse, or harsh, non-loving parents. Thornberg and Knutsen (2010) further point out that the personality of the bully, his manners and immorality, the bully's exposure to influential computer games, the existence of children the bully perceives to be deviant, odd or different and the bully's prior victim history all influences bullying behaviour. Some children however bully others out of ignorance, not realizing how harmful their deeds are (Louw & Louw, 2012, p.263). Dore (2015) argues that children often imitate what adults do at home, for instance if conflict is resolved at home by either physical means or emotional aggression, they will soon learn that aggression is normal.

Many parents view bullying as part of the growing process and that it is healthy to dominate others and weak to complain about ill-treatment by others (Louw & Louw, 2012, p.262). On the other hand however, Jack, Westman, and Costello (2011) posit that parental presence, physically, morally, intellectually and emotionally for their children will guide against the spilling over of family problems and deficiencies into the community. It has been observed that children who did not form a solid attachment with their parents, with unmet basic needs often have the classroom as the first place where their problems manifest (Jack et al., 2011, p.344).

c) Individual traits

Sadek (2011) found that other people bully others because they have a high self-esteem and desire to demonstrate their social prowess. According to De Wet (2005b) bullies generally attack without reason. They often regard their victims as easy targets. In trying to understand bullying behaviour, the drive to dominate others is strong in some individuals than others, which leads to the development of hierarchies in which those who are the most dominant are at the top and the least at the bottom (Dore, 2015, p.33). Studies on twins conducted to ascertain the existence of a genetic predisposition towards aggression and anti-social behaviour conclude that genetic inheritance played a role in determining behaviour (Dore, 2015, p.35). Temperament is part of the genetic makeup of an individual and can be described as an individual's reactive disposition or emotions and how an individual deals with them on consistent basis. According to Dore (2015) other disorders and mental illnesses also influence the aggressive behaviour of an individual which may lead to bullying.



d) The school environment

The school culture may have an impact on the degree and type of bullying and victimization that takes place within its environs. Safety is one factor that affects the culture of a school (Dore, 2015, p.38). The lack of safety in the school, for instance in the toilets, sports fields, in the classroom, open spaces and behind classrooms are all areas that bullying can occur if uncontrolled.

e) The community

Dore (2015) asserts that children and adolescents who grow up in lower end socio-economic neighborhoods face many challenges that put them at risk of violence. Poverty can increase the level of stress and dysfunctionality and studies have shown that impoverished communities usually have higher levels of violent child abuse, delinquency, truancy and mental illness. Most children in such impoverished communities grow up with single-parents. The children lack supervision as the single parent is often away trying to fend for that family (Dore, 2015 p.42). In several studies of school bullying by Azeredo, Rinaldi, De Moraesi, Levy, and Menezes (2015) socio-demographic features related to bullying and inequalities were observed at the country, city and school levels. For instance, the study

revealed that bullying was prevalent in cases where there are income inequalities (Azeredo, Ainaldo, Moraesi, Levy & Menezes, 2015, p.73).

2.2.3.7 Factors that contribute to some learners being bullied

The deviant behaviour from victims may cause bullying (Thornberg & Knutsen, 2010, p.183). Some victims have bully attracting behaviour such as being physically weak like a small boy or girl, having poor self-confidence, being shy, without friends, having an history of being bullied, and one with family problems is an ideal victim for bullying (Thornberg & Knutsen, 2010, p.184). Dore (2015) points out that bullying is motivated by the difference that exists between the bully and the victim. Grade difference, age, gender differences are all motivations for bullying.

Still on contributory factors, Dore (2015) identified other attributes that attract bullies to victims as students who struggle academically or in sport, those of different race or culture, those who wear spectacles, those who are new in class and those who are underweight or overweight. Victimization leads to peer-rejection and a low status (Sentse, Kretschmer, & Samivalli, 2015). Sullivan, Cleary & Sullivan (2004) identified target groups that are attract bullying in a particular society as;

- Racial group is targeted because they look different, speak a different language and have different customs.
- Group with different physical and psychological needs stand out from their peers and thus attracting bullying.
- Homophobic bullying occurs to those with a different sexual orientation. Victims of bullying are bullied because of their sexuality.

Children who are new in school, who are impoverished, who are the youngest, who are physically unattractive, those who have been traumatized, those who are submissive, who are shy, reserved or sensitive, those not willing to fight, those too fat or too thin, too short or too tall and those who are generally different from the rest are all targets of bullying (Coloroso, 2003, p.43) These views are consistent with results from a study by Liang, Flisher and Lombard (2007, p.169) of 476 schools in Cape Town and Durban, South Africa which were

found to be consistent with previous studies (Olweus, 1994) that bullying was more prevalent among males than females, and victims were likely to be younger.

2.2.3.8 The by stander/observer response to bullying

According to Jeffrey, Miller, and Linn (2001) bullies at school intimidate and instill fear which not only affects direct victims, but also secondary targets such as the witnesses of bullying. These witnesses to bullying (the observers) are more indifferent as they grow older. This is so because when there is intimidation, fear emerges and it favours the fact that a group becomes inhibited (Castro & Barbazan, 2007, p.21).

Jeffrey et al. (2001) point out that peers often witness and cheer the acts of bullying without intervening to calm the situation. Atlas and Pepler (1998) contend that dealing with bullying requires engaging the peers as they may escalate or help to reduce bullying at school. Olweus (1993) observed that the failure of the by-standers to intervene or report acts of bullying emanates from fear of reprisal from the perpetrators, lack of knowledge on how they can assist, focus on school work or insecurity as they do not have the confidence that teachers may help in stopping the bullying. The biggest ally of the aggressors is the law of silence (Castro & Barbazan, 2007, p.21). In a research conducted by Jeffrey et al. (2001), at secondary school level, most students tend to exclude themselves by pretending not to notice what is happening. In one study, Atlas and Pepler (1998) reports that of the students present in 85% of the bullying cases, peer intervention was recorded in 10% of the episodes. Batsche and Knoff (1994) observed that peers were not empowered to respond to bullying activities this could be because of lack of intervention strategies in their schools. In such cases where witnesses to peer aggression are poorly equipped, they become reluctant to help the victim or to report such cases (Jeffrey et al., 2001).

2.2.3.9 The effects of bullying

As already alluded to earlier on in this chapter, bullying has tremendous effects on the life of the victim, the by stander and the atmosphere of the schools in general. The discussion on the effects of bullying will be discussed under 3 subheadings namely, the effect on the victim, on the perpetrator and on the school.

a) Effect on the victim of bullying

A greater proportion of school children and adolescents across the globe often experience bullying at some time (Sarento, Garandeu, & Salmivalli 2015, p.204). Bullies create a state of terror and extreme distress in the target. As such, children who are targeted regularly by bullies are at an enormous risk both for their present and future well-being (Heino, Frojd, and Maritunen, 2010; Dore, 2015). Ferdon and Hertz (2007) highlighted some of the effects of bullying as bringing sadness, depression and emotional degradation to the victim. Dore (2015) noted that children exposed to persistent verbal attacks, have a significantly increased risk of developing severe anxiety, depression and substance abuse. De-Wet (2005) shares the same view when he points out that the victim's right to human dignity, freedom; privacy and security are infringed by acts of bullying. Louw and Louw (2012) takes this further that physical consequence such as psychosomatic symptoms of stomach pains, headaches, poor posture, loss of appetite and bedwetting occur. Depression, social withdrawal, suicidal tendencies, anxiety and fear are some of the emotional problems experienced by the bullying victims (Louw & Louw, 2012, p.262; Kowalski & Limber, 2012, p.14), ironically, peers of both the bully and the victim often find it difficult to accept both of them.

b) Effect on the perpetrator of bullying

For the perpetrators of bullying Louw and Louw (2012) point out some of the problems that arise for them include poor academic performance, juvenile criminality, and alcohol and drug abuse. Correlational analyses revealed a significant relationship between students' involvement in bullying and factors like anxiety, low self-esteem, depression, self-reported health problems, absenteeism from school, days off due to sicknesses, and low grades (Kowalski, Susan, & Limber, 2012, p.S18). Castro and Barbazan (2007) point out that bullies want to impose the law of fear and silence and also install fear that nobody helps the victim. While cyber-bullies can only employ non-physical means to harm their victims through the internet, traditional bullies can employ both physical and/or non-physical methods, either verbal or relational, to harm seemingly weaker members (Barlett & Coyne, 2014, p.475).

Du-Wet (2005) goes on to say that both the bully and the victim of bullying are negatively affected physically, emotionally, socially and in terms of academic achievements. Salman, James, and Smith (1998) point out that perpetrators and victims of bullying exhibit higher levels of physical and psychiatric symptoms.

c) Effect of bullying behaviour on the school environment

Heino et al. (2010) state that studies carried out in Japan and Taiwan have established that depression, suicide attempts and suicidal idealization were correlated to youth school bullying. Studies by Penning, Bhagwanjee and Govender (2010) focusing on the effects of bullying on trauma in male adolescent learners in some High Schools in South Africa proved that there is a significant relationship between stress and bullying. According to Penning, Bhagwanjee & Govender (2010) trauma was operationalized through the multiple constructs of post-traumatic stress, anxiety, depression, dissociation and anger. Jeffrey et al. (2001) point out that, in severe cases of bullying, affected school children end up disliking school work, viewing the school environment as an unsafe and unhappy place. Jeffrey et al. (2001) observed that an environment where there is intimidation, power and control by the bullies along with the lack of measures for effective intervention by the school authorities may lead learners not want to spend even a day at school. Educational problems such as absenteeism, loss of concentration and deteriorating academic achievement may develop as a result of such an environment (Louw & Louw, 2012, p.262). In agreement, Muscari (2002) pointed out that bullying has negative effects on schooling through fear of school, absenteeism, stunted academic progress.

Bullying has far reaching consequences for both the victims and the perpetrators (Louw & Louw, 2012, p.262). Field (2007) posit that all types of school environments are susceptible to bullying; whether it is for the wealthy or poor, privately owned or state owned, single-sex or coeducational, large or small, religious or non-religious, boarding or day school. According to Liang, Flisher, and Lombard (2007), studies carried out in South African Schools found out that 19.3% were victims of bullying as compared to 36.3% of the students who tended to be the perpetrators who bullied others.

Bullying has a devastating effect on children as it affects the victim and the by-stander (Dore, 2015, p.4). Dore (2015) points out those bullying influences the health, emotions and educational achievement of victims, resulting in increased absence from school, low grades and dropouts. Townsend, Alan, Flisher, Chikobvu, Lombard & King (2008) contend that given that bullying is associated with adverse outcomes that are in turn associated with dropping out of school, one could expect that bullying behavior may predict dropping out of school. Weinhold and Weinhold (1998) found that 10% of dropouts had left school in South Africa prematurely as a direct result of bullying and victimization. Jeffrey et al. (2001) viewed

bullying as undermining the mission statement of the schools in which principles of justice, efficacy and civility are embedded. This discussion focused on the various effects of bullying, however, of interest to note also is the fact that there are several factors that contribute to bullying, such as age, gender, grade level, characteristic of a school, status hierarchy, norms, climate quality, the by stander behaviours and the role played by teachers. Some of these factors will be discussed next.

2.2.4 *Bullying and age*

Although the odds of being bullied decrease with increasing grade level, bullying victimization does not decrease significantly with increasing age (Owesu, et al., 2010 p.236).

Studies have shown that reports on bullying and age vary most probably from one area to another or from country to another. In a field study, 43000 teens in 2008 Ethics of America Youth Survey by Josephson Institute of Ethics cited in Jack, Westman, and Costello (2011), nearly half of the boys and girls admitted to bullying someone and 48% were victims of bullying the previous year. In another study, Barlett and Coyne (2014) discovers that females used cyber bullying at an earlier age than males, though males were likely to cyber bully others at an older age. Similarly, Rivers and Smith (1994) reported on a study of 7000 primary and secondary school children in Britain, which focused on bullying behavior of these children at different ages. By comparing boys and girls aged 8, 11, 15 years, it was found that indirect aggression appeared in the behavior of girls as young as 8 years of age but it did not fully develop as an alternative to more direct forms of aggression until 11 years, at which it peaked. Boys used more direct-physical aggression than girls; this declined by the age of 15 years for both boys and girls. Both boys and girls used direct-verbal aggression to similar extents and this increased with age; by 11 and 15 years boys similar extents and this increased with age; by 11 and 15 years boys used profanity and showered their victims with abuse more than girls (Rivers & Smith, p.360).

In a study on bullying and violence in South African High schools by Ncontsa and Shumba (2013) older learners especially boys were identified as the perpetrators of bullying. New initiates 'amakrwala' were identified as the bullies of young boys. This study further revealed that young learners in Grade 8 and 9 were vulnerable to the bullies because they were physically weaker and as they could not defend themselves.

2.2.5 Bullying and gender

According to Anderson (2007) research shows that different genders bully in different ways and are exposed to different types of bullying. Lipidot-Lefler and Dolev- Cohen (2014) contend that in face to face cases, females are likely to use indirect bullying, whilst males tends to be more directly aggressive (p.12). Peguero and Popp (2012) point out that research suggests that girls are more likely to be victims of verbal aggression, insults, gossip, manipulation, and social isolation by their peers whereas boys are more likely to be victims of physical aggression According to Peguero and Popp (2012) direct bullying has a gender-specific effect on educational achievement. Girls experiencing direct bullying may be more concerned about their personal safety because of the bully's physical attacks, threats, and/or destruction of the girls' personal property than about achieving their educational goals. In a study of bullying and violence in South African High schools Ncontsa & Shumba (2013) found that there was a lot of sexual harassment where old boys coming from the 'bush' (as new initiates) would target girls particularly in Grade 9 for sexual relationships. This supports previous research, which suggests that although bullying negatively impacts both genders; girls experience greater psychological distress as a result (Peguero & Popp,2012).In one nationally representative United States sample, Nansel et al., (2001) found that boys reported bullying victimization more than girls did. When specific forms of victimization were examined, boys reported experiencing more physical bullying than girls, and girls reported more bullying by rumors and sexual comments (Nansel, 2011, p.3).

On cyber bullying and gender, a survey by Li, (2006) of Canadian middle school students found that boys were more likely to perpetrate cyber bullying than girls; 22% of boys reported cyber bullying others as compared to 12% of girls. In secondary/junior high school, more than four times as many boys as girls reported having bullied other students (Olweus, 1994 p.1176). The Bergen study of 42 schools in Norway also concludes that boys carried out a large part of the bullying to which girls were subjected. More than 60% of bullied girls (in grades5-7) reported being bullied mainly by boys. An additional 15-20% said they were bullied by both boys and girls. The great majority of boys, on the other hand more than 80% were bullied chiefly by boys (Olweus, 1994 p.1176).

Numerous other studies have been carried out to ascertain the effect of gender on bullying. The studies show a general consensus pertaining to gender and bullying in the adolescent stage.

a) Boys and bullying

A recent study conducted by Olweus and Limber (1999) established that males tend to bully, as well as be on the receiving end of bullying behavior more often than females. Clarke and Kiselica in Ma (2002, p.65) says that boys usually bully both boys and girls whereas girls tend to only bully other girls. Ma (2002, p.65) further mentions that within the bully situation one finds that boys will take on the role of bully or encourager of the bully, whereas girls will take on the role of bystander and defender. Garrett (2003) also affirms that physical and verbal bullying is most common in boys. Boys tend to use physical bullying more often than girls do (Coloroso, 2003 p.14). Boys play in large groups where a pecking order is established and where there is jockeying for a dominant position through physical prowess which is highly honored (Coloroso, 2003 p.15). In a study of school violence, Ncontsa and Shumba, (2013) reported that perpetrators of bullying were older boys than young boys. In agreement Liang, Flisher and Lombard (2007) observed that male students were most at risk of both perpetration and victimization, with younger boys more vulnerable to victimization. Male aggressors mainly insult, hide other people's belongings, steal and threaten to frighten while female aggressors usually intimidate by criticizing others (Castro & Barbazan, 2007 p.20). Furthermore, a recent study by Barlett and Coyne (2014) indicated that a greater number of cyber bullies were male. In addition recent findings in cyberspace found higher chances of cyber bullying in males (Lapidot-Lifler & Dolev-Cohen, 2014, p.1).

b) Girls and bullying

Gareth (2003) posits that girls view bullying more negatively than boys. Studies by Barlett and Coyne (2014) found that during adolescence, females are engaged more in relational or indirect aggression than males. Girls use relational bullying more than boys (Coloroso 2003 p.14). According to Coloroso (2003) bigger girls also get involved in physical bullying when they trip, shove and poke smaller girls and boys. Girls tend to play in small intimate circles with clearly defined boundaries, making it easier and effective to harm a girl by merely excluding her from the social circle.

In a study conducted by Kowalski, Susan, and Limber (2012), it was discovered that female bullies were more anxious and depressed than other females. The same study also established that boys had higher chances of engaging and being affected by certain types of cyber bullying like video gaming than girls of the same age. In a recent study by Barlett and Coyne

(2014) , females reported more cyber bullies during early and mid-adolescence, only to have the trend reversed as males develop and become more technologically advanced and become acquainted with the use of sophisticated online communication methods. However, Barlett and Coyne (2014) point out that the literature on gender differences in cyber bullying frequency is mixed depending on how one views cyber bullying. Thus, if it is viewed as a form of bullying and aggressive behaviour, males are likely to cyber bully more than females, but if it is conceptualized as a form of indirect bullying or relational bullying, females are likely to cyber bully more than males. Du-Wet (2005) found that boys were the aggressors and victims of bullying more than girls. Ncontsa and Shumba, (2013) also contend that when it comes to gender bullying, females were the target of bullies as they were perceived to be physically weak. Drawing from their study on school dropouts, Townsend et al. (2008) said that girls who were both bullies and victims were found to be at greater risk for dropping out of school.

2.2.6 Bullying and school grade level

When it comes to bullying younger students are significantly more likely to be bullied than their older peers at any grade level (Owesu et al., 2010 p.236). Olweus (1994) study of bullying involving 130 000 Norwegian students using the Bully/victim questionnaire revealed that the percentage of students who reported being bullied decreased with higher grades. It was the younger and weaker students who were most exposed (Olweus, 1994, p.1174). Similarly in the Bergen, study highlighted by Olweus (1994) involving 42 schools in Norway; it was found that a considerable part of the bullying was carried out by older students. This was particularly marked in the lower grades: More than 50% of the bullied children in the lowest grades (2 and 3, corresponding to ages 8 and 9 in this survey) reported that they were bullied by older students. Youth at risk behaviour surveillance system; Centre for Disease control and Prevention (2013) indicated that more than 20% of students doing Grade 9-12 experience bullying in the United States and elsewhere. A recent study in Benin City, Nigeria found that 78% of learners in junior secondary school had been victims of bullying.

Research has revealed that grades were significantly related to both traditional and cyber bullying. Studies by Sarento, Garandeu and Salmivalli (2015) indicate that victimization declines as one moves along the ladder of education while bullying increases as the children become physically stronger. By this Kolwaski and Limber (2012) meant that verbal,

physical, social and cyber bullying tended to increase from lower grades in primary schools to higher grades in secondary schools.

South African studies focusing on bullying also looked at bullying prevalence in different school grades. For example, in a study focusing on causes and effects of school violence, Ncontsa and Shumba (2013) found bullying as the common form of violence in schools and identified vulnerability amongst young students who happened to be in Grade 8 and 9.

In a research conducted by Liang et.al. (2006) to establish bullying behaviour of five thousand and seventy-four adolescent schoolchildren in grade 8 (mean age 14.2 years) and grade 11 (mean age 17.4 years) at 72 Government schools in Cape Town and Durban, South Africa it was found out that over a third (36.3%) of students were involved in bullying behaviour, 8.2% as bullies, 19.3% as victims and 8.7% as bully-victims (those that are both bullied and bully others). A similar study by Greeff and Grobler (2008) of the bullying behaviours of Grade 4 to 6 learners in the intermediate phase at a single sex school in Bloemfontein, South Africa indicated a higher rate of bullying(56,4%) than previously cited in South Africa as well as in international research.

Thus, bullying in South African high schools is pervasive, ranging from 61% among a sample of high school learners in Tshwane (Neser, Ovens, Van der Merwe, Morodi, & Ladikos, 2003), to 41% in a nationally representative sample of high school learners (Reddy,Panday, Swart, et al., 2003), 36.3% among Grade 8 and Grade 11 learners in Cape Town and Durban (Liang, Flisher & Lombard, 2007), to 11.8% in rural high schools in Mpumalanga (Taiwo & Goldstein, 2006).

2.3 Prevention and intervention of bullying in schools

The researcher takes note of the fact that schools and indeed the South African Department of Basic Education have established rules and regulations as well as intervention programmes to curb bullying in schools. For instance, Section A of the South African Schools Act 84 of 1996 prohibits bullying and such practices as initiation in schools (Dore, 2015 p31). Initiation or hazing involves painful and degrading acts for new comers in a school sanctioned by some bullies in the school. A study by Naidoo et al. (2015) about the effect of school based bullying intervention on Grade 10 learners in rural schools in KwaZulu-Natal indicated that girls were more likely to experience verbal bullying than boys. Intervention

programmes to stop bullying are not only taking place in South African Schools but internationally as well. Smith and Madson (1997) from a nationwide survey in England reports that by 1996, most schools in England had anti-bullying policies and others had a behaviour and discipline policy. Smith and Shushu (2010) mentioned other improvements as playground improvement policies meant to improve the monitoring of playground activities. The periods 1990-1997 reported decreases in bullying and bully victimization in England, most probably because of these interventions (Smith & Shushu, 2010, p.199).

Further, Reygan (2016) argues that focusing on inequality, violence, and culture diversity will lead to the transformation of schools and social justice. The development of school-based anti-bullying measures necessary for supporting the positive development of students and the healthy functioning of schools as social systems requires the ability to identify influential factors (Saarento, Garandeu & Salmivalli, 2015, p. 212). In a review of 31 studies related to school bullying by Azeredo, Rinaldo, Leite de Moraes, Levy and Meneses (2015) reports that lower rates of bullying in schools was observed in schools that has anti-bullying and pro-victim attitudes, set rules and accepted regulations discouraging bullying, and the ability to intervene against violence. A whole school anti bullying intervention programme that incorporates all three stakeholders- teachers, learners and parents had been put in place (Dore, 2015, p.125). In agreement, Vreeman and Carrol (2007) suggest that the whole school approach which includes school rules and regulations, the training of teachers, training in conflict resolution and counseling are better placed to reduce school bullying. Dore (2015), affirm that the whole school approach has proved to be effective as it involves all stakeholders and it controls bullying behaviour through:

- Each learner signing the code of conduct.
- Offenders being subjected to disciplinary action.
- Having a policy on bullying.
- Conducting mini-workshops and presentations for all stakeholders on the discipline such as held by the Western Cape Education Department for educators. .
- Learners signing anti-bullying pledges.

- Bully proofing the school through various anti-bullying campaigns.
- Implementing other programmes such as the Olweus bully prevention programme.

On cyber bullying, many studies (Hunter, 2012; Lipidot-Lefler, & Dolev-Cohen, 2014) suggest that the victims need to inform adults on such issues so that stern action is taken against such bullies. This then implies that the interventions for traditional bullying can equally be applied for cyberbullying. Jeffrey et al. (2001) says bystanders could be used as an avenue to prevent bullying if peer reaction could be mobilized rather than to let them be passive in the face of victimization of others. Thornberg and Knutsen (2010) believe that those wanting to prevent bullying should commence by investigating and targeting the conceptions of teenagers about the causes of bullying. In addition, it is important to educate adolescents about increasing vulnerability of the victims of cyber bullying to cultivate an attitude of empathy in would-be perpetrators towards the potential victims, despite the absence of information concerning their victims and the lack of physical interaction with victims in cyberspace (Lipidot-Lefler & Dolev-Cohen, 2014, p.12).

To discourage bullying at school, Saarento, Garandeu, & Salmivalli (2015, p.212) emphasizes the need for positive teacher–student associations and clear condemnation of bullying by teachers. They are convinced that in addition to peer bystanders’ reactions to bullying, the reaction of guardians and teachers can work for the good or bad by mitigating or aggravating the problem of bullying. To Saarento, Garandeu, and Salmivalli (2012) peers, teachers, family relationships and the broader community can play an important role in curbing bullying in schools. Young students who are often victims ought to be empowered to report incidences of bullying to higher authorities through their teachers. (Ncontsa & Shumba, 2013). A study by Naidoo et al. (2016) on bullying intervention in South African Schools recommended that a school-based intervention program aimed at reducing bullying will be beneficial. The findings of this study highlighted that positive changes can be achieved with school-based interventions seeking to reduce bullying among students (Naidoo et al., 2016 p.819).

Despite these intervention programmes, bullying persists in schools and as Dore (2015) points out in South Africa each day thousands of children dread going to school because they know they are going to be bullied. Many others fake illness in an attempt to avoid the picking-on, name calling, exclusion or physical abuse that have become their daily torture.

Violence and aggression will flourish if means to curtail bullying are not taken seriously (Dore, 2015, p.5). Given such a sad scenario, the researcher thought of physical activity as another way through which bullying could be curtailed, and therefore ventured to find out whether there is a relationship between bullying and levels of physical activity. The researcher's idea was that if there was a link, and the link was inverse, then it would indeed be a possible means at reducing bullying activities in schools. The other important variable in the current study, namely physical activity is discussed next.

2.3.1 Bullying and adolescence

The adolescence period is a period of change in the individual adolescent. As already alluded to in the previous sections, the physical, social and emotional changes that take place affect the individuals differently and some of which may stimulate anxiety and bullying. Leonard (2014) points out that bullies are deeply insecure and that such insecurities may lead them to attack other learners. According to Leonard (2014), bullies are cowards whose deep insecurities fuel their aggression. Cassidy (2014) concurs and points out that because bullies are insecure; they often pick on the small and vulnerable victims so as to make themselves feel better and stronger. During adolescent period, bullies vent their frustrations and insecurities on vulnerable victims (Leonard, 2014, p.24). The victim of the adolescent bully thus bears the brunt of the bullying episode (Coloroso, 2003). The submissive and vicarious victims often receive most of the bullying as they often suffer in silence unlike the proactive and argumentative victim. The current study has shown that adolescence bullying picks up during the early and middle adolescence stages and declines during the late adolescence..

2.4 The concept of physical activity

2.4.1 What is physical activity?

Harris (2016) defines physical activity as all bodily movement that uses energy. It includes all forms of physical education, sports and dance activities. It also includes indoor and outdoor play, work-related activity, outdoor and adventurous activities, active travel (e.g. walking, cycling, rollerblading, scooting) and routine, habitual activities such as using the stairs, doing housework and gardening.

Similarly, Hardman and Stensel (2003) describe physical activity as sophisticated performance which is all encompassing that includes various forms of activities such as

occupational, household (e.g. cleaning) transporting (e.g. walking, running) and leisure time activities (e.g. dancing, swimming). Further, Hardman, and Stensel (2003) described exercise as a subdivision of physical activities done during leisure time whereby an individual performs bodily movements that are planned, structured and repetitive aimed at improving or maintaining one's physical fitness. Allender, Cowburn and Foster (2006) describe physical activity as any type of movement of the body that uses skeletal muscles resulting in energy expenditure. According to the Health Survey for England (HSE) (2004) physical activity includes aerobics, running, gym work, gardening and even house work.

The Physical Education (PE) component carried out in the school curriculum aims to develop learners' physical well-being and knowledge of movement and safety. It encourages learners to use these to perform in a wide range of activities associated with the development of an active and healthy lifestyle. It also aims to develop learners' confidence and generic skills, especially those of collaboration, communication, creativity, critical thinking and aesthetic (Department of Basic Education, 2011, p.28). Not only is Physical Education an important component of physical activity, so too is sport. Harris (2016) points out, school sport is the structured learning that takes place beyond the curriculum (i.e. in the extended curriculum) within school settings; this is sometimes referred to as out-of-school-hours learning. Again, the context for the learning is physical activity. The school sports' programme has the potential to develop and broaden the foundation learning that takes place in physical education. It also forms a vital link with community sport and activity'.

Physical Education is a formalized and timetabled physical activity done in schools and so is sport except that sport is carried out as an extra mural activity in most schools.

2.4.2 *The benefits of physical activity*

a) General overview of the benefits of physical activity

Bailey and Richard (2006) believe that there are positive effects of physical activities on anxiety, self-esteem, self-concept, self-confidence, stress, depression, tension, energy, mood, efficiency and well-being. Academic grade point, average scores on standardized tests and grades in specific courses; measures of concentration, memory, and classroom behaviors benefit from physical activity (William & Strong, 2005). The addition of physical education to the curriculum results in small positive gains in academic performance of

participants. Robert and Gould (2007) point out that physical activity, in particular exercise, offers participants opportunities to socialize and according to Albert Bandura's Social Learning theory cited by Robert and Gould (2007, p.553), specific positive sporting attitudes and behaviors are learnt through modeling or observational learning, reinforcement and social comparison. Participation in physical activities is thus beneficial in that direction and furthermore sport administrators, coaches and community leaders claim that taking part in sport keeps youths off the street, trouble free and out of gangs. In addition research supports the claim that participants in organized sport are less likely to be delinquents as opposed to non-participants (Robert & Gould, 2007, p.558). A review of 850 articles by Strong, Mauna, Bumkie, Daniels, Dighman, Gutin and Trudeau, (2005) reveals that physical activity has development of skill, health and behavioral benefits in children and adolescents. Apart from health benefits, the review also found that physical activity had beneficial effects to self-concept, anxiety and depression symptoms in children and adolescents. A further discussion of these benefits of physical activity ensues.

b) Physical activity and emotional and mental well being

Studies by Shoup, Gattshall, Dandamundi and Estabrooks (2008), have demonstrated that physical activity leads to emotional and psychosocial stability of an individual and as already alluded to earlier depression, for example, can have negative consequences for an individual if not controlled. As a mental health problem, depression is experienced by adolescents who end up having economic, health, and quality of life challenges. Despite depression being a serious public health issue in adolescents across the globe, a paucity of studies have endeavored to examine how protective factors, such as engagement in physical activity, may help to alleviate depression (McPhie & Rawana, 2011, p. 43). A study by McPhie and Rawana (2015, p.83) established an association between higher levels of physical activity in mid-adolescence and lower levels of depression. Similar results were found by Kremer, Elshaughb, and Leslie (2014) who conducted a study using Australian children and adolescents which revealed a relationship between physical activity, leisure-time screen use and lower levels of depression. It was observed that teachers and guardians should encourage students to engage in school activities and in the community as well and reduce screen-time use (thus playing computer games, video games and watching television) to enhance their mental health and well-being. A study by McPhie and Rawana (2011) established that physical activity raises self-esteem and lowers depressive symptoms (p.48). This supports the promotion of physical activity among adolescents as intervention initiatives to prevent

depression. Kremer, Elshaugb, Leslie and Toumbouroud (2014, p.187) share the same view as they suggest that increasing opportunities for students to engage in sporting activities at school and in the community encourages physical activity which may lower depressive symptoms.

When self-esteem is raised through physical activity, it helps to reduce depression in adolescent boys, and girls (McPhie & Rawana, 2011, p.46). In a similar argument, William and Strong (2005) point out that physical activity has beneficial effects on depression, anxiety and self-concept while activities such as aerobics increase self-concept. Robert and Gould (2007) citing one National Institute of Mental Health panel concluded that physical fitness was positively linked to mental health and well-being and that exercise was linked to the reduction of stress emotions such as state anxiety, that exercise is linked to decreased levels of depression and anxiety and that physically healthy people who require psychotropic medication (mood altering) may instead, take up exercise that is closely monitored. Priest (1993) contends that physical activity can have a positive causal effect on self-esteem. The issue of the importance of self-esteem and its relationship to depression and physical activity is explained further by Mcphie and Rawana (2011)'s stance that early and late adolescent girls had less self-esteem and high levels of depression compared to early and late adolescent boys since the latter proved to be more physically active. Miles (2007) argues that physical inactivity decreases the risk of clinical depression and anxiety. Miles (2007) further points out that more benefits could be derived from physical activities in the life time of an individual, owing to its ability to improve one's psychological well-being, self-esteem and mood.

According to Lau, Fox, and Cheung (2004), recent studies have shown a relationship between playing sport and inclination towards athletic identity necessary for stability and direction in one's life. A study by Ramstetter, Murray, and Garner (2010) highlighted that free play enhances children's creativity, their social and emotional development and that physical activity promotes a child's well-being as well as academic and social maturation. Miles (2007) concurs by pointing out that physical activity has physiological effects on individuals and affects various body systems. Participation in sport and physical activity has been linked to numerous physical and psychological benefits (Slater & Tiggermann, 2010 p.455).

c) Physical wellbeing and health benefits

Other benefits of physical activity according to Miles (2007) include reduction of resting blood pressure and diabetes in individuals, reduction of risks of cardio vascular diseases and cancers through such physical activities as running, walking and skipping. Allender, Cowburn and Foster (2006) concur and explain that physical activity reduces the risk of coronary heart disease and some cancers. It also reduces the chances of obesity. In agreement William and Strong (2005) add that health benefit of physical activity include adiposity (reduction of total body weight), cardiovascular health, aerobic and anaerobic fitness of youths with asthma. In a study of adolescence and benefits of physical activity, Mcphie and Rawana (2011) found that during early adolescence, physical activity is a less relevant source of psychological well-being for girls, only to be considered as the girls mature and gain a greater awareness of body image and perception issues. According to Miles (2007) physical activity interventions greatly influence the state anxiety and traits anxiety as well as markers such as blood pressure. The physical benefits have been clearly established and include reduction in the risk of obesity, cardiovascular disease, osteoporosis and other chronic diseases (Slater and Tiggermann, 2010, p.455).

The study carried out by Roman, Caterina, and Taylor (2013) on the school climate, bullying victimization and physical activity revealed that reduced physical activity is a health issue associated with bully victimization. From these findings, it can be concluded that youth physical activity is a complex behaviour determined by many factors. Furthermore William and Strong (2005) point out that muscular strength and endurance are important health benefits of physical activity. Robert and Gould (2007) echo the same view that physical activity done regularly leads to personality development as well as self-concept, high self-confidence, better concentration, focus, positive imagery and thoughts. Therefore, programmes can be designed so that the prescribed sixty or more minutes of physical activity can be cumulatively achieved during physical education at school, recess, intramural sports, and prior and post school time in a given day (Strong et al., 2005, p.737).

2.4.3 Factors that influence physical activities for adolescents

In their review of correlates of physical activity of children and adolescents, Sallis, Prochaska and Taylor (2000) found that the factors that influenced physical activity for adolescents were: gender, ethnicity, availability of community sports, parental influence,

weekend activities, support from others, sibling physical activity, opportunities to exercise, age, perceived activity competence, intentions previous physical activity and depression. According to Robert and Gould (2007) people take up exercise if it is fun, bringing with it happiness and satisfaction. Whilst there are numerous factors that play a role in influencing participation in physical activity as expounded by Sallis, Prochaska, and Taylor (2000), the researcher mainly focused on the variables gender, age and grade level in this research to determine their influence on physical activity and bullying. They summarise the factors that influence learners' participation in physical activity as self-efficacy, physical or sports competence, perceived benefits, perceived barriers, intention, enjoyment, physical education attitudes, parental encouragement, direct help from parents, peer and sibling support, access to play spaces and equipment, and time spent outdoors. The result of Sallis et al., (2000) study also supports ecological models of behavior that posit behavioral influences from personal (biological, psychological, behavioral), social, and physical environmental factors.

a) Physical activity and age

Physical activities of children and adolescents vary with age, type of exercise, and setting. Physical activity begins in infancy with pushing up, turning, crawling, and eventually walking, and it progresses to more complex activities as neuromuscular control develops. Basic movement patterns develop during preschool ages and are the foundation for a wide range of physical activities at later ages. With growth, maturation, and experience, basic movements are integrated and coordinated into more specialized and complex movement skills that characterize the free play, games, sports, and other activities of school-age youth (William et al. 2005 p.736). Roman et al. (2013) reveal that in recent reviews of 15 studies, that levels of physical activity decline with age

The same observation was made by Khan, Huang, Gillman, Field, Austin, Colditz, & Frazier (2008) in their study of participation of learners by age in physical activity. They recorded a greater decline in physical activity between the ages of 13 and 18. The study by Khan (2008) as well as that by Figaji (2009) noted that older learners were less involved in moderate physical activities than young learners. Findings in terms of physical activity levels and trends of the world population among adolescents were found to be extremely concerning as 4 out of 5 adolescence aged 13-15 years did not reach current physical activity recommendations (Hallal et al., 2012, p.21). Similar views are echoed by Pernía, Borrego, Fernández and Del Rey (2017) who observed that the period of adolescence is a time of rapid

physical, psychological and social changes; however recent studies show that, at this stage, there is a decrease in physical activity (PA) levels, along with high rates of overweight and obesity in Barcelona, Spain.

b) Physical activity and gender

Findings from studies on gender differences in terms of levels of physical activity vary.. For example, a study to examine gender differences in adolescent participation in sport and physical activity in Australia, by Slater and Tiggermann (2010) it was found that of 332 adolescent girls, 216 (66.1%) participated in an organized sport. The most popular sports played were: netball (47.7%), volleyball (29.2%), and tennis (19.4%). A similar study for 382 adolescent boys revealed that more boys 296 (78.5%) participated in an organized sport and the most popular sports were (Australian) football (23.6%), cricket (22.6%), basketball (18.6%) and soccer (20.9%). It was found that by comparison significantly more adolescent boys than girls reported participating in organized sport. However, Slater and Tiggermann (2010) also found that more girls than boys reported partaking in other fitness activities such as running, walking and swimming laps, and girls were more likely to exercise at the gym.

In another study carried out by Stewart et al.(2001) on 1110 students to measure age and gender differences in physical activity in youths, it was found that across all grades, boys were more active than girls and that physical activity declined rapidly during childhood and adolescence. A similar study by Caspersen, Pereira and Curren (2000) also indicates a decline of physical activity by age to be more profound for girls. A study by Sue, Kimm, Nancy, Glynn, Andrea..... Liu (2002) on the decline of physical activity in adolescents in the

United States of America found that substantial declines in physical activity occur during adolescence in girls. Cockburn and Clarke (2002) point out that for many girls, impressing boyfriends and other peers was seen as more important than physical activity.

While many girls wanted to be physically active, a tension existed between wishing to appear feminine and attractive and the sweaty muscular image attached to active women. In a similar study by Figaji (2009) to assess participation in physical activity among learners he concluded that 77% of the sampled participants were sedentary that is, they were not active, while 23% were active and furthermore, boys reported significantly more hours of vigorous as well as moderate physical activity when compared to girls. In a study of female

adolescents' physical activity levels in 10 high schools in Saudi Arabia, it was found that 14.8% were obese and that the Saudi female adolescents were in need of interventions to increase their levels of physical activity (PA).

Another study on the prevalence of physical activity amongst adolescence and young adults in 122 countries worldwide found that the prevalence of physical inactivity in most countries was higher in females compared to males (Hallal, Anderson, Bull, Guthold, Haskell & Ekelund, 2012, p.3). The findings suggest the importance of addressing perceived barriers to PA and targeting PA self-efficacy, enjoyment of PA, and social support for PA to enhance commitment to PA (Bajamal, et al.2017 p.5).

c) Physical activity and grade level

A study of physical activities by grade revealed that physical activity among children and adolescents has declined, and increasing numbers of children are spending more time in sedentary activities such as watching TV and video games (Springer, Hoelscher, Kelde, Castrucci & Perez, 2009). In a similar study of the prevalence of physical activity (PA) by grade of 6556 students in urban, suburban and rural Texas, United States of America was reported as follows: urban 8th- and 11th-grade students reported the lowest prevalence of PA. Suburban or rural schools were significantly more likely than their urban counterparts to report higher school-based sports team participation among 8th graders; higher vigorous PA and strengthening exercises among 11th-grade boys; and higher physical education attendance in 4th and 11th graders. Sports teams and other organized PA participation in urban 4th-grade girls and vigorous PA in urban 8th-grade boys were the only behaviors for which a significantly higher prevalence was reported compared with nonurban counterparts (Springer, Hoelscher, Kelde, Castrucci & Perez, 2009, p.1). Springer et al. (2009) point out that the general low prevalence of PA behaviors for urban 8th- and 11th-grade students and PE attendance in urban 4th- and 11th-grade in Texas students as compared to rural areas suggests the need to heighten PA promotion efforts and opportunities for children in urban areas. The effect of a decline in physical activity by adolescence is highlighted in the first South African National Youth Risk Behaviour Study of grade 8–11 schoolchildren (13–19 years) which showed that 17% were overweight and 4% were obese according to Cole's BMI standards (Kruger et al.,2005, p.2).

2.4.4 Physical activity and bullying

Roman et al. (2013) point out that less attention has been devoted towards how physical activity can help to reduce bullying and victimization. On bullying during performance of physical activities, a study by Slater and Tiggermann (2010) concluded that adolescent girls reported higher rates of sport-related teasing than boys and that experiences of teasing and associated body image concerns contribute to the higher rates of withdrawal from physical activity observed around early adolescence in girls. Some studies have found out that a school climate supportive of bullying reduces participation in extracurricular activities. Research by Storch and Ledley (2005) indicated that physical activity and bullying were negatively related while research by Bowes, Marquis, Young, Holowaty and Isaac (2009) highlighted physical inactivity and bullying as areas of concern in some schools. From the above discussion, the importance of physical activity cannot be overemphasized and it is therefore vital for students to be physically active in and out of a school system, however of concern to the researcher is the little attention that has been given to how physical activity can be used to reduce bullying as propounded by Roman et al., (2013) and echoed by Bowes, Marquis, Young, Holowaty and Isaac (2009). This then calls for more and more research in bullying and physical activity. The theoretical framework is discussed next.

2.5 Theoretical Framework

According to Du Plooy-Cilliers (2014), a theoretical framework is intended to frame the research results. It serves as a roadmap, useful in the researcher's expedition of establishing trends and patterns as they seek to address the research objectives and obtain solutions to the prevailing issues (Du Plooy-Cilliers, 2014, p37). Further, Du Plooy-Cilliers (2014) explains that a theoretical framework is a specific collection of thoughts and theories that relate to the phenomenon that a researcher chooses to investigate. It is a snapshot of a particular topic that we select and describe in terms of specific and related theories. Du Plooy-Cilliers (2014) contends that through a theoretical framework the researcher brings into focus specific theories, concepts and their assumptions because they are relevant to the topic. Some of the functions of a theoretical framework according to Du Plooy-Cilliers (2014) are summed up as follows:

- It is used to investigate and scrutinize a specific research topic, problem or question.

- It outlines what is relevant to the study.
- It provides guidelines and specific perspectives through which we examine a topic.
- It points to the concepts we need to focus.
- A theoretical framework helps to identify the key variables in the research study.
- It guides on data collection, analysis and interpretation.
- A theoretical frame work points to the most critical research questions that need to be considered in order to improve understanding of a particular phenomenon.

2.5.1 Power Relations Theory

This study used the power relations theory to understand the concept of bullying. This theory is based on the negative relationship that exists between the bully and the bullied (the victim) (Radtke & Stam, 1994). This theory seeks to explain the complex strands that link gender and power relations. The power relationship is asymmetrical (Olweus, 1993). In addition, Olweus (2010) explains that bullying is an aggressive behaviour with special characteristics of repetitiveness and an asymmetrical balance of power. Radtke and Stam (1994) view power as the ability of persons or groups to impose their will on others despite resistance through deterrence or in the form of withholding rewards or in the form of punishment. Thus, the relationship is coercive and unequal. Guerra, Williams, and Sadek (2011) highlighted the reasons why bullies bully other learners as imbalance of power, social background, emotional instability, self-low esteem and a desire to demonstrate social prowess. In a study meant to investigate bully-victim relationship conducted by Veenstra et al. (2007) it was established that the probability of a bully-victim relationship was higher if the bully was more dominant than the victim, and if the victim was more vulnerable than the bully and more rejected by the class. In a bully-victim dyad, boys were more often the bullies. Veenstra, Oldehinkel & Oldehinkel (2007) goes on to say that if the domination component is relatively strong (in comparison to the social approval component), then it is likely that children bully to experience and show their domination over other children. This goal orientation makes it likely that the bullies' skills are first of all related to achieving domination, not to the question

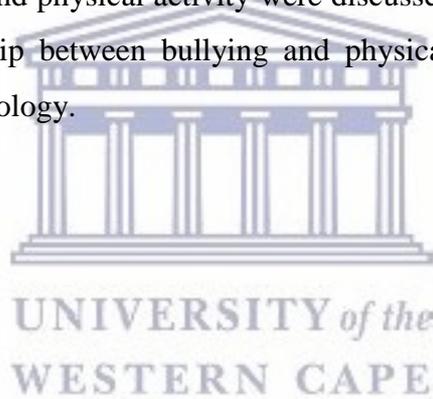
whether or not they are considered socially competent by others. Scholars reported that bullying is an indicator, the tip of an iceberg for a larger profile of anti-social problems (Guera, Williams & Sadek., 2011). In a study of 54 schools, Veenstra et al. (2007) found out that in a bully – victim dyad, boys were more often the bullies. From the bully’s perspective, the power advantage is indeed not a status advantage in the sense of social approval but one in the ability to dominate (Veenstra et al., 2007, p.1851). This bullying consists of the power aggressor attacking the less powerful victim. Hawley (1999) points out that children bully those perceived to be physically weaker to gain, among other things, higher status among peers. If this theory of power imbalance is anything to go by, then bullying in schools could be a serious problem as most of these schools consist of older, mature boys and girls and younger, weaker boys and girls. It therefore remains an urgent task for schools to find out more about the best ways to intervene to prevent bullying (Lawren, 2015). Furthermore, based on the reviews of literature discussed, the researcher believes that bullying due to power imbalance can indeed exist by age, gender and differences in grade level among students in schools.

2.6 Conclusion

The discussion on bullying has highlighted the fact that bullying is prevalent in almost all schools in and outside South Africa (Dore, 2015; Townsend, 2008). The effect of bullying on the victims is devastating (Coloroso, 2003; Rigby, 2007; Olweus, 1993; 1994). This discussion revealed that bullying is fuelled by the imbalance of power between the bully and the victim and that the bully is spurred into action by the perceived differences that he may notice between himself and the victim (Radtke & Stam, 1994; Olweus, 1993; Sadek, 2011). The difference could be due to factors such as gender, age or grade. Since bullying may occur in a cycle that involves the bully, the victim and the bystander, the bystander is an important element that may perpetuate bullying in schools and the bystander can be an important cog in the reduction of bullying in the school (Coloroso, 2003; Jeffrey et al., 2003). This discussion further revealed that four main categories of bullying can be identified, namely verbal, social also known as relational bullying, physical, and cyber (Olweus, 1994; Rigby, 2007; Field, 2007; Dore, 2015; Coloroso, 2003; De Wet, 2005a; 2005b). As earlier on alluded to, bullying can also be gender, age and grade based because from the former discussion, the bully is motivated to bully because of any difference he notices between himself or herself and the victim. A difference in race, tribe or nationality for example can spark xenophobic bullying. Bullying is motivated by the difference that exists between the bully and the victim

(Thornberg & Knutsen, 2010; Dore, 2015).As already alluded to earlier on in this chapter, the adolescent stage is characterized by numerous differences that the adolescent bully will take advantage of, such as grade, age and gender differences. These are all motivations for the adolescent to bully.

For a long time now, worldwide intervention programmes to curb bullying have been established. Recently, the whole school intervention programme that involves all stakeholders has been introduced in South African schools as well as in some other countries (Rigby, 2007; Olweus, 1994; Naidoo, 2015; Coloroso, 2003; De Wet, 2005a). Research has revealed that physical activity has some benefits that could be utilized to reduce bullying (Chad, Cushing & Elledge 2013; Miles, 2007; Robert & Gould 2007). Psychological, social, emotional, physical and moral benefits are derived from physical activity and these benefits could be utilized to curb bullying in schools. The power relations theory and previous research studies on bullying and physical activity were discussed, the focus being to find out whether there is a relationship between bullying and physical activity. The next chapter discusses the research methodology.



CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter presented the literature review including the theoretical framework of the study. This chapter focuses on research methodology which is situated within the quantitative approach. It describes the aims of the research, research paradigm, research approach and design. The above is followed by discussion on the procedure for data collection; the research site, population, sample, and sampling type, the criteria for participant's selection as well as the instruments used in collecting data. The chapter closes with a detailed account of the data analysis and interpretation and the ethical measures undertaken.

3.2 Aim and Objectives of the Study

This study aimed to determine the relationship between bullying and physical activity among South African learners in one high school in the Western Cape. In an effort to achieve this aim, the following objectives were established;

- To measure the frequency of bully-victimization and bullying perpetration among learners in this high school in the Western Cape.
- To establish the level of physical activity among South African learners in this high school in the Western Cape.
- To investigate the relationship between bullying and physical activity at this high school in the Western Cape.

3.3 Hypotheses of the study

In this study numerous hypotheses and null hypotheses were formulated for bullying and physical activity as outlined below:

H1: There is a significant difference related to being bullied by others by age among learners in one high school in the Western Cape.

Ho1: There is no significant difference related to being bullied by others by age among learners in one high school in the Western Cape.

H2: There is a significant difference related to bullying others by age among learners in one high school in the Western Cape

Ho2: There is no significant difference related to bullying others by age among learners in one high school in the Western Cape

H3: There is a significant difference related to being bullied by others by gender among learners in one high school in the Western Cape.

Ho3: There is no significant difference related to being bullied by others by gender among learners in one high school in the Western Cape.

H4: There is a significant difference related to bullying others by gender among learners in the one school in the Western Cape.

Ho4: There is no significant difference related to bullying others by gender among learners in one high school in the Western Cape.

H5: There is a significant difference related to being bullied by others by grade level among learners in one high school in the Western Cape.

Ho5: There is no significant difference related to being bullied by others by grade level among learners in one high school in the Western Cape

H6: There is a significant difference related to bullying others by grade level among learners in one high school in the Western Cape.

Ho6: There is no significant difference related to bullying others by grade level among learners in one high school in the Western Cape.

The hypotheses were tested using $p = .05$ as the acceptable level of significance. A hypothesis was rejected if it was $\geq .05$. It was accepted if its level of significance was $< .05$. The researcher found it convenient to have many hypotheses as this enabled him to look in depth at the variables gender, age and grade level in respect of bullying and physical activity.

3.4 Research paradigm: Post-positivism

A paradigm is a basic set of beliefs that guides action and feelings about the world and how it should be understood and studied (Guba, 1990, p. 17). It is a broad conceptual framework within which research is conducted and analyzed (Oliver, 2010 p.27). The paradigm adopted for this study is post-positivism. Johnson and Onwuegbuzie (2004, p 14) explain that while positivism focused on results that are objective, post-positivism takes into account the subjectivity element, such as making decisions of what to study, the question to be asked and the sample size. In addition the post-positivism school of thought posit that truth and knowledge change overtime (Johnson & Onwuegbuzie, 2004, p.15). As such the positivism is considered to be outmoded (Clark, 2002). Positivism was advocated particularly by the French sociologist; Auguste Comte in the mid nineteenth century (Oliver, 2010). He postulated that empiricism and science were the way in which we could acquire knowledge about the world. Since the seventeenth century, positivism was viewed as science that uncovered universal truths such as the production of law like statements (such as Newton's law of gravitation) that apply to all times and places (Mouton (1996). Post positivism on the other hand is viewed as new philosophy of science that searches for assertability as opposed to truth (Leourneau, 2002). According to Ryan (2006), post-positivism is actually extra-positivist, because it provides vantage points outside positivism from which one can approach research. Post- positivists are constructionists who believe that we construct our world based on our perceptions of it (Trochin, 2000; 2006). In agreement, Wolcott (1990) affirms that new meaning can be constructed from a study using post positivism. Knowledge, according to Trochin, (2000; 2006) evolves through a process of variation, selection and retention. Further, Ryan (2006) explains that post-positivism emphasizes meaning and the creation of new knowledge.

Since the current study investigated whether an association exists between bullying and physical activity, through post-positivism, the paradigm helped to understand how learners constructed and maintained their perceptions about bullying and physical activities. With Post- positivism as stated by Eagleton (2003), this study is able to address not part but the

whole picture of the phenomenon under study. It further allows for the creation of new knowledge, the construction of new meaning (Wolcott, 1990, p. 19), as well as examines patterns across many cases (Ryan, 2006). The researcher chose post positivism for the numerous reasons highlighted above and in addition, the researcher realized that in post-positivism the researcher's motivations for and commitment to research were central and crucial as expounded by Schratz and Walker (1995,).

Thus the use of this paradigm is beneficial to this study for many reasons; firstly, it offers a new way of thinking about science (Clark, 2002). This approach as a unifying research methodology, allows for rival theories and methods to be integrated in a singular study (Letourneau, 1998). Further, the researcher decided on post-positivism because it allows for flexibility in identifying research questions, sampling and data collection. Finally, this approach allowed for ethical scrutiny which is vital for a good research (Schratz & Walker, 1995). In addition post positivism is most suitable for this study as according to Schratz and Walker (1993) it investigates and writes about human experience as well as helping in the creation of new knowledge.

3.5 Research approach: Quantitative approach

According to Punch (2009), a research approach can be divided into two groups; deductive and inductive. The relevance of hypothesis is the main distinctive point between these approaches (Punch, 2009). Deductive approaches test the validity of assumptions of theories and hypotheses, while on the other hand inductive approaches contribute to the emergence of new theories and generalizations. Alzheimer -Europe (2009) gives four main research approaches namely; quantitative, qualitative, mixed methods and participatory research approaches. This study adopted the quantitative approach, which is based on the systematic, or positivist approach to social enquiry (Kumar, 2014, p. 31).

Quantitative approach involves the use of numbers and the manipulation of observations for the purpose of describing and explaining the phenomenon that the observations reflect (Guthrie, 2010, p. 168). The quantitative approach is generally associated with the positivist and post-positivist paradigms (Alzheimer-Europe, 2009). Quantitative research is based on measuring variables for individual participants to obtain scores, usually numerical values that are submitted for statistical analyses for summary and interpretation (Gravetter & Forzano, 2012 p.158). The process involves collecting and converting data into numerical form so that

statistical calculations can be made and conclusions drawn. The quantitative approach, which the current study has utilized, is, according to Saunders et.al. (2007) about asking people for their opinions in a structured way so that the researcher can produce hard facts and statistics to guide him/her. Furthermore, it involves a systematic empirical investigation of social phenomena with the use of statistical and mathematical techniques (McMillan, 2008, p. 168). According to Kumar (2014) the quantitative approach is a structured approach because everything that forms the research process: the research objectives, the research design, the sample and the questionnaire are predetermined. Science is characterized by empirical research (Sale, Lohfeld & Brazil, 2002). As explained by Singh & Bajpai (2008), if the research adopts a range of hypotheses the research is aimed to explore, then the research is deductive research. Two important functions that hypotheses serve in scientific inquiry are the development of theory and the statement of parts of an existing theory in testable form (Singh & Bajpai, 2008, p.11) In line with this thinking, this research is quantitative and is deductive in nature because it has a number of hypotheses and research questions. According to Saunders et al. (2007), deductive methods move from theory to data, they explore relationships between variables (in this case bullying, physical activity, gender, grade and age), they collect quantitative data and use measures of control to ensure reliability and validity, they ensure the researcher is independent from the research, they use appropriate research instruments, they are highly structured and samples of a sufficient size is used in order to be able to generalize research conclusions.

Still on the benefits, this approach allows for the examination of patterns of bullying and physical activity amongst different ages, grades and gender in one high school. Through the use of a survey questionnaire, variables of physical activity, bullying, age, grade and gender were examined.

3.6 Research Design: Descriptive survey

A research design is a road map that a researcher decides to follow during a research journey and to find answers to the research questions as validly, objectively and economically as possible (Kumar, 2014, p.122). It is a procedural-cum-operational plan that details what and how different methods and procedures to be applied during the research process operate. It is a plan through which a researcher decides on and communicates that decision to others (Thyer, 1993, p. 94). Mouton (1999) points out that it is important to design and plan for a research project to eliminate potential error and maximize validity. It is important to design a

Plan for a research project; because it allows structuring the eventual validity of the research findings that is maximized through eliminating the potential error (Mouton, 1999).

According to Best and Khan (2007), a descriptive survey study refers to research which concerns itself with the present phenomenon in terms of conditions, practices, beliefs, processes, relationships or trends. Aggarwal (2008) further states that descriptive survey research is devoted to gathering of information about prevailing conditions or situations for the purpose of description and interpretation. Descriptive survey includes proper analyses, interpretation, comparisons, identification of trends and relationships (Aggarwal, 2008). Survey research provides information useful to the solutions of local issues or problems and is factual; hence it provides practical information (Salaria, 2012). Descriptive survey implies that data is collected on a phenomenon and that data is described (O'Dwyer et al., 2014). Gravetter & Forzano (2012) also see the purpose of descriptive survey research as that of describing people's responses to questions about behaviour and attitudes. Borg and Gall (1996) in addition state that descriptive surveys are mostly concerned with describing the findings. The use of the survey research allowed the researcher to determine the present practices, opinions or perceptions of a specified population (Thomas & Nelson, 2005). Descriptive research involves measuring a variable or a set of variables as they exist naturally (Gravette Forzano, 2012). According to Salaria (2012), survey research applies scientific methods by critically analyzing and interpreting data that leads to generalizations and predictions being made. A descriptive study according to Kumar (2014) attempts to describe systematically a situation, problem, phenomenon, service or programme or describes attitudes about an issue.

The main purpose of such studies is to describe what is prevalent with respect to the issue or problem (Kumar, 2014 p.13). Quantitative surveys can study relationships between variables and how and why they are related (Punch, 2003).

3.7 Population and sampling

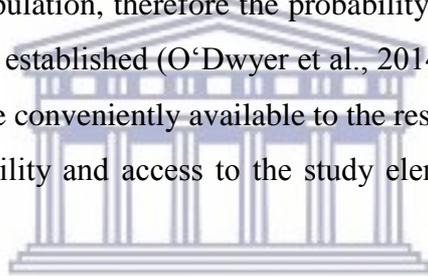
Oliver (2010) identifies explains that a group of people who are the focus of a research project are known as the research population and a selected number of the total potential research population is called a research sample. Gravetter and Forzano (2012) meanwhile view a population as the entire set of individuals of interest to the researcher and a sample as a set of individuals selected from a population intended to represent the population in a

research study. According to Swartz, de la Rey and Duncan (2004) as well as Kumar (2014), a population is the larger group from which a sample is drawn. According to Mouton (1996), a population is the aggregate of all the cases that conform to some designated set of specifications and in the context of sampling is a constructed or defined set of elements. Defining a population is a two way process: first, the target population, which is the population to which one wishes to generalize, must be identified, and the second the sampling frame must be constructed (Mouton, 1996, p.135). The target group or population for this study was high school learners in the Senior Phase (SP) and Further Education Phase (FET), thus Grade 8-11 at one identified high school. Grade 12s were not included in the study because they were busy preparing for their final examinations.

For this study, the research site, which was conveniently selected, was a previously disadvantaged school in the Cape Metropole and has mostly Xhosa-speaking learners. The school is in quintile one according to Western Cape Education Department (WCED) classification of schools. Hall and Giese (2009) identified five categories of schools in the Western Cape. Category one schools are low income, non-fee paying schools. It is considered to be the poorest category of schools while category five is considered the most affluent schools (p. 37). The school under study was therefore considered to be among the poorest of schools in the Cape Metropole. This school was selected because of its proximity to the researcher's workplace and more importantly, since the research was done soon after normal school time, the researcher was able to arrive in time at this school to conduct the research. From a population of about 1000 learners, an initial sample of 150 learners (who had voluntarily chosen to participate) was conveniently selected from grades 8-11. However, on completion of the survey questionnaires, 17 were incomplete and were therefore omitted. The final sample therefore comprised 56 females and 77 males; giving a sample size of 133. According to Grinnell and Williams (1990) usually 10% of a population is an adequate sample size to control the sampling errors.

The selected school is located within a neighborhood which consists of public housing provided through a Government programme called the Reconstruction and Development Programme (RDP). A large informal settlement is also part of this community. Therefore learners (the participants) came from both the formal and informal settlements. Most of the learners walk to school, some commute by train while others come by taxi depending on the distance between their home and the school. .

Sampling is the process of selecting participants for use in the research (O'Dwyer, et al., 2014). Salaria (2012) explains sampling as the process by which a small number of individuals is chosen and analyzed so as to find out something about the entire population from which it was chosen. However, this selection needed to be carried out in accordance with the requirements of the sampling theory which maintains that data obtained from the sample should quite accurately pertain to the entire set. The selection of a valid sample aims at avoiding bias and helps to achieve maximum precision for a given outlay of resources (Kumar, 2014, p. 40). There are three categories of sampling design. They are random/probability sampling, non-random/non probability sampling and mixed sampling design (Kumar 2014, p. 235). In this study, the researcher used the non-random, convenience sampling. According to O'Dwyer et al., (2014) there are several non-probability sampling procedures which are convenience sampling, purposive sampling, systematic sampling and snowball sampling. On probability sampling procedures do not select elements in accordance with their incidence in the population, therefore the probability of an element being sampled from the population cannot be established (O'Dwyer et al., 2014, p.82). A convenient sample is made up of elements that are conveniently available to the researcher. Selection is therefore mostly determined by availability and access to the study elements. (O'Dwyer et al., 2014 p.83).



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Convenience sampling was appropriate for this study owing to the convenience for the researcher to carry out the research. Accessibility and availability were very important determinants, and another factor was the willingness of the learners to participate as this research was done after school. Most learners were unwilling to stay a minute longer after the last bell for dismissal for the day had rung. Swartz, de la Rey Duncan (2004) highlighted that in practice; this procedure involved a logistic feasibility in order to draw a sample. Bless and Higson-Smith (1995) believed that convenience sampling is convenient for researchers in terms of time and money. Thus, the use of convenience sampling was beneficial, because the researcher was familiar to the school and knew when learners could be accessed. In deciding on sample size, Gravetter & Forzano (2012) suggest that the law of large numbers should be applied, because they believe that a large sample is more representative of the target population. The bigger the sample is, the more accurately it represents the population (Gravetter & Forzano, 2012, p.142). In general, there is no simple solution to determining how many individuals should be in a sample (Gravetter & Forzano, 2012, p.143). One guide to deciding on sample size is to look at past studies and to review published reports of similar studies.

In deciding the sample for this research, the researcher looked and followed these guidelines and principles. The researcher also looked at the feasibility and cost to carry out this research. The researcher conducted the field work for four consecutive days after school at the rate of one grade per day for answering both the bullying and physical activity questionnaires. Age, grade and gender constituted important variables. According to Swartz, de la Rey and Duncan (2004), a variable is any property of an object or person that can vary from person to person or object to object. To Kumar (2014, p. 85) variables that cause change are independent variables and outcome/effect variables are the dependent variables. In this study, age, grade and gender are the independent variables.

3.8 Data collection measures

After observing all ethical protocols, the recruitment of the learners began with a formal announcement by the school principal at assembly. The researcher was introduced to learners and a polite request was made to the learners to cooperate. The principal requested the researcher to meet with the class teachers and develop a list and a timetable of the classes that were not committed to other school activities such as afternoon lessons and extra curricula activities. Using the school timetable, two classes in the SP and two classes in the FET phase were conveniently identified. Permission to conduct the study was sought from their parents and the learners themselves through letters they were requested to sign. The learners in these classes brought back the signed consent letters before they responded to the questionnaires. One class each from Grade 8 to 11 was conveniently selected. Grade 12 classes were not included because they were fully focused on revision and the upcoming final Matric examinations. Together with the class teachers an agreement was reached that the researcher was to see one class per day in the afternoon starting with the Grade 8 class. The bullying questionnaire was administered first after the researcher explained the purpose of the research and gave instructions on how to answer the questionnaires. After a short interval, the physical activity questionnaire was also administered to the participants.

3.8.1 Data collection instruments

With regard to quantitative method, this study used standardized, but slightly modified questionnaires as instruments for data collection. A questionnaire is a primary source of information and is a written list of questions, the answers to which are recorded by respondents (Kumar, 2014, p.178). Gall and Borg (1996) define a questionnaire as —a

document that asks the same of all individuals in a sample (p. 297). To captivate audience such as students in a classroom Kumar (2014) suggests collective administration of questionnaire as one of the best ways. Collective administration ensures a very high response rate as the researcher has personal contact with the study population where the purpose of the research can be explained (Kumar, 2014, p. 179). As such, it is recorded that a very high percentage of research in education employs the questionnaire technique for gathering data (Behr, 1973, p.72). This technique which is guided by the research questions (Punch, 1998), saves money and offers greater anonymity (Kumar, 2014).

Based on the objectives of this study, the researcher used validated and standardized instruments to measure the relationship between bullying and physical activity among learners in this high school in the Western Cape. These were the Olweus Bully/Victim Questionnaire (OBVQ) and Physical Activity Questionnaire (PAQ-A), see (Appendix 7 and 8).

3.8.1.1 The Olweus Bully/Victim questionnaire

The Olweus Bully/Victim questionnaire that the researcher used was revised in 1996. It is a revised version of the 1978 OBVQ (Olweus, 1996). It consists of items for the measurement of bully/victim problems (Olweus, 1996). Studies using this instrument have been conducted in several countries (Garcia & Perez; Olweus, 1993). The studies provided support for the use of the OBVQ as a valid and reliable instrument (Bendixen & Olweus, 1999). Studies by Kyriakides et al (2006) on a sample of 335 pupils using the Rasch model revealed that the instrument had satisfactory psychometric properties; namely construct validity and reliability. The conceptual design of the instrument was also confirmed (Kyriakides, Kaloyirou & Lindsay, 2006).

The OBVQ asks a whole range of questions on types of bullying, being bullied and bullying others (Olweus, 2007). The reaction of others to bullying including teachers, students, peers and parents are also measured (Olweus, 2007). The frequency of the responses is measured (Olweus, 2007). According to Olweus (2007), the OBVQ is designed to provide data that is relevant, reliable and valid. It encourages the students to remember events related to bullying during a given period of time. Response alternatives are made by using such phrases as ‘2 to 3 times in a month and about once a week’ (Olweus, 2007).

According to Olweus, (2007) in his Standard School Report on the OBVQ, he argues that the OBVQ is a standardized, validated, multiple choice questionnaire designed to measure a number of bullying aspects in the school environment. The OBVQ has psychometric properties, in other words it has validity and reliability. Internal consistency has been achieved at Cronbach's Alpha of 0, 80 or higher. This means that the questionnaire has construct validity (Olweus, 2004). Tables, percentages, graph and frequency distributions were used to present the study's results.

Various studies have concluded that the OBVQ is a sound instrument that measures bullying and victimization whose use for international studies in different countries is supported (Kyriakides et al., 1996 p.784; 796). As alluded to earlier on, the questionnaire has construct validity. It is through the sums or means of answers to the questions that internal reliabilities of .80 or more are achieved (Olweus Sample Report, 2007). A study by Bendixen & Olweus, (1999) shows evidence of construct validity for the two dimensions of being bullied and bullying. Related to that, Goncalves et al. (2016) contend that the OBVQ is among the few bullying assessment instruments that have well established psychometric properties in different countries. According to Goncalves et al. (2016) through using the Brazilian version of the OBVQ, reliability scores of 0.85 for victims and 0.87 for perpetrators was attained. For this study, scoring was done in relation to the subgroups or categories as in the questionnaire of the Olweus Sample Report:

- ❖ Students' responses about bullying and being bullied.
- ❖ Bullying others.
- ❖ Different ways of being bullied.
- ❖ Duration of bullying.
- ❖ Where it occurs.
- ❖ Communicating bullying.
- ❖ Feelings and attitudes to bullying
- ❖ Bullying intervention.

- ❖ Attitude to school and about school.

All the 40 items fitted into one of the above categories. Frequency distributions using percentages were established. Results were then presented in graphs and tables. In order for the questionnaires to be more applicable and relevant to the context of the study, some modifications were made to the questionnaire by the researcher. (See appendix 9).

3.8.1.2 The physical activity questionnaire for Adolescents (PAQ-A)

Kent and Kowalski (2004), explains that the PAQ-A is a 7- day recall instrument developed to assess general levels of physical activity for high school students from Grade 8 to 12, aged approximately 12 to 21 years. Participation in a specific physical activity is scored in terms of the frequency of such participation ranging from the lowest score of 1 to the highest score of 5 (Kolwaski et al., 1997), excluding item 9 which is used to identify students engaged in unusual activities. Kolwaski (1997) further explains that the final PAQ- A activity summary is found by finding the mean of all the means of the 8 items.

The physical activity questionnaire for adolescence (PAQ-A) used was adapted (see appendix 9) and used to measure experiences of physical activity of all the 133 participants in this study (including victims and perpetrators of bullying) in the South African context. The reliability (internal consistency) of the questionnaire was tested by Kent, Kowalski, and Crocker & Kowalski (1997) using 85 high school students in Grade 8 to 12 and a PAQ-A Cronbach rating of .73 was attained and in a 7-day recall interview, a rating of .59 was attained. The results of that study support the validity of the PAQ-A as a measure of general physical activity for High School students (Kent et al.,1997 p.342). In another study by Hagstromer and Bergman (2008) of the physical activity levels of 248 adolescents aged between 12 and 17 years was compared using Spearman's correlation coefficient and Bland–

Altman analysis. It was concluded that the PAQ-A had reasonable psychometric properties for assessing physical activity though the Hagstromer et al. (2008) study did not report Cronbach's reliability scores.

3.9 Data Analysis

According to Gay et al. (2006) data analysis is an attempt by the researcher to summarise data in a dependable and accurate manner. Along the same line, Swartz, De la Rey & William, (2004) described descriptive statistics as analytical tools that are used to organize, summarise and describe data. Thus, generalizations are made based on sample results. Analysis involved statistical processes; presenting data in form of frequencies, tables, and percentages. Data was captured on the Statistical Package for Social Sciences (SPSS) version 24 (IBM Corp, 2016). Swartz et al. (2004) also observed that the use of computerized statistical software has greatly reduced the laborious computation involved in data analysis. Analysis of the hypotheses was done using t-tests and chi squared tests, with a significance level of ($p < .5$). The variables of gender, grade and age of the learners were taken into account in the analyses of data.

3.10 Reliability and validity

Best and Khan (2007) describe psychometric properties of a questionnaire as quantifiable attributes such as validity and reliability that relate to the statistical strength or weakness of a test or a measurement. According to the Medical Dictionary (2012), reliability refers to the extent to which a measure is repeatable and stable. A reliable measure would return to the same results from time to time. Reliability is particularly important as it establishes a ceiling for validity. A measure can be no more valid than it is reliable. According to Maree (2011, p.217) the validity of an instrument is the extent to which it measures what it is purports to measure. Johnson and Onwuegbuzie (2004 p.15) pointed out that with regard to validity, all research in the social sciences represents an attempt to provide warranted assertions about human beings or groups of human beings and the environments in which they live and evolve. It is therefore important for researchers to use the correct tools and measurements to validate what they were trying to prove. According to Creswell and Clark (2011, p.210) in quantitative research, the researcher focuses on the issues of validation at two levels: the quality of the scores from the instruments used and the quality of the conclusion that can be drawn from the results of the quantitative analyses. They say quantitative validity means that the scores received from participants are meaningful indicators of the construct being measured. As for reliability of the data captured in the quantitative paradigm, this indicates that scores received from participants are consistent and stable over time (Creswell and Clark 2011, p.211).

As already discussed in Section 3.8 of this chapter, in this study, the instruments used (OBVQ and PAQ-A) were previously standardized in previous academic studies and found to have acceptable psychometric properties. In addition the researcher attempted to increase the study's validity by reviewing the items of the instruments used and adapted certain items to make the instruments more relevant to the particular socio-lingual context under focus. For this study, to ensure that the data collected was valid and reliable every participant was issued with the same questionnaire for bullying and physical activity and besides no one was forced to complete any questionnaire. The use of the SPSS package in analyzing the data statistically was conducted under the guidance of a qualified statistician to improve the validity of the construction of the finding.

3.11 Ethical Considerations

Du Plooy-Cilliers, Davies and Bezuidenhout (2014) note that ethical considerations are the cornerstone of research, and without them, the delicate and complex interweave of research falls apart in undesirable ways. In addition, Flick (2009) suggests that for a research to be conducted with integrity, basic principles for the dignity of persons and justice should be used. Lincoln (2009) alludes to this when he states that there are multiple, overlapping principles that guide ethical practice.

Du Plooy-Cilliers, Davies and Bezuidenhout (2014) identified numerous stakeholders who have vested interest in a research as: the participants, the broader public, the academic institution, any funding body, the community, the policy makers, the mass media and the researcher himself/herself. Ethical considerations come into play at three stages of a research project, namely:

- When participants are recruited;
- During the measurement procedure to which they are subjected;
- In the release of results obtained (Welman and Kruger 2001).

As the issue of bullying, may be of a sensitive nature, confidentiality of the information provided is of uttermost importance. Therefore, the researcher, in accordance with the University of the Western Cape ethical and professional guidelines ensured that:

- Permission to carry out the research was obtained from the University of the Western Cape ethics committee.
- Permission was also obtained from the Western Cape Education Department to carry out the research in its schools.
- The Principal of the school w also gave permission
- Permission for this research was also obtained from the parents and learners in question.
- That the researcher was properly trained and was prepared to conduct the research.
- The rights and welfare of the participants were protected via the principles of: informed consent, anonymity and confidentiality.
- The identities, interests and the diversity of cultures of those involved was respected and protected.
- Guarantees for confidentiality were given for information received.
- That the participants participated voluntarily
- The questionnaires were completed anonymously

In addition, to ensure confidentiality, the analysis of data is stored in a password-protected folder on a computer that is solely for individual use. Participant consent forms and completed surveys are stored in a locked cabinet. Data will be kept for a period of five years and then destroyed by deleting the study folder permanently from the computer storage system and shredding all material data.

3.12 Conclusion

This chapter discussed post positivism as the paradigm selected for this research, discussion also centered on the quantitative research approach as the methodology used. Descriptive survey was also discussed as the research design of the study. Also highlighted in this chapter were the target population and the sampling procedure. Data collection measures, the data collection process and how data were analyzed were also discussed. Reliability and validity considerations pertaining to the study were discussed. Of vital importance and also discussed were issues of ethics pursued in this study. The next chapter focuses on the presentation of the analysis of data and discussion of findings.



CHAPTER FOUR

PRESENTATION OF AND DISCUSSION OF FINDINGS

4.1 Introduction

In this chapter, data from questionnaires are presented using descriptive statistics entailing the use of percentages, tables and other statistical measures. Data is then analyzed and reference is made to the aims, objectives, research questions and hypothesis as outlined in Chapter one.

A total of 150 bullying and 150 physical activity questionnaires were administered to Grades 8-11 learners at the selected high school. Seventeen pairs of the questionnaires were found to be incomplete as they had missing data; hence only 133 of each set of questionnaires were analyzed. Missing data however affects sample size and occurs when there is non-completion of questionnaires by respondents (Dooley, 1995). The solution to missing data according to Dooley (1995) is to have a large sample to begin with so that even if the researcher removes the incomplete questionnaires the desired results will still be attained regardless of the non-completed questionnaires or refusals. The analysis of the 133 responses revealed that some bully-victimization and bullying perpetration, (although not on a large scale) exist in the school under study. The study also reports on the levels of physical activity among the study's participants. Finally, the relationship between bullying and physical activity will be discussed in terms of gender, age and grade levels of the participants. To be considered first in ensuing discussion is the demographic profile of the 133 participants.

It was deemed prudent to integrate the discussion where appropriate, with the presentation of findings so that the chapter illustrated flow and coherence in the presentation and discussion of findings.

4.2 Demographic profile of participants showing variables of gender, age, age-groupings and grade

The demographic profile of the participants is discussed according to the following variables; gender, age, (including age groupings) and grade (including phase groupings).

4.2.1 Gender

Table 4.1 indicates that out of 133 participants, more females, 58 % (n=77) participated in this study compared to 42% (n=56) males. Next is the discussion of the age profile of the participants.

Table 4.1: Gender of participants

Gender	Percentage %	Frequency
Males	42.1	56
Female	57.9	77
Total	100	N = 133

4.2.2 Age profile of participants

Table 4.2 shows the age distribution of the 133 participants from Grade 8 to 11. The table indicates that the age group with the highest number of participants was that of the 16 year-olds (30%, n=40). The second largest group was that of the 15 year-olds (about 23%, n=30). The 17 year-olds made up the third largest group, (about 19%, n=25). The 14 and 18 year-olds were almost similarly represented (respectively about 10%, n=13 and about 11%, n=14). There were a few 20 year-olds (about 5%, n=6). The lowest representation was that of the 13 and 21 year-olds (each about 0.8%, n=1).

Participants were also categorized into larger age groupings in terms of the different stages of adolescence as identified by Erikson (1968), namely the early adolescence, mid adolescence and late adolescence. Williams (n.d.) went further to classify these stages as follows; early adolescence included ages 10-14 years, middle adolescence 15-17 years; and late adolescence 18-21 years. From this categorization, it would appear that the highest number of participants were in the middle adolescent age group (about 72%, n=95) while the lowest numbers were in the early adolescence (about 11%, n=14) and late adolescence (about 18%, n=24). The participants' profile in terms of grade level is discussed next.

Table 4.2: Gender of participants

Age in years	Percent %	Frequency
13	0.8	1
14	9.8	13
Early Adolescence total	10.6	14
15	22.6	30
16	30.1	40
17	18.8	25
Middle adolescence total	71.5	95
18	10.5	14
19	2.3	3
20	4.5	6
21	0.8	1
Late adolescence total	18.1	24
Total	100	N = 133

4.2.3 Grade level of the participants

Table 4.3: Participants profile in terms of grade level

Grade	Percentage %	Frequency
8	26.3	35
9	24.1	32
10	32.3	43
11	17.3	23
Total	100	N=133

Table 4.3 presents the profile of the participants according to Grade level. Grade 10 was best represented (about 32%, n=43) followed by Grade 8 (about 26%, n=35), then Grade 9 (24%, n=32) with the least number of participants coming from Grade 11 (about 17%, n=23). Participants were also grouped according to phases of schooling.

4.2.4 Phases of schooling

Education in the secondary schools in South Africa is divided into two phases, namely the Senior Phase (SP) comprising of Grade 8 and 9 and Further Education and Training (FET) phase comprising of Grade 10-12. (Department of Education, 2003). The senior phase (Grades 7-9) falls under the General Education and Training band together with intermediate phase (Grades 4-6) and the foundation phase (Grade R-3) (Department of Education, 2011). According to the Department of Basic Education (2010) secondary schools consist of grades eight to twelve, and generally serve learners from thirteen to nineteen years of age. Table 4.4 indicates that the phases in the Secondary School were equally represented with about 50 % (n = 67) in the Senior Phase (SP) and about 50%, (n=66) in the Further Education and Training Phase (FET). The demographic profile of the bully- victims will be considered next.

Table 4.4: Phases of schooling

Phase	Percentage %	Frequency
FET	49.6	66
SP	50.4	67
TOTAL	100	133

4.3 Experiences of bullying

This section attempts to achieve the first objective 1 of the study: To measure the frequency of bully-victimization and bullying perpetration among learners in one high school in the Western Cape. The presentation of findings and the discussions will attempt to provide much depth in the exploration of the experiences of victims of bullying.

4.3.1 Psychometric properties of adapted Olweus questionnaire used to measure bullying in this study.

The Olweus Bullying-Victim questionnaire (1996) was adapted (see appendix 7) in this study and used to measure experiences of bullying (for both victims and perpetrators) in the South African context. The reliability (internal consistency) of the adapted questionnaire of 44 items in this study was measured using Cronbach's alpha and was found to be acceptable with a score of 0.87. The high internal consistency scores suggest that the questionnaire is a reliable measure of bullying prevalence in the present study. This finding is consistent with the good reliability scores found by Olweus (2004, 2007) who reported internal consistency reliability of 0.80 and above using Cronbach's Alpha.

4.3.2 Experiences of being bullied (victims of bullying)

4.3.2.1 Prevalence of being bullied in the study sample

A key question in this study was question number B3. *How often have you been bullied at school in the past couple of months?* This item was used to identify the participants who were considered as victims of bullying in line with Olweus (1994) definition of bullying which emphasizes that bullying occurs when the individual repeatedly experiences certain threatening negative actions by other individual(s). Item B3 was a likert scale item and the responses of 133 participants to the different likert scale response categories of the item were (i) *I haven't been bullied at school in the last couple of months (about 80%, n=106);* (ii) *It has only happened once or twice (about 11%, n=14;* (iii) *I experienced bullying two or three times a month (about 4%, n=5);* (iv) *I experienced bullying once every week (about 5%, n=6) and* (v) *I experienced bullying several times a week (about 2%, n=2).*

The latter three response categories were considered to be consistent with Olweus (1994; 2004) definition of bullying which highlighted aggression, deliberate intention to cause harm, imbalance of power and repetitive action over time as its hallmarks and as result 13 participants were identified as victims of bullying. This meant that out of the sample of 133 participants, about 10 % indicated that there were victims of bullying (according to Olweus' (1994) definition of bullying). Of the 13 participants identified as victims of bullying as shown in Table 4.5 (about 39%, n=5) experienced bullying two to three times a month, (46%, n=6) experienced bullying once every week, while (about 15%, n= 2) said they

experienced bullying several times a week. The demographic profile of the victims will be discussed next.

Table 4.5: Prevalence of being bullied in the last couple of months?

Item response	Percentage %	Frequency
experienced bullying two to three times a month,	38.5	5
experienced bullying once every week	46.2	6
experienced bullying several times a week	15.4	2
Total	100	13

The percentage of victims of bullying (10%) in this study, is not as high as in other studies such as that reported by Townsend et al.(2008) in Benin City, Nigeria which found that 78% of learners in a junior secondary school had been victims of bullying. However the results of the current study are consistent with a study by Liang, Flisher & Lombard (2007) involving five thousand and seventy four school children carried out in Cape Town and Durban that found that over 19.3% were victims of bullying. Similar studies in Zimbabwe by Zindi (1994) reported that 16% of learners were victims of bullying *now and then*, and 18 percent were bullied *weekly or more often*. Similar findings were made by Olweus (1994) in a survey of more than 130,000 Norwegian students using the Bully/Victim Questionnaire where a total of some 5% of the students were found to be involved in more serious bullying problems (as bullies or victims or *bully/victim*), *occurring "about once a week" or more frequently*. From the results of the study, an observation can be made that although the school experiences bullying it is the frequency of bullying as evidenced by the 15% victims of bullying every week that really should be of concern to it. The results of the current study where 10% were found to be victims of bullying are also consistent with the study of the prevalence of bullying of 15 686 US youths by Nansel, Overpeck &Pilla (2001) which found that 10.6% of the youths were victims of bullying.

4.3.2.2 Demographic profile of the victims

a) Gender profile of victims

Table 4.6 below shows the gender distribution of the 13 bully-victims. The table reveals that there were more than three times the number of female victims of bullying (77%, n=10) than males (23 %, n=3). A look at the age distribution of the victims follows.

Table 4.6: Gender profile of victims

Gender	Percentage %	Frequency
Males	23.1	3
Females	76.9	10
Total	100	13

b) Age distribution of the victims of bullying

Table 4.7 illustrates the distribution of the bully-victimization by age. The table reveals that most of the victims (about 39%, n=5) were aged 15 years and that the second largest group of victims (23%, n= 3) was that of the 17 year-olds. The table also indicates that there was a low prevalence of bullying equally among other age groups from 14 to 21 years (each about 8%, n=1). No bullying victims were identified among 13-year-olds.

c) Gender versus age profile of bullying victims

Table 4.8 illustrates that no males in the 14, 16, 17 and 18 year groups were victims of bullying. On the other hand females in both the 15 and 17 year olds, had the highest and equal number of victims (about 23%, n=3) each while (about 15%, n=2) males were victimized in the 15 year-group. Only one female (about 8%) was victimized in the 14- year-group as well as in the 16, 19 and 21 year groups. The same number (about 8%, n=1) was victimized in the 18 year-old group. The same table illustrates that they were more victims of bullying in middle adolescence (about 69%, n=9) compared to early adolescence (8%, n=1) and late adolescence (23%, n=3). The table further illustrates that the highest number of victims of bullying were females in the middle adolescence (about 54%, n=7) followed

by males in the middle adolescence and females in the late adolescence who were (about 15%, n=2) each.

The results of this study which indicate that they were more female victims of bullying (77%, n=10) are consistent with the findings of the Bergen study of 42 schools in Norway as reported by Olweus (1994) which found that boys carried out a large part of the bullying perpetration to which girls were subjected. Rigby (2007) made similar observations when it came to gender victimization that girls were frequently the victims. On the other hand, Liang, Flisher and Lombard (2007) assert that male students were most at risk of both perpetration and victimization, with younger boys more vulnerable to victimization. The current study indicates that about 77% of the victims of bullying were younger than 18 years of age (which fall under the early and middle adolescence age groups). This finding of the current study is also consistent with the study by Owesu, Hart, Oliver & Kang (2010) which submit that, younger students are significantly more likely to be bullied.

Table 4.7: Age distribution of victims of bullying

Age in years	Percentage %	Frequency
14	7.7	1
15	38.5	5
16	7.7	1
17	23.1	3
18	7.7	1
19	7.7	1
21	7.7	1
Total	100	13

In the current study, there were more victims in the middle adolescence (69%, n=9) than in the early and late adolescence groupings, (54%, n=7) of these victims, were females. Pellegrini and Long (2002) posit that bullying would initially fall in secondary school and

rise again due to the need for dominance in the middle adolescence. Pellegrini and Long 71 (2002) suggested that the need for dominance fuelled bullying as youngsters entered a new social group. Victimization, too, should decrease during the early adolescence and rise again in the middle adolescence as the need for dominance of a new social group arises before falling in the late adolescence as adulthood beckons (Pellegrini & Long, 2002).

Table 4.8: Age distribution of victims of bullying

Age in years	Males	Percentage	Females	Percentage	Total
14	0	0	1	7.7	1
Early adolescence	0	0	1	7.7	1
15	2	15.4	3	23.1	5
16	0	0	1	7.7	1
17	0	0	3	23.1	3
Middle adolescence	2	15.4	7	53.9	9
18	1	7.7	0	0	1
19	0	0	1	7.7	1
21	0	0	1	7.7	1
Late adolescence	1	7.7	2	15.4	3
Total	3	23.1	10	76.9	N=13

d) Grade level of the victims of bullying

Table 4.9 indicates that there were twice as many victims of bullying in Grade 8 (46%, = 6) than each of grades 9 and 10 (23%, =3 each). The least number of victims of bullying (about 8%, =1) were found in Grade 11.

Table 4.9: Grade level of victims

Grade	Percentage	Frequency
8	46.2	6
9	23.1	3
10	23.1	3
11	7.7	1
Total	100	N= 13

e) Gender versus grade level and phase of victims of bullying

Table 4.10 illustrates a cross tabulation of gender and grade level of the victims of bullying. Overall, more females (about 77%, n=10) were victims of bullying compared to (about 23%, n=3) males. Double the number of female victims of bullying (about 31%, n=4) were found in grade 8 compared to (about 15%, n=2) males in the same grade. Grade 9 had the second highest number of victims, who were all females (about 23%, n=3). In grade 10 (about 15%, n=2) females were victimized compared to (about 8%, n=1) males each in Grade 10 and 11. No Grade 9 and 11 male learners were victims of bullying. Table 4.10 further indicates the prevalence of bully-victimization by phase. The study found that there were twice as many victims of bullying in the Senior Phase (SP) (over 69%, n=9) than in the Further Education and Training phase (FET), (about 31%, n=4).

Table 4.10: Gender versus grade level and phase of victims

Grade	Males	Percentage	Females	Percentage	Total
8	2	15.4	4	30.8	6
9	0	0	3	23.1	3
Senior Phase	2	15.4	7	53.9	9
10	1	7.7	2	15.4	3
11	0	0	1	7.7	1
FET Phase	1	7.7	3	23.1	4
Total	3	23.0	10	77.0	N=13

The findings of this study as displayed in Table 4.10 illustrate that more females in the SP phase (in Grade 8 and 9) were victims of bullying compared to the FET phase (Grade 10 and 11). This is consistent with the findings by Rigby (2007) which reported that victimization in Australian schools was on the whole, higher among younger students, and

tapered off towards the end of secondary school. This is also consistent with the Bergen study of 42 schools in Norway which found that girls were subjected to bully victimization more than boys (as cited in Olweus, 1994). The higher percentage of female victims (77%) as compared to male victims (23%) in both phases of the current study is better explained by Dake et.al (2003) who reported on studies that investigated gender differences in bullying behaviours among children and adolescents which found that girls were victims of bullying by both genders equally. Similarly in a South African study on bullying by Townsend (2008) more than 60% girls (in grades5-7) reported being victimized mainly by boys. In a study reported by Dake, Price & Telljohann (2003) in secondary schools (grades 9-12) prevalence of victimization ranged from 4.2% in a large sample of British students and 15 to 25% in a small sample of Australian students.

f) Victims of bullying's attitude towards school

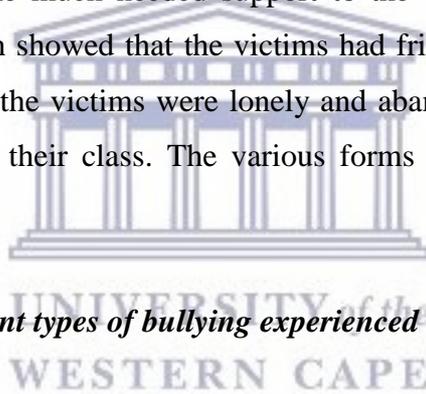
The 13 victims of bullying (table 4.5) were asked about their attitude towards school. The majority of the victims, (about 85%, n=11) liked school compared to only (8 %, n=1) who did not like school and the same for those who were undecided about whether they liked school or not. In response to item B22; *when you see a learner your age being bullied at school, what do you feel or think?* A large number (about 46%, n=6) indicated that *they felt sorry for the victim and wanted to help him or her*, while (about 31%, n=4) *felt a bit sorry for him or her*. (23%, n=3) indicated that *they did not feel much for the victim*. These findings are encouraging because they suggest some empathy expressed by most victims of bullying when observing others being bullied

The fact that one victim of bullying reported not liking school may attribute to bullying in the school and this is consistent with the observations of Louw & Louw (2012) that educational problems such as absenteeism, loss of concentration and deteriorating academic achievement may develop as a result a bullying environment. In agreement, Muscari (2002) pointed out that bullying has negative effects on schooling through fear of school, absenteeism and stunted academic progress. Weinhold and Weinhold (1998) found that 10% of dropouts had left school in South Africa prematurely as a direct result of bullying. Similar observations were made by Townsend et al. (2008) that bullying can lead to fear of school, absenteeism, and stunted academic progress, which in turn are precursors to dropping out of school.

The responses to question B22 of the bullying questionnaire on the learners feelings about others being bullied reveal that although most learners have a lot of empathy for the victims, they often do nothing about it as highlighted by Nansel et al. (2001) when they observed that youths who are bullied may well be avoided by other youths for fear of being victimized themselves or for fear of losing social status among their peers.

g) Friendship at school experienced by victims of bullying

All the 13 victims indicated that they had friends, though the number of friends for the victims differed; about 31% (n= 4) had one friend each and the same percentage had two or three friends. Those with six or more friends were (23%, n=3) and (about 16%, n=2) had four or five friends. On the issue of friends, Castro & Barbazan (2007) point out that a victims' friends are important and should not leave the victim alone so as to reduce vulnerability and to render the much needed support to the victim against the aggressor. Contrary to this finding which showed that the victims had friends, the Bergen study, cited by Olweus (1994) found that the victims were lonely and abandoned at school and did not have a single good friend in their class. The various forms of bullying prevalent at this school will be discussed next.



4.3.2.3 Prevalence of different types of bullying experienced by victims

This study reveals that the victims of bullying are subjected to different forms of bullying such as verbal, physical, relational, gender as well as cyber bullying in the school. A high frequency of bullying was identified in some of these forms in the school. Olweus (1994; 1997) classifies bullying under verbal, physical, indirect bullying, sexual and racial bullying in the Olweus Bullying questionnaire. Other studies however tend to discuss indirect bullying under relational and cyber bullying, whilst sexual bullying is discussed under gender bullying (Coloroso, 2003, p.17; Field, 2007, p.4). Table 4.11 illustrates the analysis of survey items B4 to B10 of the bullying questionnaire. Please note that participants were at liberty to indicate as many forms of bullying they had experienced since it is possible that more than one form of bullying can be experienced at times as reported by Olweus (1994; 1997).

In line with Olweus (1994; 2004) definition of bullying which includes repetitive action over time as one of its main characteristics, instances of each form of bullying were only computed when the particular form of bullying was reportedly experienced: *two or three*

times a month or once every week or several times a week. Thus the measure of repetitive experience of a particular form of bullying determined whether it would be included in the computations or not.

Table 4.11 illustrates the prevalence of the forms of bullying experienced by the victims. The highest prevalence was verbal bullying and exclusion (39 %, n = 5 each), followed by physical bullying, food taken away, money taken away and spreading rumours about the victim (23 %, n =3 each).Threat as a form of bullying was not reported by the victims and only one (8 %) victim reported bullying related to race.

Reported forms of bullying were also analyzed in terms of how often each form of bullying was reportedly experienced by the victim(s) during the past months. In this aspect of the data analysis the reports of experiencing a certain form of bullying was considered to be high in the past months by only selecting the responses to the likert scale categories: *About once a week* and *several times a week*. The last column of Table 4.11 indicates the findings in this regard. The form of bullying experienced with the highest frequency was exclusion (31%). This was followed by the forms of bullying: verbal and money being taken away (23 % each). Next was physical bullying and food being taken away (15 % each) followed by racial bullying and spreading rumours (8 % each).

The results of this study which showed that verbal bullying and exclusion (social) bullying were the most prevalent is consistent with the findings of Wang et al. (2009).who reported that verbal bullying (53.6%) to be the most prevalent among adolescents in the United States when compared to physical (20.8%), social (51.4%), and electronic (13.6%) bullying. Surveys of bullying in British school children reported by Rivers and Smith (1994) found that boys were more likely to experience physical forms of bullying; while girls were only slightly more likely to experience verbal forms of bullying. In the current study, exclusion had a high frequency rate of 31% followed by verbal bullying (22%), indicating that isolation or exclusion of victims on different platforms was a more common weapon used by the perpetrators more than verbal bullying. The popular misconception that bullying mainly involves physical aggression (Rivers and Smith, 1994) can be laid to rest as it can be both subtle and elusive. One type of bullying; racial bullying had a very low prevalence rate most probably because almost everyone in the school belonged to one race. Similar studies in Rome middle schools as reported by Nansel et.al. (2001) found that the most common types of bullying for boys were threats, physical harm, rejection and name-calling. For girls it was

name-calling, teasing, rumours, rejection and taking away of personal belongings. According to Nansel et al. (2001) one British study involving 23 schools found that direct verbal aggression was the most common form of bullying for both sexes and direct physical aggression was more common among boys, while indirect forms were more common among girls.

4.3.2.4 Being bullied via the internet and/or mobile phone

Victims of bullying were also requested to report the extent to which they had experienced bullying via the internet and/or the mobile phone by responding to the following item: *In case you were bullied on the cellphone, internet or both ways. How was it done?* A large number of victims (85%, n=11) indicated that they had been bullied via the mobile phone (cellphone) while (8%, n=1) each indicated that they had bullied on internet or via both ways. The large majority of victims in this study reported that they were bullied via cellphone communication which is consistent with the views of Trolley and Hanel (2010) who found that instances of cyber-bullying are increasing and have destructive consequences on learners as well. According to previous studies, including the research conducted by Wanga et al. (2009) it was found that in most cases boys would be the perpetrators of cyberbullying while girls were often the victims of cyberbullying. Surprisingly studies conducted with U.S. teens have found that rates of cyberbullying range from 5% to 20% (Sourander et al.2010). The high percentage of cyberbullying (85%) for the victims of bullying in the current study is indeed a disturbing phenomenon that needs the attention of the school and other authorities.

Table 4.11: Gender versus grade level and phase of victims

Type of bullying	Question number	Question from questionnaire	Prevalence (%) of different types of bullying	High frequency p (%) with regard to different types of bullying (About once a week and several times a week)
Verbal	B4	I was called mean names, made fun of and teased in a hurtful way	39 (5)	23
Threat	B9	I was threatened or forced to do things I didn't want to do	0 (0)	0
Racial	B10	I was bullied with mean words and comments about my tribe	8 (1)	8
Physical	B6	I was hit, kicked, pushed, shoved around or locked indoors	23(3)	15
Money taken away	B8a	I had money or food or other things taken away from me or damaged	23(3)	23
Food taken Away	B8b	I had food taken away from me and eaten	23(3)	15
Exclusion	B5	Other students left me out of things on purpose and excluded me.....ignored me.	39(5)	31
Rumours	B 7	Other learners told lies or spread false rumours about me and tried to make others to dislike me.	23(3)	8

4.3.2.5 Contextual factors related to the experiences of being bullied

Contextual factors here relate to where the 13 victims were bullied; the places where the bullying occurred, by whom they were bullied and by how many individuals were they bullied. The duration of bullying is also discussed under the contextual factors. Items B13 - B17 of the bullying questionnaire sort to find out more about the bully as questions asked, 7 pertained to which grade the bully belonged; the number of perpetrators per each bullying incident and the duration of the bullying.

With reference to item B13: *In which class(s)/grade(s) is the learner who bullies you?* (23%, n=3) indicated that they had been bullied by learners in the same class as them (the victims), while (about 15%, n=2) indicated that they had been bullied by someone or some learners in the same Grade as them but not in the same class, while the same percentage and number (15%, n=2) indicated that they had been bullied by someone or some learners in a higher grade. Furthermore the same number (15%, n=2) indicated that they had been bullied by learners from different grades. Surprisingly and contradicting their responses earlier on (31%, n=4) of the victims indicated that they had not been bullied in the last couple of months. The finding in the current study that a fairly large number of students (23%) were bullied by learners in the same class is consistent with Greeff's (2004) study on the nature and prevalence of bullying during the intermediate phase in a South Africa school that indicated that the greatest proportion of learners (both boys and girls) reported being bullied by learners in their own classes. The finding that they were some learners bullied by learners from higher grades is consistent with the Bergen study cited by Olweus (1994) which found that a considerable part of the bullying was carried out by older students. This was particularly marked in the lower grades: more than 50% of the bullied children in the lowest grades; grades 8 and 9 in the survey reported that they were bullied by older students (Bergen as cited by Olweus, 1994).

The victims of bullying were also asked in B14 *By how many students have you usually been bullied.* The highest response of (about 31%, n= 4) indicated that they had been bullied by one learner, while the second highest response, (23%, n=3) indicated that they had been bullied by a group of 2 to 3 learners. Similar responses each of (about 8%, n=1) indicated that they had been bullied by either a group of 4 to 5 learners or by a group of more than 9 learners. (31%, n=4) of the victims indicated that they had not been bullied in the last couple of months. The finding that some learners had been bullied by a group of learners is

consistent with the Bergen study cited by Olweus (1994) which found that in some cases several students jointly engaged in the bullying of another student, Data from the Bergen study indicate that, in the majority of cases, the victim is harassed by a group of two or three students. Dake et.al. (2003) observed that bullying involves a group process, that includes the by stander, the victim and the bully.

Victims of bullying also reported *on the duration of bullying they had experienced* in item B15. The highest response for this was (about 31%, n=4) that indicated that bullying had lasted for a month, while (23%, n=3) indicated that they had experienced bullying for a year, while (8%, n=1) indicated that it had lasted for one or two weeks The rest, (about 39%, n=5) indicated that they had not been bullied in the last couple of months. These findings indicate that victimization for most victims was not as frequent according to Nansel (2001) 's description of frequent bullying which is that occurring once a week or more.

In response to item B16: *have you been bullied by a boy or a girl? The highest number of victims (about 62%, n=8) indicated that they had been bullied by a boy, while (about 15%, n=2) indicated that they had been bullied by a girl. The rest (23%, n=3) indicated that they had not been bullied in the last couple of months. Participants also reported the locations of where they had experienced bullying (B17; where have you been bullied?) and their responses are illustrated in Table 4.12*

The finding in the current study indicates that the highest number of victims (62%, n= 8) were bullied by boys is consistent with other studies such as that of Olweus (1994) which found that perpetration and victimization is more common amongst boys, with younger boys more frequently victimized. In another study Clarke and Kiselica in Ma (2002 p.65) found that boys usually bully both boys and girls. This finding by Clarke and Kiselica (2002) confirms the results in this study which found that boys tended to bully more than girls. Similarly, a South African study by Naser *et al.* (2003) victims of bullying mostly reported being bullied by boys, Naser *et al.* (2003) found that 49.3% of the participants were bullied by a boy, 28% by a group of boys, 24.6% by a girl and 15.9% by a group of girls.

In this current study the percentage of victims bullied for the duration of one month continuously (31%, n=4) and for a duration of one year (23%, n=3) is of concern and so is (23%, n=3) victims bullied by learners in the same class.

Table 4.12: Gender versus grade level and phase of victims

Place	Percentage %	Frequency
Playground/athletic field	69.2	9
In the hallway/passage	7.7	1
In class (teacher present)	7.7	1
On the bus or in a taxi	15.4	2
Total	100	N=13

Table 4.12 illustrates that the majority of the victims (about 69 %, n=9) were bullied in the playground or athletic field while (about 15%, n=2) were bullied in a bus or taxi. A small number (8%, n=1) was bullied in the school hall way or passage. The same percentage (8%, n=1) indicated that bullying occurred in the classroom in the presence of a teacher. This finding is consistent with the report by Olweus (1993) and Rivers et al. (2007) that most bullying takes place in the playground due to the absence of adult supervision.

4.3.2.6 Responses to experiences of being bullied

a) Reporting on bullying

Item 18a of the questionnaire sort to find out whether learners reported bullying at school by responding to the question; *have you told anyone that you are being bullied in the last couple of months?* A big group of victims (54 %, n= 7) indicated that they reported bullying at school compared to (23%, n= 3) who did not. The rest (23%, n=3) surprisingly indicated that they had not been bullied at school.

b) *People to whom the bullying incident was reported*

In response to item 18b, (*Who did you tell?*) a large number of victims (46 %, n= 6) reported the matter to their class teachers while (15 %, n= 2) reported to their parents. The rest (8%, n=1) each went either to the principal or to an adult at school, or to friends or to a sister, or brother. The fact that more victims of bullying (15%) reported to parents than to friends or an adult (8%) is contrary to the observation of Rigby (2007) who observed that children are often reluctant to tell adults that they have been bullied by their peers but were more likely to tell their friends. Another observation is that although some victims told their teachers (46%) while other victims (15%) told their parents, Griffiths (2002) notes

that victimized students may be reluctant for adults to intervene, as the issues often feel overwhelming and the victims fear to make things worse. This view is supported by Rigby (2007) who points out that children often are disinclined to tell their teachers and their parents and as a result bullying can go on for some time. Ncontsa and Shumba (2013) point out those young students who are often victims of bullying ought to be empowered to report such incidences to higher authorities through their teachers.

In this study (54%, n=7) victims of bullying reported that they were being bullied at school while (23%, n=3) did not, This finding is consistent with the report by Holt (2007) who found that about 50% of victims reported bullying to authorities in their schools. Conversely, Selekman and Vessey (2004) state that many victims of bullying do not report bullying to a teacher, and in the experience of those who do report to a teacher, some may be helped while others make no difference or even make the bullying worse. According to Holt (2007) and Griffiths (2002) the reasons for not reporting bullying experiences may be due to factors such as: fear, lack of confidence, victims feeling that they are to blame, or worry that telling an adult will make the bullying worse. Holt (2007) claims that the proportion of victims who reported bullying is lower for boys and for older pupils.

c) *Bullying intervention*

By intervention, is meant finding out if there were any efforts to stop these acts of victimization in terms of measures taken by teachers, other students, adults or parents. In response to item B19; *how often do the teachers or other adults at school try to put a stop to it when a student is being bullied?* The highest response category was *always* which was (about 39%, n=5) followed by *sometimes at* (about 31%, n=4), *almost never* (23%, n=3), *once in a while* (about 8%, n=1). There was no response for category 4 (*often*). These findings are concerning because less than 40% of the victims of bullying reported that their reports of bullying resulted in action being taken by adults to stop bullying all the time.

In response to item B20; *how often do other students try to stop bullying when another student is being bullied at school?* The highest response was *never* (46%, n=6) while (23%, n=3) said *sometimes*, another response category was *always* (about 15%, n=2) while response categories *once in a while* and *often* each received (about 8%, n=1). The inaction by some learners to stop bullying is also disturbing given the findings reported here. However, the nature of bullying, the power dynamic and the intimidation aspect may be a strong

deterrent to students wanting to take action when observing others being bullied (Castro & Barbazan 2007, p.20). In a study conducted with Toronto elementary schools, researchers observed that peers were present 88% of the time when bullying occurred, and they sometimes intervened 19% of the time to stop bullying (Dake, Price & Telljohann, 2003, p.178). This observation by Dake, et al. (2003) is consistent with the finding of the current study that showed that sometimes the students intervened to stop bullying.

In response to B21; *has any adult at home contacted the school to try stop your being bullied in the past couple of months?* The victims only responded to three response categories, these being *I haven't been bullied at school in the last couple of months*(about 39%, n=5).The same response (about 39%, n=5)was made for *No, they have not contacted the school*, while (23%, n=3) responded positively to *yes they have contacted the school*. Response categories *Yes they have contacted the school once and yes they have contacted the school several times* did not get any response.

The findings in this study on intervention of teachers and adults reveal that almost 40% never intervened while (46%, n=6) of the victims said other students also never intervened in their being bullied. About (39%, n=5) said parents never contacted the school about their being bullied. The reason for not reporting bullying victimization is expounded in a similar study by Lohaus and Elben (2004) who explained that 44% of learners who were bullied reported that no action was taken to reprimand the perpetrator or deal with the bullying incident. To discourage bullying at school, there is need for positive teacher–student associations and clear condemnation of bullying by teachers (Sarento, Garandeu, & Salmivalli, 2015, p. 212). In addition, Saarento, Garandeu, and Salmivalli (2012) point out that peers, teachers, family relationships and the broader community can play an important role in curbing bullying in schools. A study by Naidoo et al. (2016) on bullying intervention in South African Schools recommended that a school-based intervention programme aimed at reducing bullying would be beneficial. The next discussion will focus on the perpetrators of bullying of the study sample.

4.3.3 Perpetration of bullying

4.3.3.1 Prevalence of bullying other learners in the study (bullying perpetrators)

A key question in Section C of the questionnaire was C 23 (see appendix); *how often have you taken part in bullying another learner(s) at school in the last couple of months?* A similar process to the one used for identifying victims of bullying was followed to identify the perpetrators of bullying. The responses of the 133 participants led to the identification of the 17 perpetrators. The analysis of the responses in this sample (N=133) indicated that about 13% (n=17) were perpetrators of bullying while about 87%, (n=116) were not. Table 4.13 displays these findings.

Table 4.13: Prevalence of bullying for the whole sample

	Percentage %	Frequency
Non- perpetrators of bullying	87	116
Bullying perpetrators	13	17
Total	100	N=133

4.3.3.2 Demographic profile of the perpetrators

The analysis went further to illustrate that the 17 perpetrators' demographic profile in terms of their age, gender and grade and the different forms of bullying perpetrated as expounded by Olweus(1994;1997) such as verbal, physical, indirect and sexual bullying were common in most cases. The discussion that follows details the findings of this analysis.

a) Gender and age profile of bullying perpetrators

Table 4.14 illustrates a cross-tabulation of gender and age profile of the perpetrators of bullying. Overall, the highest number of perpetrators were found in middle adolescence (about 59%, n=10) with equal gender representation, five males and five females. Of these 10 middle adolescent perpetrators, the majority (six) were 16-year-olds (four males and two females), followed by two 15-year-olds (two females) and only two 17 year- olds (one male and one female). About 24 % of bullying perpetrators were from the late adolescent phase (three females and one male). Late adolescent perpetrators comprised two 18 year-old females and one male as well as one male 20 year-old. The early adolescence category had the least number of perpetrators (about 18%, n=3) with the 14- year- old group having one

male and one female perpetrator (about 6% each). There was one male and no female perpetrator in the 13-year age group. The next table illustrates the bullying perpetrator profile in terms of high school grade and phase.

Table 4.14: Gender and age profile of the perpetrators of bullying

Age	Males	Percentage	Females	Percentage	Total	Percentage
13	1	5.9	0	0	1	5.9
14	1	5.9	1	5.9	2	11.8
Early adolescence	2	11.8	1	5.9	3	17.7
15	0	0	2	11.8	2	11.8
16	4	23.5	2	11.8	6	35.3
17	1	5.9	1	5.9	2	11.8
Middle adolescence	5	29.4	5	29.5	10	58.9
18	0	0	2	11.8	2	11.8
19	0	0	0	0	0	0
20	1	5.9	1	5.9	2	11.8
Late adolescence	1	5.9	3	17.7	4	23.6
Totals	8	47	9	53	N=17	100

Of the 17 identified perpetrators of bullying, there was only one more female perpetrator of bullying (53% females) compared to (47%) male perpetrators of bullying. This finding is contrary to a study by Wanga et al. (2009) which revealed that boys tend to engage in bullying more than girls and also to a study by Rigby (1999) which revealed that males were involved in bullying as bullies and victims significantly more often than females. The results are also contrary to Salmivalli et al., (1996) as well as Veenstra et al. (2005) who found that boys are generally more involved in bullying than girls. The highest number of perpetrators was in the middle adolescence phase and the least number of perpetrators is in the early adolescence in the current study. This finding is consistent with the views of Owesu et al. (2010) that although the odds of being bullied decrease with increasing grade level, bullying victimization does not decrease significantly with increasing age. These results as illustrated in Table 4.8 and 4.14 are consistent with the views of Pellegrini and Long (2002) who posit that bullying would initially fall in secondary school and rise again due to the need for

dominance in the middle adolescence. Pellegrini and Long (2002) suggest that dominance operated through bullying strategies as youngsters entered a new social group.

b) Gender, grade and phase profile of bullying perpetrators

Table 4.15 illustrates that there was one more perpetrator of bullying in the FET phase than in the Senior Phase (9 [53%] vs. 8 [47%] respectively). In terms of the gender of FET phase perpetrators, there was one more female (five females vs. four females). In the FET phase, grade 11 females had the highest number of perpetrators (about 24%, n=4) one more than the male perpetrators in the same grade (about 18%, n=3).

Table 4.15: Gender, grade and phase profile of bullying perpetrators

Grade	Male	Percentage	Female	Percentage	Total frequency	Percentage
8	4	23.5	2	11.8	6	35.3
9	0	0	2	11.8	2	11.8
Senior Phase	4	23.5	4	23.6	8	47.1
10	1	5.9	1	5.9	2	11.8
11	3	17.6	4	23.5	7	41.1
FET Phase	4	23.5	5	29.4	9	52.9

The senior phase had (about 47%, n=8) perpetrators. This phase had an equal number of male and female perpetrators each with (about 24%, n=4). In terms of grades in the Senior Phase, grade 8 in this phase had the highest male perpetrators (about 24%, n=4) and half the number, about (12%, n=6) female perpetrators. In grade 9, there were two female bullying perpetrators and no males. Of the eight perpetrators in the senior phase, there were three times as many perpetrators (about 35%, (n=6) in Grade 8 compared to the two perpetrators in grade 9.

Slightly more bullying perpetrators were found in the FET phase (53%) compared to SP phase (47%) than at any grade level. This is consistent with the Bergen study highlighted by Olweus (1994) involving 42 schools in Norway where it was found that a considerable part of the bullying was carried out by older students. The current study found that they were more young victims of bullying (39%, n=9) than older ones, this finding is consistent with a study of school violence, by Ncontsa & Shumba (2013) which established that

perpetrators of bullying were older boys than the young boys. The current study also reveals that they were more female perpetrators in the FET phase (29%, n=5) compared to the SP phase (24%, n=4). An equal number of male and female perpetrators (24%, n=4 each) was found in the senior phase.

4.3.3.3 Bullying perpetrators' attitudes towards school

The 17 perpetrators of bullying were asked about their attitude towards school. The majority of the perpetrators (77%, n=13) liked school compared to (18%, n=3) who did not like school. Only (6%, n=1) was undecided on whether or not he/she liked school.

The results on the perpetrators' attitude towards school reveal that (77%, n=13) liked school. This finding is contrary to the study by Nansel et al. (2001) of U.S youths who found that persons who bullied others showed poorer school adjustment, both in terms of academic achievement and perceived school climate. Townsend et al. (2008) pointed out that, girls who were both bullies and victims were found to be at greater risk for dropping out of school. It may therefore follow that the 18% (n=3) in this current study who did not like school in the current study were indeed at risk of dropping out of school.

4.3.3.4 Friendships at school experienced by perpetrators of bullying

Of the 17 perpetrators of bullying, about 18 % reported that they had no friends. Another 29% (n=5) had one friend each while those with two or three friends were (about 24%, n=4), the same number as those with five or six friends. Only (6%, n=1) had six or more friends. On a study of US youths, Nansel et al.(2001) observed that the ability to make friends was positively related to bullying. In the current study, the fact that some of the perpetrators had one or more friends seems consistent with Nansel et al.'s findings. Hawley (1999) posits that children bully weaker children to gain, among other things, higher status. Hawley's (1999) observation may be used to explain the number of friends perpetrators have in some cases high, partly in an attempt by them to gain a higher social status amongst their friends.

4.3.3.5 Prevalence of different forms of bullying perpetration.

Similar to section 4.3.2.2 (Table 4.11), the prevalence of different forms of bullying employed by the perpetrators was also reported in the current study. Here too, the different

forms of bullying were classified in terms of the forms identified by Olweus (1994; 1997); namely: verbal, physical, indirect bullying, sexual and racial bullying. As in the case of the victims of bullying, perpetrators were also at liberty to indicate as many forms of bullying they had employed. The same logic was used to determine the prevalence of the different forms of bullying being perpetrated as was done with the prevalence of different forms of bullying related to victim experiences (see section 4.3.2.2). Therefore, when a participant reported not using a particular form of bullying or using it only once or twice, that score was not added to the computation. Thus, the measure of repetitive use of employing a particular form of bullying determined whether it would be included in the computations or not. Table 4.1.6 highlights the prevalence of the different forms of bullying that were employed by the 17 perpetrators.

Table 4.16 illustrates that the most prevalent forms of bully-perpetration were threatening, physical bullying and taking away of food, each about 41% (7) of such instances, followed by verbal bullying (about 35%, n=6), then racial bullying and the taking away of money, each about 30% (n=5) of such instances of bullying perpetration. The use of exclusion in perpetrating bullying was less prevalent, (about 24%, n=4) and spreading rumours (about 18%, n=3) was the least prevalent.

Further analysis of the different reported forms of bully perpetration was conducted to identify forms of bullying perpetration that were considered to be high in terms of how often each form of bullying was used. High use of a particular form of bullying was identified by only selecting the responses to the Likert scale categories: *About once a week and several times a week*. The last column of Table 4.16 indicates the findings in this regard. The forms of bully perpetration with the highest frequencies (used *about once a week and several times a week*) were verbal bullying, taking away of money, exclusion and physical bullying, each with a frequency of about 18%. The second highest frequency of bullying was the spreading of false rumours (about 12%). The forms of bullying that were used the least in the course of a week were: threats, racial and food taken away.

Table 4.16: Different forms of bullying perpetration

Of bullying Form	number Item	Question from questionnaire	Prevalence (%) of different types of bullying	High frequency (%) with regard to different types of bullying (About once a week and several times a week)
Verbal	C24	I called another learner mean names, made fun of or teased him/her in a hurtful way	35.3(6)	17.7
Threat	C29	I threatened and forced him/her to do things he didn't want to do	41.2(7)	5.9
Racial	C30	I bullied with mean words and comments about his/her tribe	29.4 (5)	5.9
Physical	C26	I hit, kicked, pushed, shoved him/her around or locked him/her indoors	41.1(7)	17.6
Money taken Away	C28a	I took money or food or other things away from him or damaged his/her Belongings	29.5 (5)	17.7
Food taken Away	C28b	I took his food away from him/her and ate it	41.2 (7)	5.9
Exclusion	C25	I left him out of things on purpose and excluded him/her.....	23.5(4)	17.6
Rumours	C27	I spread false rumours about him tried..... others dislike him.	17.7 (3)	11.8

A similar study by Olweus (1994), found that three forms of bullying, namely verbal, indirect and physical bullying were most prevalent. In another study, Wang et al. (2009) reported verbal bullying (53.6%) to be most prevalent among adolescents in the United States when compared to physical (20.8%), social (51.4%), and electronic (13.6%) bullying.

4.3.3.6 Perpetration of bullying using the internet and/or mobile phone

Perpetrators of bullying were also requested to report the extent to which they bullied others via the internet or mobile phone by responding to the following item: *In case you bullied him on the cellphone, internet or both ways. How was it done?* A large number, (about 71%, n=12) indicated that they had used the cell phones to bully others, while about 18% (n=3) used the internet and 12% (n=2) used both means to perpetrate bullying. Other items related to contextual factors were also considered and will be discussed next.

These findings are contrary to the findings of a study by Sourander (2010) who found that the most common means of cyberbullying were computer instant messages (18%) and online discussion groups (13.8%). Name-calling and being the target of rumors were the most commonly endorsed methods of cyberbullying reported by victims. In another study on cyber bullying and gender, a survey by Li, (2006) of Canadian middle school students found that boys were more likely to perpetrate cyber bullying than girls; 22% of boys reported cyber bullying others as compared to 12% of girls.

4.3.3.7 Intervention and attitude related to bullying perpetration

a) Interventions and attitudes towards bully-perpetration

Dore (2015) points out that bullying has devastating effects on children as it affects the victim and the bystander. Given the scenario, the need for intervention to stop bullying cannot be overemphasized. Some items in the adapted Olweus bully-victim questionnaire sort to find out whether there were any interventions to bullying by teachers, parents or the bystanders. This is in line with the thinking of Saarento, Garandeu and Salmivalli (2012) who point out that peers, teachers, family relationships and the broader community can play an important role in curbing bullying in schools. Other items tended to test the attitude of the

learners towards bullying activities. Each item is listed in italics and then the responses to the particular item are presented.

(i) *Has your teacher(s) talked to you about your bullying other learners at school in the past couple of months?*

The responses indicate that 41% (n=7) perpetrators reported that their teachers had not spoken to them about their bullying while only about 12% (n=2) reported that their teachers spoke to them several times about their bullying other learners. Surprisingly (47%, n=8) indicated that they had not bullied anyone in the last couple of months.

(ii) *Has any adult at home talked to you about your bullying other learner(s) in the past couple of months?*

The responses to this item indicate that about 24% (n=4) had not been approached by adults about their bullying activities while (about 18%, n=3) indicated that they had been approached once by adults about their bullying activities. Only (about 12%, n=2) admitted that adults had talked to them about their bullying activities several times. The rest, (47%, n=8) indicated that they had not bullied anyone in the last couple of months.

The fact that 24% had not been approached by adults and only 18% had been approached once is consistent with the observation of Olweus (1993) that the common perception among the majority of societies around the world, as with the Scandinavian school officials, has been that bullying is a relatively normal and harmless experience most children go through as part of growing up. The later view is echoed by Kleovoulou (2014) when he points out that some adults believe bullying is part of growing up, that it builds character and that hitting back is the only way to tackle the problem. Dake et al. (2003) observes that the parents' perceptions as influence their willingness to support intervene or advocate for school based prevention efforts.

iii) *Do you think it likely that you would join in bullying a learner whom you didn't like?*

About 35% (n = 6) of the perpetrators of bullying reported that they would definitely not join in bullying a learner whom they did not like while about 6% (1 perpetrator) reported the opposite, that they would do so (yes). The majority of perpetrators (53 %, n = 9) reported that they were unsure (*maybe* and *no, I do not think so*). One perpetrator (6%) did not know how he/she would react (*I do not know*) when witnessing a learner being bullied that he/she does not like.

(iv) *How do you usually react if you see a learner your age being bullied by other learners?*

Of the 17 perpetrators of bullying, a fair number (about 29%, n=5) reported that they would participate in the bullying of another learner of the same age. About 18% (n=3) reported they would not react when observing the bullying of another learner of the same age and also felt that it was acceptable to do so. Another group of about 12 % (n =2) of the perpetrators reported that they too, would not do anything although they had thoughts that they ought to have helped the bullied learner compared to about 6% (, n=1) who reported that they just observe the other learner being bullied. Surprisingly about 18% (n=3) indicated that they had not seen any learner being bullied.

v) *How often are you afraid of being bullied by other learners in your school?*

Just over half the perpetrators (53 %, n = 9)) reported that they were *never* or *seldom* afraid of being bullied by other learners. Another 35% (n = 6) reported that they were *sometimes* afraid of being bullied by other learners. The rest (12%, n = 2) reported that they were afraid of being bullied by other learners (ranging from *fairly often* to *very often*).

vi) *Overall, how much do you think your class teacher has done to fight bullying in the past couple of months?*

The results indicate that the majority of perpetrators of bullying (59 %, n = 10) perceived that nothing or fairly little was done by their teachers over the past couple of months to fight bullying. However about 41% (n=7) felt that their class teacher was playing a role in fighting bullying.

vii) *Do you sometimes consider dropping out of school because of bullying?*

The majority (59%, n = 10) of the bullying perpetrators reported that never considered dropping out of school while only one perpetrator (6%) thought so most of the time. The rest (about 36%, n = 6) had considered dropping out of school at least once, a few times or sometimes.

viii) *How often have you been bullied at school in the past couple of months?*

This question was posed to ascertain if perpetrators also had experiences of being bullied in line with Olweus' (2004, 2007) definition of bullying. The findings indicate that 12 % (n = 2) of the perpetrators were also victims of bullying.

The finding that most teachers never intervened in the bullying behaviour of most perpetrators is consistent with a study by Meyer (2009) which found that 83% of participants in her study had indicated that teachers rarely intervened when learners bullied others. Meyer (2009) went on to say that some teachers claimed that they could not determine bullying or feel confident to address a bullying situation at school because they were never trained to address cases of bullying.

Similar observations were made by Batsche and Knoff (1994) that peers were not empowered to respond to bullying activities. This could possibly be due to a lack of intervention strategies in their schools and may partially explain why most learners do not intervene where bullying is taking place. To support this point, Jeffrey et al. (2001) point out that peers often witness and cheer the acts of bullying without intervening. Atlas and Pepler (1998) observe that dealing with bullying requires engaging the peers as they may escalate or help to reduce bullying at school.

Olweus (1993) observed that the failure of the by-standers to intervene or report acts of bullying emanate from fear of reprisal from the perpetrators, lack of knowledge on how they can assist, focus on school work or insecurity as they do not have the confidence that teachers may help in stopping the bullying. This observation by Olweus (1993) is amplified in the current study where (41%, n=7) of the perpetrators reported that teachers did not intervene or talk to the bullying perpetrators although most probably they knew them

Surprisingly, 59% (n=10) of the bullying perpetrators in the current study, never thought of dropping out of school, though bullying is associated with adverse outcomes that are in turn associated with dropping out of school (Townsend et al.,2008, p.24). In the current study, 12% of the perpetrators were also victims of bullying. Townsend et al.(2008,p.24) note that bully-victims have been found to be at elevated risk for depression and in their study found that girls who were both bullies and victims were at greater risk for dropping out of school. In one study of bullying behavior, the bully-victim group showed significantly higher rates of vandalism and suicidal behavior than either bully or victim groups (Liang et al. 2007, p.168). The drive to dominate others is stronger in some individuals than others, which leads to the development of hierarchies in which those who are the most dominant are at the top and the least at the bottom (Dore, 2015, p.33). This observation by Dore (2015) is consistent with the finding in the current study that 53% of the perpetrators did not fear being bullied themselves as they were in a dominant position already.

The analysis moves on to assess the level of physical activity of the sample. Focus will mainly be on the levels of physical activity of the victims and perpetrators of bullying.

4.4 Levels of physical activity in the study sample.

The section attempted to achieve Objective 2 of the study: To establish the level of physical activity among South African learners in one high school in the Western Cape. Again, this section includes both the presentation of findings as well as the discussion of findings, where appropriate.

4.4.1 Psychometric properties of the adapted PAQ-A in the study

The physical activity questionnaire for adolescence (PAQ-A) used in this study is a standardized instrument with acceptable psychometric properties (Kent et al., 1997). Since the instrument was adapted in the current study to make it appropriate for the current study, the reliability (internal consistency) of the 8 items of adapted PAQ-A was measured using Cronbach's Alpha and was found to be acceptable with a score of .80 which suggests that the instrument is a reliable measure of levels of physical activity for the study (Janz, Levy, Gilmore, Letuchy, Burns, Torner.....Willing., 2007).

4.4.2 Prevalence of physical activity in the study sample

4.4.2.1 Levels of physical activity for different categories of participants

Table 4.18 illustrates levels of physical activity for all the 133 participants, the 17 perpetrators and 13 victims of bullying.

Table 4.17: Levels of physical activity for different categories of participants

Number of Participants	Mean physical activity(M)	Standard deviation (SD)
Total sample (N = 133)	2.33	.62
Perpetrators of bullying (N = 17)	2.40	.61
Victims of bullying (N = 13)	2.1	.44

As illustrated in Table 4.18 above, the mean score for all the 133 participants in physical activity was found to be ($M = 2.33$, $SD = .62$). The mean physical activity levels for the 17 bullying perpetrators was found to be ($M = 2.40$, $SD = .61$) which is almost similar to that of all the 133 participants. The 13 victims of bullying had a physical activity mean score of ($M = 2.1$, $SD = .44$). These findings suggest that the 133 participants were involved in some form of physical activity and that the 17 perpetrators of bullying were more active than the 13 victims of bullying. This is consistent with a study by Slater and Tiggermann (2010) who concluded that adolescent girls reported higher rates of sport-related teasing than boys and that experiences of teasing and associated body image concerns contribute to the higher rates of withdrawal from physical activity observed around early adolescence in girls. Some studies have found out that a school climate supportive of bullying reduces participation in extracurricular activities, for instance Demissie, Lowry, Eaton, Hertz & Lee (2014) points out that bullying victimization is an important risk factor for insufficient physical activity in schools.

4.4.2.2 Levels of physical activity by gender, grade and phase profiles of victims of bullying

Table 4.18 indicates levels of physical activity by gender, grade and phase of victims of bullying.

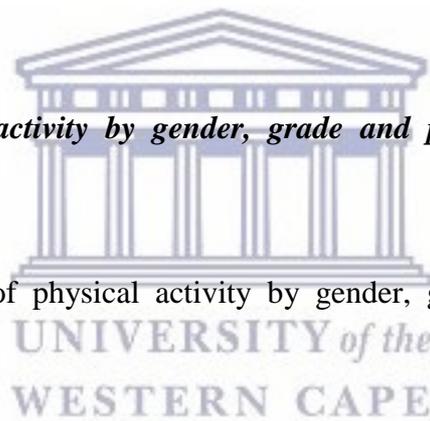


Table 4.18: Physical activity levels of the victims of bullying by gender, grade and phase

Category	Frequency N=13	Percentage %	Physical Activity Mean (M)	Standard deviation(SD)
Gender and levels of physical activity among victims of bullying				
Males	3	23.1	2.1	.32
Females	10	76.9	2.1	.49
Levels of physical activity among victims of bullying in relation to school grade and phase				
Grade 8	6	46.2	1.8	.47
Grade 9	3	23.1	2.3	.13
Senior Phase	9	69.3	2.0	.45
Grade 10	3	23.1	3.5	.46
Grade 11	1	7.7	n/a*	n/a*
FET phase	4	30.8	2.3	.39

* Not applicable (n/a) because of only one participant so mean could not be calculated.

Based on stastical analysis that was conducted as illustrated in Table 4.19 on gender, grade and phase of the victims of bullying's levels of physical activity, the mean score for the male victims of bullying (n=3) was (M=2.1, SD=.32) and was similar to the mean score of the female victims (n=10) which was (M=2.1, SD=.49). In respect of grade, Grade 10 (n=3) had the highest mean score of (M=3.5, SD=.46) followed by Grade 9 (n=3) which had (M=2.3, SD=.13). Grade 8 (n=6) had the least physical activity rating with (M=1.8, SD=.47). This table illustrates that Grade 10 victims of bullying (n=3) were more active in physical activity than the other grades. In respect of school phases, the FET phase (n=4) had a higher mean score of (M=2.3, SD=.39) compared to the senior phase (n=9) which was (M=2.0, SD=.39).

The finding that the most victims are found in lower grades such as grade 8 is consistent with Owusu et al. (2011)'s observation that younger students are significantly more likely to be bullied than their older peers at any grade level. Among students in Ghana, grade level is a better predictor of the likelihood of being bullied (Owusu et al. (2011, p.236).The observation by Kleovoulou (2013) that younger students tend to lack confidence and feel

insecure is supported by the finding in the current study that a large number of Grade 8 being in the lowest grade were not physically active. The researcher postulates that fear of being victimized while participating in physical activities could have led to a marked decline in physical activity by the Grade 8 victims of bullying.

Table 4.20 indicates levels of physical activity in terms of age and adolescent groupings. The 17- year age group of the victims of bullying (n=3) had the highest mean score of (M=2.52, SD .24) followed by the 15-year olds with a score of (M= 1.95, SD=.43).The 13, 14,16,18,19 and 21-year olds had only (n=1) participant each and therefore no physical activity mean scores were calculated for them. In respect of the adolescent groupings of the victims of bullying, the middle adolescence (n=9) had the highest mean scores of physical activity (M=2.2, SD=.44) followed by late adolescence (n=3) which had (M=2.0, SD=.18). There was (n=1) victim of bullying in the early adolescence and as result no mean score was calculated.

Table 4.19: Levels of physical activity by age and adolescent groupings of victims of bullying

Age	Frequency	Percentage %	Mean (M)	Standard deviation(SD)
13	0	0	-n/a*	-n/a*
14	1	7.7	n/a*	-n/a*
Early adolescen.	1	7.7	n/a*	n/a*
15	5	38.5	1.95	.43
16	1	7.7	n/a*	n/a*
17	3	23.1	2.52	.24
Mid.adolescence	9	69.2	2.2	.44
18	1	7.7	n/a*	n/a*
19	1	7.7	n/a*	n/a*
21	1	7.7	n/a*	n/a*
Late adolescence	3	23.1	2.0	.18

* Not applicable (n/a) because of only one participant so mean could not be calculated.

4.4.2.3 Levels of physical activity by gender, grade and phase profiles of perpetrators of bullying

Tables 4.21 and 4.22 indicate levels of physical activity by gender, grade and phase of perpetrators of bullying. Table 4.21 illustrates the levels of physical activity of the 17 bullying perpetrators by gender, grade and phase. In term of gender the male perpetrators of bullying (n=8) had slightly higher levels of physical activity (M=2.51, SD= .61) compared to the female perpetrators (n=9) (M=2.29, SD=.57). Grade 8 (n=6) bullying perpetrators had the highest physical activity mean score of (M=2.77, SD =.59) followed by Grade 9 perpetrators (n=2) (M=2.58, SD=.18), then Grade 11 perpetrators (n=7) whose score was (M=2.17, SD=0.41).Grade 10 (n=2) had the lowest physical activity score of (M=1.88, SD=1.17). In respect of school phases, the senior phase (n=8) had a higher physical activity mean score of (M=2.72, SD=.51) compared to the bully perpetrators in the FET phase (n=9) whose score was (M=2.11, SD=.56).

Table 4.20: Physical activity levels of the bullying perpetrators by gender, grade and phase

Category	Frequency N=17	Percentage %	Physical Activity Mean (M)	Standard deviation(SD)
Gender and levels of physical activity among perpetrators of bullying				
Males	8	47.1	2.51	0.67
Females	9	52.9	2.29	0.57
Levels of physical activity among perpetrators of bullying in relation to school grade and phase				
Grade 8	6	35.3	2.77	0.59
Grade 9	2	11.8	2.58	0.18
Senior Phase	8	47.1	2.72	0.51
Grade 10	2	11.8	1.88	1.17
Grade 11	7	41.2	2.17	0.41
FET phase	9	52.9	2.11	0.56

Table 4.21: Activity ratings by age and adolescent groupings of perpetrators of bullying

Age	Frequency	Percentage %	Mean (M)	Standard deviation(SD)
13	1	5.9	3.22	n/a*
14	2	11.8	2.39	0.18
Early adolescence.	3	17.7	2.80	0.18
15	2	11.8	2.39	0.18
16	6	35.3	1.94	0.72
17	2	11.8	2.46	0.01
Middle adolescence	10	58.9	2.26	0.30
18	2	11.8	1.92	0.28
20	2	11.8	1.92	0.67
Late adolescence	4	23.6	1.92	0.47

* Not applicable (n/a) because of only one participant so the standard deviation could not be calculated.

Based on statistical analysis that was carried out as illustrated in Table 4.22 in respect of physical activity ratings of the 17 bullying perpetrators by age and age groupings, the 13 year olds (n=1) had the highest mean score of physical activity of (M=3.22, SD= n/a) followed by the 17 year- old perpetrators (n=2) with a physical activity rating of (M=2.46, SD=.01). Next were the 14 year olds (n=2) and 15 year old (n=2) perpetrators of bullying with similar mean and standard deviation scores of (M=2.39, SD=.18) each. Then followed the 16 year olds (n=6) with a physical activity score of (M=1.94, SD=.72). The 18 year-old bully perpetrators (n=2) had (M=1.92, SD=.28) and lastly the 20 year-old perpetrators had (M=1.92, SD=.67). In respect of adolescent groupings, the early adolescence group (n=3) of the bullying perpetrators had the highest physical activity mean score of (M=2.80, SD=.18) followed by the middle adolescence (n=10) which had (M=2.26, SD=.30) and the late adolescence (n=4) had the least score of (M=1.92, SD=.47).

This finding where physical activity declined with age and grade for bullying perpetrators in this study is consistent with the study by Roman et al. (2013) who revealed that in recent reviews of 15 studies, that level of physical activity declined with age. The same observation was made by Khan et al. (2008) in their study of participation of learners by age in physical activity when they noted that the decline in physical activity was greatest between the ages of 13 and 18. The study by Khan (2008) as well as that by Figaji (2009) noted that older learners were less involved in moderate physical activities than young learners. This explains why more Grade 8 perpetrators were the most active compared to other grades.

Although there were more female perpetrators of bullying (53%, n=9) compared to males (47%, n=8), males were more active than females. This finding is consistent with the study by Figaji (2009) who assess the participation in physical activity among learners and concluded that 77% of the sampled participants were sedentary, that is, they were not active, while 23% were active and furthermore, that boys reported significantly more hours of vigorous physical activity when compared to girls. Boys also reported more hours of moderate physical activity than girls (Figaji, 2009, p.69).

4.5 Relationships between physical activity and bullying

This section attempts to achieve Objective 3 of the study: To investigate the relationship between bullying and physical activity at this high school in the Western Cape. The discussion will also include the testing of hypotheses of the study

4.5.1 Relationships between physical activity and being bullied (victim of bullying)

4.5.1.1 Gender differences in physical activity levels among victims of bullying

An independent-samples t-test (see Table 4.23) was conducted to compare the means of levels of physical activity between male and female adolescent victims of bullying. The assumption of homogeneity of variances was tested and satisfied via Levene's F test ($F(11) = 37, p = .556$). There was no significant difference in the scores for male ($M = 2.1, SD = .32$) and female ($M = 2.1, SD = .49$) victims of bullying; $t(11) = -.01, p = .992$ as illustrated in table 4.23 and 4.24. These results indicate that there is no difference in levels of physical activity between male and female victims of bullying. Thus, there is no relationship between levels of physical activity and gender among adolescent victims of bullying. Therefore hypothesis, H3, is rejected.

Table 4.22: Independent Samples Test comparing physical activity levels between males and female victims of bullying

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances Assumed PAQ_A	.369	.556	-.010	11	.992	-.00300	.30295	-.66979	.66379
Equal variances not Assumed			-.013	5.270	.990	-.00300	.23855	-.60689	.60089

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4.5.1.2 Age differences in physical activity levels among victims of bullying

One way between groups analysis of variance (ANOVA) (see Table 4.24) was conducted to investigate the influence of age on levels of physical activity among adolescent victims of bullying as illustrated in table 4.25. No significant difference was found, $F(6, 6) = 1.682, p = .272$. No relationship was found between age and levels of physical activity among adolescent victims of bullying. Therefore hypothesis, H1, is rejected.

Table 4.23: Independent Samples Test comparing physical activity levels between males and female victims of bullying

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.461	6	.244	1.682	.272
Within Groups	.869	6	.145		
Total	2.330	12			

4.5.1.3 High school grade differences in levels of physical activity levels among victims of bullying

One way between groups analysis of variance (ANOVA) (see Table 4.25) was conducted to investigate the influence of school grade (grades 8-11) on levels of physical activity among adolescent victims of bullying as illustrated in table 4.26. No significant difference was found, $F(3, 9) = 1.464$, $p = .289$. Thus, no relationship was found between high school grade levels and levels of physical activity among victims of bullying. Therefore hypothesis, H_5 , is rejected.

Table 4.24: ANOVA: investigating the influence of school grade (grades 8-11) on levels of physical activity among adolescent victims of bullying

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.764	3	.255	1.464	.289
Within Groups	1.566	9	.174		
Total	2.330	12			

4.5.1.4 High school phase differences in levels of physical activity levels among victims of bullying

An independent-samples t-test (see Table 4.26) was conducted to compare the means of levels of physical activity between two groups of victims of bullying; namely those in the Further Education and Training (FET) phase (grades 10 and 11) and those in the Senior Phases (SP) (grades 8 and 9) as illustrated in table 4.27 and 4.28. The assumption of homogeneity of variances was tested and satisfied via Levene's F test $(11) = .07$, $p = .803$.

There was no significant difference in the scores for FET (M= 2.3, SD = .39) and GET (M = 2.0, SD = .45) adolescent victims of bullying; $t(11) = 1.2, p = .252$. The results indicate that there is no relationship between levels of physical activity and high school phase among victims of bullying.

Table 4.25: Independent Samples Test: school phase differences in levels of physical activity between FET and SP victims of bullying

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances Assumed PAQ_A	.065	.803	1.210	11	.252	.31444	.25980	-.25737	.88626
Equal variances not Assumed			1.280	6.665	.243	.31444	.24560	-.27228	.90117

4.5.1.5 Differences in levels of physical activity between victims and non-victims of bullying

An independent-samples t-test (see Table 4.27) was conducted to compare the means of levels of physical activity between adolescent victims and non-victims of bullying as illustrated in table 4.29 and table 4.30. The assumption of homogeneity of variances was tested and satisfied via Levene's F test ($131) = 2.46, p = .119$. There was no significant difference in the scores for victims (M= 2.36, SD = .63) and non-victims (M = 2.10, SD

=44) of bullying; $t(131)= 1.40, p =.163$. These results indicate that there is no difference in levels of physical activity between adolescent victims and non-victims of bullying.

Table 4.26: Independent Samples Test: comparing the means of levels of physical activity between adolescent victims and non-victims of bullying

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances assumed	2.461	.119	1.404	131	.163	.25361	.18067	-.10379	.61101
Equal variances not assumed			1.876	17.894	.077	.25361	.13522	-.03059	.53781

4.5.2 Relationships between levels of physical activity and the perpetration of bullying

Gender differences in physical activity levels among adolescent perpetrators of bullying

An independent-samples t-test (see Table 4.29) was conducted to compare the means of levels of physical activity between male and female bullying perpetrators as illustrated in table 4.31 and table 4.32.. The assumption of homogeneity of variances was tested and satisfied via Levene's F test (15) = .71, $p = .413$. There was no significant difference in the scores for male (M=2.51, SD=0.67) and female (M=2.29, SD=0.57) perpetrators of bullying; $t(15)= .73, p =.475$. These results suggest that there is no difference in levels of

physical activity between male and female perpetrators of bullying. Thus, there is no relationship between levels of physical activity and gender among perpetrators of bullying. Therefore hypothesis, H4, is rejected.

Table 4.27: Independent samples test: comparing the means of levels of physical activity between male and female bullying perpetrators

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances assumed	.708	.413	.733	15	.475	.22028	.30061	-.42046	.86101
PAQ_A									
Equal variance not assumed			.726	13.909	.480	.22028	.30357	-.43121	.87176

4.5.2.1 Age differences in physical activity levels among adolescent perpetrators of bullying

One way between groups analysis of variance (ANOVA) (see Table 4.30) was conducted to investigate the influence of age on levels of physical activity among adolescent perpetrators of bullying as illustrated in table 4.33. No significant difference was found, $F(6,10) = 1.340$, $p = .325$. No relationship was found between age and levels of physical activity among adolescent perpetrators of bullying. Therefore hypothesis, H2, is rejected.

Table 4.28: Investigating the influence of physical activity among adolescent perpetrators of bullying

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.651	6	.442	1.340	.325
Within Groups	3.296	10	.330		
Total	5.946	16			

4.5.2.2 High school differences in levels of physical activity levels among perpetrators of bullying

One way between groups analysis of variance (ANOVA) (see Table 4.31) was conducted to investigate the influence of school grade (grades 8-11) on levels of physical activity among adolescent perpetrators of bullying as illustrated in table 4.34. No significant difference was found, $F(3, 13) = 1.873, p = .184$. Thus, no relationship was found between high school grade levels and levels of physical activity among adolescent perpetrators of bullying. Therefore hypothesis, H_6 , is rejected.

Table 4.29: Investigating the influence of school grade (grades 8-11) on levels of physical activity among adolescent perpetrators of bullying

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.795	3	.598	1.873	.184
Within Groups	4.152	13	.319		
Total	5.946	16			

4.5.2.3 High school phase differences in levels of physical activity levels among perpetrators of bullying

An independent-samples t-test (see Table 4.32) was conducted to compare the means of levels of physical activity between two groups of perpetrators of bullying; namely those in the Further Education and Training (FET) phase (grades 10 and 11) and those in the Senior Phase (SP) (grades 8 and 9) as illustrated in table 4.35 and 4.36. The assumption of homogeneity of variances was tested and satisfied via Levene's F test $(15) = .06, p = .812$.

There was a significant difference in the scores for FET (M= 2.1, SD = .56) and SP (M = 2.7, SD = .51) adolescent perpetrators of bullying; $t(15) = -2.36, p = .033$. The results indicate that there is a relationship between levels of physical activity and high school phase among perpetrators of bullying.

Table 4.30: Independent Samples test: comparing the means of levels of physical activity between SP and FET perpetrators of bullying

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances Assumed	.058	.812	-2.350	15	.033	-.61458	.26157	-1.17211	-.05706
Equal Variances not assumed			-2.362	14.973	.032	-.61458	.26021	-1.16929	-.05988

4.5.2.4 Differences in levels of physical activity between perpetrators and non-perpetrators of bullying

An independent-samples t-test (see Table 4.33) was conducted to compare the means of levels of physical activity between adolescent perpetrators and non-perpetrators of bullying as illustrated in table 4.37 and table 4.38. The assumption of homogeneity of variances was tested and satisfied via Levene's F test ($131) = .06, p = .813$. There was no significant difference in the scores for perpetrators (M= 2.40, SD = .61) and non-perpetrators (M = 2.32, SD = .62) of bullying; $t(131) = .46, p = .647$. These results indicate that there is no

difference in levels of physical activity between adolescent perpetrators and non-perpetrators of bullying.

Table 4.31: Independent Samples Test: comparing the means of levels of physical activity between adolescent perpetrators and non-perpetrators of bullying

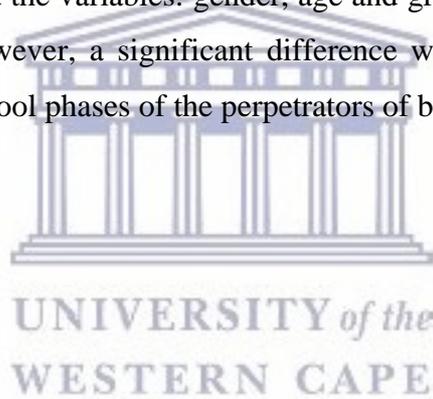
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal Variances Assumed	.056	.813	.459	131	.647	.07424	.16176	-.24576	.39425
PAQ_A Equal Variances not assumed			.467	21.233	.645	.07424	.15883	-.25583	.40432

Objective three in in this section was to establish the relationship between physical activity and bullying through testing the variables of gender, age, grade and phase of the victims and perpetrators of bullying against levels of physical activity. The findings reveal that there was no relationship between levels of physical activity and the variables: gender, age and grade for both the victims and perpetrators of bullying. Interestingly a significant difference was found between levels of physical activity and high school phases of the perpetrators of bullying. The finding also reveals that both phases were fairly active in physical activities and that the senior phase (grade 8 & 9) were more active than those in the FET phase (grade 10 & 11). This finding is consistent with the findings of a study of physical activities by grade by Mathew et al. (2006) which revealed that physical activity among children and

adolescents had declined, and increasing numbers of children were spending more time in sedentary activities such as watching TV and video games.

4.6 Conclusion

Data from the 133 participants' questionnaires were presented and analyzed by gender, age and grade levels. By making reference to the standardized and modified OBVQ and comparing it to the participants' responses, the victims as well as the perpetrators of bullying were identified. The psychometric properties of the standardized OBVQ and PAQA questionnaires were highlighted and so were the various forms of bullying perpetration and victimization. The issue of intervention was given attention and so were physical activity levels of participants. Finally, the relationship between physical activity levels and bullying was discussed. It was found that there was no relationship between levels of physical activity and the variables: gender, age and grade for both the victims and perpetrators of bullying. However, a significant difference was found between levels of physical activity and high school phases of the perpetrators of bullying.



CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter; chapter four presented an analysis of the findings of the study based on the set research questions. The findings were further deconstructed and conclusions drawn against the backdrop of literature on each issue. In this chapter however, an attempt will be made to summarise these findings by situating them within the study hypothesis to conclude. Hence in this chapter, a summary of the findings, its significance, limitations, conclusion on the study and recommendations, are made.

This study was motivated by the need to find possible ways in addressing bullying which is prevalent in some primary and secondary schools. Education systems all-over the world seek to stamp out bullying through punishing the bully in one way or another and to promote harmony and tranquility in schools (Christie, 2008; Dore, 2015). As rightly noted by Jacobson (2007), bullying within schools continues unabated despite thoughtful and well researched anti-bullying strategies deployed against it. While bullying seems to be a pervasive problem in most secondary schools, there is a lack of policies and anti-bullying programmes with which to target bullying (Kruger, 2011). While conducting the research though, the researcher became aware of some intervention programmes that the school was implementing to curb the scourge of bullying. The success rate of such intervention programmes calls for its own research and therefore such a discussion is shelved for another day. Thus this study aimed to find out whether there is a relationship between bullying and physical activity in one high school in the Western Cape. However, in investigating this relationship, the influence of gender, age and the grade level of the students were taken into account; proposition which according to Ryan (2006) is achievable through the post positivism. He affirms that it is possible to understand how learners construct and maintain perceptions such as those of bullying and physical activity.

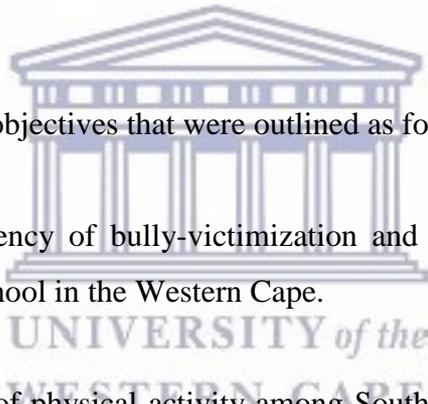
To conduct the research, the study used the quantitative methodological paradigm (Dwyer & Bernauer, 2014; Kumar, 2014). According to Kumar, (2014,p.14) It is possible for a study to be a combination of both descriptive and correlational research. To a great extent, this research is also correlational as it seeks to establish the existence of a relationship

between bullying and physical activity. (see Chapter 2). Descriptive survey seeks to describe systematically a phenomenon or a problem, summarise it and reveal patterns in the data through inspecting the raw data. The standardized, but partially modified bully/victim questionnaire and the physical activity questionnaires were used as research instruments in this research.

5.2 Summary of findings

The final sample size consisted of 133 participants, 77 females (57.9 %) and 56 males (42.1%) (Table 4.1). The results also show that more learners in grade 10 (32.3%) answered the questionnaires than any other grade; grade 8 (26.3%), grade 9 (24.1%) and grade 11(17.3%) and that more participants came from the middle adolescence stage (71.5%) compared to early adolescence (10.6%) and late adolescence (18.1%) (See Tables 4.2 and 4.3).

This research study had three objectives that were outlined as follows;

- 
- To measure the frequency of bully-victimization and bullying perpetration among learners in this high school in the Western Cape.
 - To establish the level of physical activity among South African learners in this high school in the Western Cape.
 - To investigate the relationship between bullying and physical activity at this high school in the Western Cape.

A summary of the main findings of the study are:

- This study used adapted versions of two standardized questionnaires (see Appendices 7&
- namely the OBVQ and the PAQ-A. Both questionnaires had acceptable Cronbach's

alpha scores of 0.87 and 0.80 respectively. This indicates that they were reliable measures in the study.

- Consistent with Olweus's(1994) definition of bullying and bullying victimization, this study revealed that there was some bullying victimization in the school as 13 (about 10%) out of the 133 participants were victimized, while 17(about 13%) out of 133 were bullying perpetrators. The influence of the variables gender, age and grade to bullying and physical activity was investigated.
- Pursuant to this, the study established that most of the victims were younger than the perpetrators and mostly females and that these victims were in the lower grades (Rigby, 2007; Townsend, 2008). The bullying perpetrators, it was revealed were both males and females and mostly from the FET phase. The study also established that cyberbullying was the most common form of bullying in the high school, with the cellphone being the major vehicle for this perpetration. The other common forms were verbal, exclusion (social) and physical bullying. The taking away of money from victims was also common.
- There were more female victims of bullying (77%) compared to the male victims (23%).Also revealed in this study was that most of the victims (69%) were in the middle adolescence which is also the Senior phase (SP).Also important to note is that most of these victims (62%) were bullied by boys in the playground as well as in their own classrooms perpetrated by fellow classmates sometimes in the presence of the teacher(s).Most of these victims had friends, most of whom would not intervene in the face of bullying victimisation.40% of the victims also revealed that the teachers never intervened where there was bullying perpetration. Despite these adverse experiences, the victims said they liked school. A small percentage however pointed out that they did not like school.
- Most of the bullying perpetrators (59%) were also found in the middle adolescence with an equal gender representation. The majority of the perpetrators were 16 year-olds most of whom liked school (77%).A small percentage (18%) did not like school.

- Intervention by teachers and parents in bully perpetration is minimal. The majority of the perpetrators had not been approached by adults or parents about their bullying activities. Parents too rarely contacted the school about their children being victimized.
- The findings also showed that the victims' participation in physical activities was marginal compared to that of the perpetrators. Physical activity it was revealed declined with age and that males tended to be more physically active than females.
- In arriving at the conclusions, various hypotheses were also tested and were then accepted or rejected accordingly.

H1: There is a significant difference related to being bullied by others by age among learners in one high school in the Western Cape.

The results indicate that no relationship was found between age and levels of physical activity among adolescent victims of bullying. Therefore hypothesis, H1, was rejected.

H2: There is a significant difference related to bullying others by age among learners in one high school in the Western Cape

The results indicate that no relationship was found between age and levels of physical activity among adolescent perpetrators of bullying. Therefore hypothesis, H2, was rejected.

H3: There is a significant difference related to being bullied by others by gender among learners in one high school in the Western Cape.

The results indicate that there is no difference in levels of physical activity between male and female victims of bullying. Therefore, there is no relationship between levels of physical activity and gender among adolescent victims of bullying. Therefore hypothesis, H3, was rejected.

H4: There is a significant difference related to bullying others by gender among learners in the one school in the Western Cape.

The results show that there is no relationship between levels of physical activity and gender among perpetrators of bullying. Therefore hypothesis, H4, is rejected.

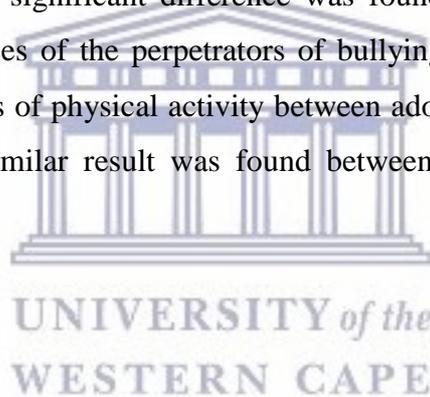
H5: There is a significant difference related to being bullied by others by grade level among learners in one high school in the Western Cape

The results show that no relationship was found between high school grade levels and levels of physical activity among victims of bullying. Therefore hypothesis, H5, was rejected.

H6: There is a significant difference related to bullying others by grade level among learners in one high school in the Western Cape.

The results show that no relationship was found between high school grade levels and levels of physical activity among adolescent perpetrators of bullying. Therefore hypothesis, H6, was rejected. The findings therefore reveal that there was no relationship between levels of physical activity and the variables: gender, age and grade for both the victims and perpetrators of bullying although these variables influenced bullying and bully-victimization in the school. Interestingly a significant difference was found between levels of physical activity and high school phases of the perpetrators of bullying. Results also indicated that there is no difference in levels of physical activity between adolescent perpetrators and non-perpetrators of bullying, a similar result was found between victims and non-victims of bullying.

5.3 Significance of study



To the school, the education fraternity and the community, this study is important in that, firstly it reveals and confirms that bullying victimization and perpetration is a reality in schools. This revelation means that the situation ought to be controlled before it gets out of hand. School intervention programmes such as those advocated by Naidoo et al. (2015) and whole school approach as highlighted by Saarento, Garandeu and Salmivalli, 2012; Dore, 2015, p.125; Vreeman and Carrol, 2007, can help curb bullying in schools.

School playgrounds need monitoring to curb bullying and in particular young learners in lower grades, both males and females need this close monitoring and support. Orientation in the use of the cellphones should be given by the school so that learners use them wisely and productively. The use of cellphones in schools ought to be monitored and so should the use of the internet system.

Physical activities as highlighted previously in this study have many positive benefits and should be encouraged at schools.

5.4 Limitations of study

The following limitations relate to this study;

- This study used convenience sampling of a fairly small sample of one high school and as such, the results may not be generalizable.
- The quality of the responses on questionnaires did not only depend on correct interpretation of questions but also on the honesty of the participants in answering the questions.
- The ability of the participants to comprehend and accurately complete the questionnaires may have affected the quality of the answers (at least among some participants) and consequently the results.

5.5 Conclusion

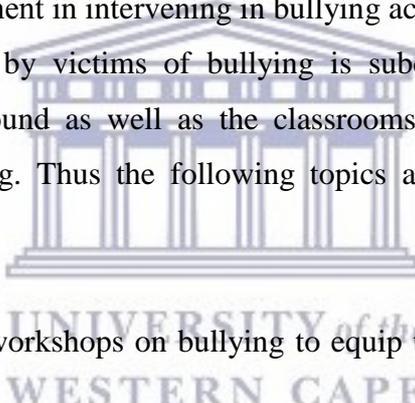
The study found no significant relationship between bullying and levels of physical activity with regards to the variables age, gender and school grade. However a significant relationship was found between levels of physical activity and high school phases of the perpetrators of bullying. Nonetheless bullying is prevalent in schools and the victims are affected adversely to the extent of not liking school and reducing their participation in physical activity as revealed by this study.

Also revealed in this study is the fact that the young ones in lower grades are bullied by those from higher grades. The need therefore for monitoring the movements and activities of the young learners cannot be over emphasized. Schools need to come up with effective intervention programmes that include the monitoring the use of cellphones at school. It is clear that school and teacher protection of the vulnerable is critical not only in the classroom but also on the playgrounds.

It is also clear from this study that bullying has tremendous adverse effects on the learner while on the other hand numerous positive effects are derived from participating in physical activities by the same learner. The school should harness such positives in order to create a teaching environment that is conducive for learning. The researcher hopes that this research will add to the already existing body of knowledge on this subject and that the education fraternity will be able to pluck out some information which may be beneficial from this study.

5.6 Recommendations for further research

Based on the findings of this research some recommendations are made for further research on bullying and physical activity in South African schools. Firstly, the research results indicated that victims, bystanders and peers do not always report cases of bullying and that parents and teachers' involvement in intervening in bullying activities is minimal. Secondly, physical activity particularly by victims of bullying is subdued due to fear of further victimization and the playground as well as the classrooms in which victims learn are dangerous havens for bullying. Thus the following topics are recommended for further research:

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- The impact of in-service workshops on bullying to equip teachers to curb bullying in schools.
 - The role of parents, teachers and peers in curbing bullying in schools.
 - Effect of increased sport activities and participation in schools on bullying
 - The effect of a whole school approach in minimizing bullying in schools.

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UNIVERSITY *of the*
WESTERN CAPE

The school is located in thexxxxxxxxxxxxxxxx
, which forms part of Circuit 1 of Metro East.

Research Title: An investigation of the relationship between bullying and physical activity in one High School in the Western Cape

This research aims to find out whether a relationship exists between bullying and levels of physical activity among General an Education and Training learners (GET) and Further Education and Training (FET) learners. Age and gender will be taken into account in this comparison.

The research is quantitative in nature and will use two standardized questionnaires, namely the Olweus bully/victim questionnaire (OBVQ) and the Physical Activity questionnaire for adolescence (PAQ-A) to solicit for information from approximately 20% of the school population. Information gathered from these learner participants will shed light on the nature and frequency of bullying in the school and whether an association exists between this bullying and levels of physical activity. If an association is realized, knowledge from this research may help the school and indeed other schools



To use physical activity as an intervention to bullying thereby bringing tranquility and harmony in the school. The school dropout rate may, as a result, fall.

Special attention will be given to ethical and legal prescriptions with regard to obtaining permission from all parties concerned, time frames of institutions and sensitivity of data collected. Please do not hesitate to contact me if you have further enquiries.

Please note that I have already been granted ethical approval by the University of the Western Cape to proceed with the study subject to all other ethical protocols that I need to follow. I therefore need your approval prior to approaching the school for permission to conduct my study there.

Yours faithfully

J.Chiware (M.ED. student at UWC)

Supervisor:

Dr. Trevor Moodley



UNIVERSITY *of the*
WESTERN CAPE



UNIVERSITY *of the*
WESTERN CAPE

I, Jeremiah Chiware, a Masters student registered in the Educational Psychology Department, within the Faculty of Education at the University of the Western Cape, hereby request permission to conduct research at your school.

Research Title: An investigation of the relationship between bullying and physical activity at one High School in the Western Cape

This research aims to find out whether a relationship exists between bullying and levels of physical activity among General Education and Training learners (GET) and Further Education and Training (FET) learners. Age and gender will be taken into account in this comparison.

The research is quantitative in nature and will use two standardized questionnaires, namely the Olweus bullying questionnaire (OBQ) and the Physical Activity questionnaire for adolescence (PAQ-A) to solicit for information from approximately 20% percent of the learner population in the school. Approximately 200 learners will be involved. Information gathered from participants will shed light on the nature and frequency of bullying in the school and whether an association exists between this bullying and levels of physical activity. If an association is realized, knowledge from this research may help the school and indeed other schools to use physical activity as an intervention to bullying

Thereby bringing tranquility and harmony in the school. The school dropout rate may, as a result, fall.

If approval is granted, the research will be conducted in July of 2016 at the school over a 4 day period, from 19-22 July. Learner participants will be required to complete two questionnaires in a classroom on the school site, after school, under the supervision of the researcher.

A general summary of the findings will be issued to the school. The school may find the summary useful in matters of bullying and physical activity. I guarantee confidentiality of information and will not reveal anything of a personal or compromising nature. If I intend

to use information that is in any way sensitive I will seek the permission of the originator before using it. There will be total confidentiality of learners, educators and parents and I will not name the school.

Please note that I have already been granted permission to conduct the study by both the University of the Western Cape as well as the Western Cape Education Department. However, I will only proceed with the invitation of potential participants from within your school once you are satisfied with the study aims and you have given me written consent.

Special attention will be given to ethical and legal prescriptions with regard to obtaining permission from all parties concerned, time frames of institutions and sensitivity of data collected. Please do not hesitate to contact me if you have further enquiries.

Yours faithfully

J. Chiware (M.ED. student at UWC)



Supervisor:

Dr. Trevor Moodley



UNIVERSITY *of the*
WESTERN CAPE

Yours faithfully

J. Chiware (MED student)

SUPERVISOR: Dr. T.Moodley



UNIVERSITY *of the*
WESTERN CAPE



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WESTERN CAPE

The research will be conducted soon after school and will be supervised by the researcher. A summary of the research, which the school may find helpful, will be made available to it. The researcher will follow stipulated ethics guidelines given by the University to conduct this research.

Yours faithfully

J. Chiware (MED student)

SUPERVISOR: Dr T.Moodley





UNIVERSITY *of the*
WESTERN CAPE

Date.....

Should you have any questions regarding this study or wish to report any problems you have experienced related to the study, please contact the study coordinator:

Study Coordinator's Name: Dr. T Moodley.

University of the Western Cape

Private Bag X17, Bellville



Appendix 6: Participant information sheet

University of the Western Cape

FACULTY OF EDUCATION

Private Bag X17

Bellville

7535

South Africa

PARTICIPANT INFORMATION SHEET

Dear Participant

Thank you for your willingness to participate in this research. The purpose and the process of this research are given below.



UNIVERSITY of the
WESTERN CAPE

The research is being carried out in fulfillment of the Masters in Education

Our contact details and those of our supervisor are given at the end of this information sheet.

TITLE OF RESEARCH

An investigation of the relationship between bullying and physical activity at one High School in the Western Cape.

PURPOSE OF THE STUDY: To find out if there is a relationship between bullying and physical activity.

INVOLVEMENT

The study will include individual questions on your experience about bullying and physical activity in the school

CONFIDENTIALITY

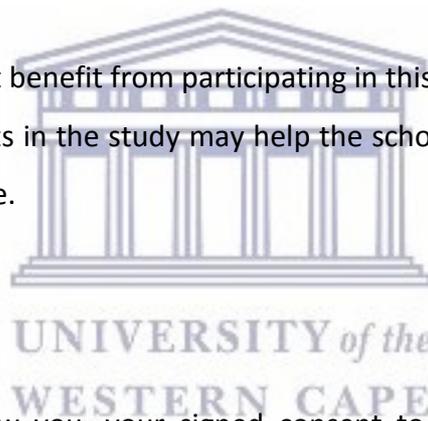
Your details are confidential and shall only be used for research purposes and shall remain confidential. All details will be destroyed at the end of the research.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Your participation in this research is entirely voluntary. Your participation however is crucial for the completion of the task we have at hand.

BENEFIT AND COSTS

You will not receive any direct benefit from participating in this study. Nevertheless, the information obtained from the participants in the study may help the school and the writers of your curriculum in their planning for the future.



INFORMED CONSENT

Before I proceed to interview you, your signed consent to participate in this research study is required. The consent form is included with this information sheet so that you can review it and then decide whether you would like to participate in the study or not.

QUESTIONS

In case you have further questions or wish to know more, we can be contacted as follows:

J. Chiware

Student



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Appendix 7: STUDENTS QUESTIONNAIRE

A QUESTIONNAIRE ON BULLYING

Section A: Details of learner. DO NOT WRITE YOUR NAME

QUESTIONNAIRE ON BULLYING

Section A: Demographic Information of Learner

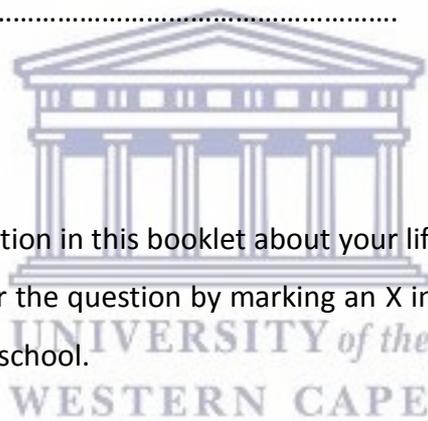
School:.....Grade :Age...: Gender: Male or Female ,

Race/Ethnicity: Black or White

Residential Area:

Date: / / 2016

Please read each item or question in this booklet about your life in school. There are several answers next to each question. Answer the question by marking an X in the box near to the answer that best describes how you feel about school.



If you really dislike school, mark an X in the box near to “I dislike school very much”. If you really like school, mark an X in the box near to “I like school very much”, and soon. Only mark one of the boxes. Try to keep the mark inside of the box.

Now put an X in the box next to the answer that best describes how you feel about school.

1. How do you like school?

I dislike school very much	
I dislike school	
I neither like nor dislike school	
I like school	
I like school very much	

2. How many good friends do you have in your class (es)?

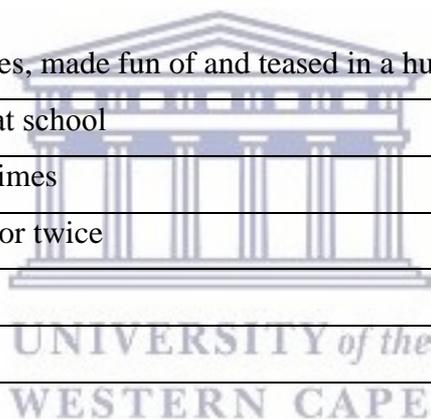
None	
I have 1 friend	
I have 2 or 3 friends	
I have 4 or 5 friends	
I have 6 or more friends	

3. How often have you been bullied at school in the past couple of months?

I haven't been bullied at school in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

4. I was called mean names, made fun of and teased in a hurtful way

No I haven't been bullied at school	
I have been bullied many times	
It has only happened once or twice	
Several times a week	
2 or 3 times a month	



5. Other learners left me out of things on purpose and excluded me from participating or left me out completely.

No I haven't been bullied at school	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

6. I was hit, kicked, pushed, shoved around, or locked indoors

I haven't been bullied at school in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	

Several-times	
---------------	--

7. Other learners told lies or spread false rumors about me and tried to make others dislike me

No I haven't been bullied at school in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

8. I had money, food, or other things taken away from me or damaged.

No, I haven't been bullied at school in the past couple of months	
It has only happened once or twice	
Or 3 times a month	
About once a week	
Several times a week	

9. I was threatened or forced to do things I didn't want to do

No I haven't been bullied at school in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

10. I was bullied with mean names or comments about my tribe

No, I haven't been bullied at school or gestures with a sexual meaning in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

11. I was bullied with mean words and comments or gestures with sexual meaning.

It has not happened to me in the past couple of months only once or twice	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

12. I was bullied in another way

It has not happened to me in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

13. In which grade(s) is the learner or learners who bully you?

No I haven't been bullied at school in the past couple of months	
In my class	
In a different class but same grade (year)	
In a higher grade	
In a lower grade	
In different grades	

14. By how many students have you usually been bullied?

No I haven't been bullied at school in the past couple of months	
Mainly by 1 learner	
By a group of -3 learners	
By a group of 4-9 learners	
By a group of more than 9 learners	
By several different learners or groups of learners	

15. How long has the bullying lasted?

No I haven't been bullied at school in the past couple of months	
It lasted one or two weeks	
It lasted about a month	
It lasted about 6 months	
It lasted about a year and more	

16. Have you been bullied by a boy or girl?

No I haven't been bullied at school	
Mainly by one girl	
Mainly by one boy	
By several girls	
By several boys	

17. Where have you been bullied?

Please SHADE in the box to indicate places you have been bullied:

a. On the playground	
b. In the classroom	
c. In class (when the teacher was in the room)	
d. In class (when the teacher was not in the room)	
e. In the toilet	
f. In the sports ground	
g. During a P.E lesson	
h. During break somewhere in the school	
i. On my way home	
j. On my way to school	

18. Have you told anyone that you are being bullied in the last few months?

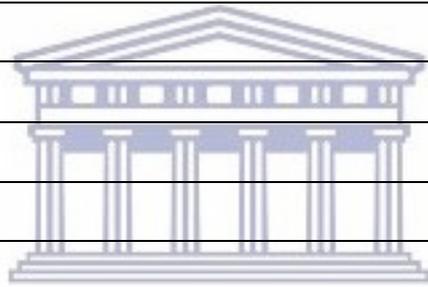
No I have not told anyone	
Yes I have told someone	
I have not been bullied at school	

19. Whom did you tell?

a. My class teacher	
b. The principal	
c. An adult at school	
d. My parents	
e. My friends	
f. My sister	
g. My brother	

20. How often do the teachers or other adults at school try to put a stop to it when a student is being bullied at school?

Never	
Once in a while	
Sometimes	
Often	
Always	



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21. How often do other students try to stop bullying when another student is being bullied at school?

Never	
Once in a while	
Sometimes	
Often	
Always	

22. Has any adult at home contacted the school to try to stop your being bullied at past couple of months?

No I haven't been bullied at school in the past couple of months	
No they haven't contacted the school	

Yes they have contacted the school once	
Yes they have contacted the school several times	

23. When you see a learner your age being bullied a school, what do you feel or think?

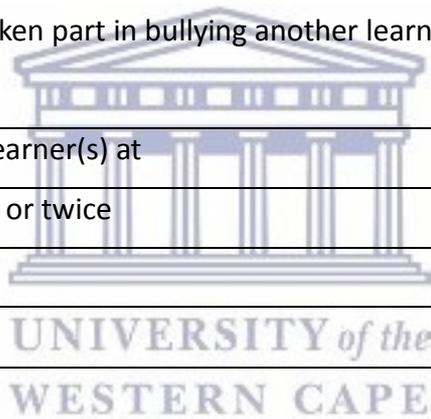
That is probably what he deserves	
I don't feel much	
I feel a bit sorry for him	
I feel sorry for him and want to help him	

SECTION C

About bullying other learners

24. How often have you taken part in bullying another learner(s) in the past couple months?

I haven't bullied another learner(s) at	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	



Have you bullied another learner(s) at school in the past couple of months in one or more of the following ways?

25. I called another student(s) mean names, made fun of or teased him/her in a hurtful way.

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

26. I kept him out of things on purpose and excluded him from my group of friends or completely ignored him

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

27. I hit, I kicked, pushed and shoved him around or locked him indoors

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

28. I spread false rumours about him/her and tried to make others dislike him/her

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

29. I took money or other things from him or damaged his belongings

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

30. I took food away from him and ate it

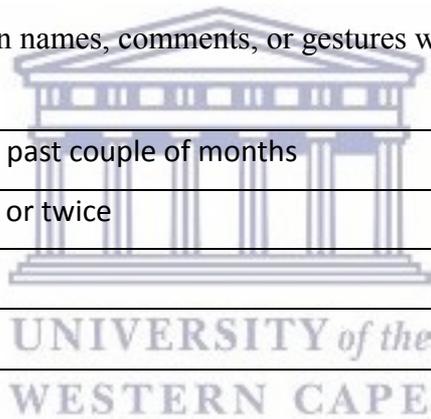
It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

31. I threatened or forced him to do things he didn't want to

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

32. I bullied him with mean names, comments, or gestures with a sexual meaning

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	



33. I bullied him in another way

It has not happened in the past couple of months	
It has only happened once or twice	
2 or 3 times a month	
About once a week	
Several times a week	

Please describe in what way you bullied the student:

34. Has your teacher or any other teacher talked with you about your bullying other learners at school in the past couple of months?

I haven't bullied another learner (s) at school	
No, they haven't talked with me about it the past couple of months	
Yes, they have talked with me about it once	
Yes, they have talked with me about it several times	

35. Has any adult home talked with you about your bullying other learner (s) at school in the past couple of months?

I haven't bullied another learner (s) at school in the past couple of months	
No, they haven't talked with me about it	
Yes, they have talked with me about it once	
Yes, they have talked with me about several times	

36. Do you think it likely that you could join in bullying a learner whom you didn't like?

Yes, maybe	
I don't know	
No, I don't think so	
Definitely no	

37. How do you usually react if you see or understand that a learner your age is being bullied by other learners?

I have never noticed that learners my age	
I take part in the bullying	
I don't do anything but I think that bullying is ok	
I just watch what goes on	
I don't do anything, but I think I ought to help the bullied learner	

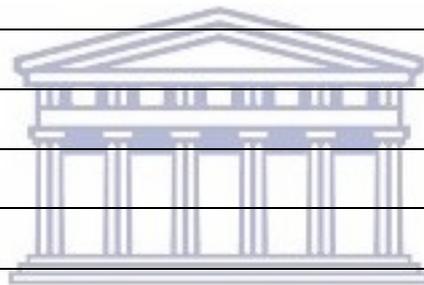
I try to help the bullied learner in one way or another	
---------------------------------------------------------	--

38. How often are you afraid of being bullied by other learners in your school?

Never	
Seldom	
Sometimes	
Fairly often	
Often	
Very often	

39. Overall, how much do you think your class teacher has done to fight bullying in the past couple of months?

Little or nothing	
Fairly little	
Somewhat	
A lot	



40. How do you describe yourself? (Fill in all that apply)

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Xhosa	
Zulu	
Sotho	
Coloured	
Other	

THANK YOU

Appendix 8: PHYSICAL ACTIVITY QUESTIONNAIRE (HIGH SCHOOL)

NAME: _____ AGE: _____

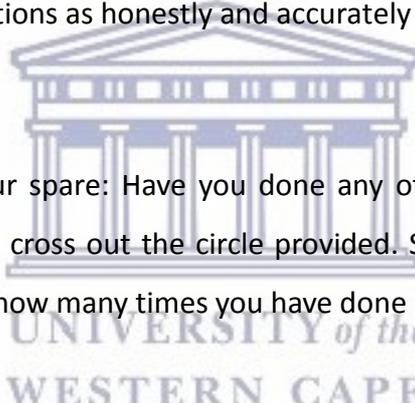
SEX: M _____ F _____ GRADE _____

I am trying to find out about your level of physical activity from the last 7 days. This includes sports, dance or other activities that make your legs feel tired or games that make you breathe hard like skipping, running and others.

Remember:

- There are no right or wrong answers
- Please answer all questions as honestly and accurately as possible.

1. Physical activity in your spare: Have you done any of the following activities in the past 7 days? If yes, shade or cross out the circle provided. Shade only one circle or cross out one circle per row to show how many times you have done physical activity.



	No	1-2	3-4	5-6	7 times or more
Skipping	0	0	0	0	0
Tag of war	0	0	0	0	0
Walking for exercise	0	0	0	0	0
Bicycling	0	0	0	0	0
Jogging or running	0	0	0	0	0
Aerobics	0	0	0	0	0
Basketball	0	0	0	0	0
Dance	0	0	0	0	0
Football/Soccer	0	0	0	0	0

Netball	0	0	0	0	0
Volleyball	0	0	0	0	0
Cross country	0	0	0	0	0
Boxing	0	0	0	0	0
Karate	0	0	0	0	0
Swimming	0	0	0	0	0
Baseball	0	0	0	0	0
Tennis	0	0	0	0	0
Skate boarding	0	0	0	0	0

2. In the last days during your Physical Education (PE) classes, how often were you very active (playing hard, jumping, throwing?) (Shade only one for all answers below)

I don't do P.E	0
Hardly ever	0
Sometimes	0
Quite often	0
Always	0



3. In the last 7 days what did you normally do at lunch breaks (besides eating lunch) at school?

Sat down relaxing, doing school work	0
Stood around or walked around	0
Ran or played a little bit	0
Ran around and played	0
Ran and played hard most of the time	0

4. In the last 7 days, right after school on how many days did you do sport?

None	0
1 time each week	0
2 or 3 times each week	0
4 times each week	0
6 or more times each week	0

5. In the last 7 days, how many evenings right after school did you do sports, dance or play games in which you were very active?

None	0
1 time each week	0
2 or 3 times each week	0
4 times each week	0
6 or more times each week	0

6. In the last 7 days right after school, how many times did you do sport, dance or play games where you were very active?

None	0
1 time	0
2-3 times	0
4-5 times	0
6 or more times	0



7. Which one of the following best describes you for the last 7 days? Read all five statements before deciding on ONE that best describe you.

- All or most of my free time was spent doing things that involve little Physical Activity
- Sometimes (1-2 times last week) I did physical things in my free time (e.g. played sports, went running, did dance)

8. Mark how often you did physical activity (like playing sport, games, doing dance or any other activity) for each day in the last week

	None	A little	Medium	Often	Very often
Monday	0	0	0	0	0
Tuesday	0	0	0	0	0
Wednesday	0	0	0	0	0
Thursday	0	0	0	0	0
Friday	0	0	0	0	0

Saturday	0	0	0	0	0
Sunday	0	0	0	0	0

9. Were you sick or did anything prevent you from doing your normal physical activities? Choose one option

YES.....

NO.....



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Appendix 9: THE BULLYING QUESTIONNAIRE

MODIFICATIONS AND REFINEMENTS MADE BY THE RESEARCHER TO THE OLWEUS BULLYING QUESTIONNAIRE (OBQ) AND THE PHYSICAL ACTIVITY QUESTIONNAIRE (PAQ-A)

THE BULLYING QUESTIONNAIRE

Question number	ORIGINAL QUESTION	MODIFICATION
2	Are you a boy or a girl?	Now appears under Section A:Demographics
9	I had money or other things taken away from me or damaged	The word 'food' was added after money
12a &2b	I was bullied with messages on my cellphone or on internet	Question 12a &12b were left out as learners are not allowed to have cellphones at school. Access to internet is for purposes of lessons only.
18	Where have you been bullied?	Option' k' was added to read:No,I have not been bullied at school in the last 3 months.
19 b	Who did you tell?	-The 'Principal' was added as an option -'Not applicable' was also added
40	How do you describe yourself -American -black -coloured -white	-Now appears in Section A under demographics. A school specific question was added: -Question 40 now asks:' Do you sometimes consider dropping out of school?'

THE PHYSICAL ACTIVITY QUESTIONNAIRE

Question No.	ORIGINAL QUESTION	MODIFICATION
1	<p>Physical activity in your spare time.</p> <p>Have you done any of the following activities in the past 7 days?</p> <p>-In line skating, canoeing, baseball, rowing, skate-boarding, street hockey, ice skating, floor hockey, ice hockey?</p>	<p>These activities were removed as they are not applicable in these learners' lives. Most of these learners come from informal settlements where such games are unheard of.</p>



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Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Principals, educators and learners are under no obligation to assist you in your investigation.
2. Principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from 19 July 2016 till 30 September 2016
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December).
7. Should you wish to extend the period of your survey, please contactxxxxxxxx at the contact numbers above quoting the reference number?
8. A photocopy of this letter is submitted to the principal where the intended research is to be conducted.
9. Your research will be limited to the list of schools as forwarded to the Western Cape Education Department.
10. A brief summary of the content, findings and recommendations is provided to the Director: Research Services.
11. The Department receives a copy of the completed report/dissertation/thesis addressed to:

The Director: Research Services

Western Cape Education Department

Private Bag X9114

CAPE TOWN

8000

We wish you success in your research.

Kind regards.

Signed: xxxxxxxxxxxx

Directorate: Research

DATE: 12 July 2016



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