Perceptions of Namibian Primary School Teachers' and Stakeholders', in the Khomas Education Region, regarding curriculum requirements for sustaining a successful Physical Education program

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Tiivistelmä – Abstract

This research was undertaken to investigate the causal factors contributing to the negligence of Physical Education (PE) in the primary schools in the Khomas Education regional council. Focus was granted on the perceptions of the primary school teachers and stakeholders with regards to the curriculum requirements or prerequisites considered as being crucial to the sustaining of a successful primary school PE program.

Various allegations were made by different educational stakeholders and writers in the local media claiming that PE is neglected in the Namibian schools. Research as conducted in 2000 and 2001, delivered supportive results to these allegations. Similar trends were reflected globally and specifically in Africa by multiple research studies. Concerns were raised regarding the resultant effects that such practises could have on the social cohesion, crime prevention, healthy lifestyles and learner academic performance of the Namibian children. An empirical study was undertaken by the author by making use of a mixed method approach.

For purposes of this study a quantitative method was used through the compiling of a questionnaire, but also in this survey, provision was made for the incorporation of a qualitative section. The author followed a sequential qualitative-quantitative data analysis method, thus qualitative and quantitative data were analyzed separately before compared, merged and integrated.

Main research findings indicated that participants do agree that physical education is a valuable subject and needed, that in addition to the well-known physical health benefit outcomes of PE, that there is evidence that regular participation in PE and physical activity is linked to students' enhanced overall academic achievements. Major concerns that could be directly linked to the negligence of the subject were indicated by the majority of the participants as being lack of proper funding and lack of sustained support from stakeholders, curriculum developers, policy makers and the community.

The single most important factor for successful and sustainable physical education and physical activity programs undeniably seems to be sufficient support from administrators, educational instructors and national educational boards. Suggestions were proposed to those parties encouraging them to explore innovative supportive ways that will lead to the sustaining of Physical Education in the Namibian Primary Schools.

Avainsanat – Keywords
Physical Education; Physical Activity; Recess; Extracurricular Activities; Classroom-based physical activities; Academic achievement; Holistic approach; Curriculum requirements;

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CONTENTS

ABBREVIATIONS

Acquired immune deficiency syndrome	AIDS
American Alliance for Health, Physical Education, Recreation and Dance	AAHPERD
Canadian Association for Health, Physical Education, Recreation and Dance	CHAPERD
Center for Advancement of Standards-based Physical Education Reform	CASPER
Centers for Disease Control	CDC
Comprehensive School Physical Activity Program	CSPAP
Continuing Professional Development	CPD
Continuous Assessment	CA
Curriculum for Excellence	CfE
Fundamental Movement Skills	FMS
Health Education Authority	HEA
Human immunodeficiency virus	HIV
Information and Commutation Technology	ICT
In-Service Education and Training	INSET
International Council of Sport Science and Physical Education	ICSPE
Key Learning Areas	KLA
Minister of Education	MoE
Ministers and Senior Officials responsible for Physical Education and Sport	MINEPS
Mixed Method Research	MMR
Moderate to Vigorous Physical Activity	MVPA
National Association for Sport and Physical Education	NASPE
National Institute for Educational Development	NIED
Physical Activity	PA
Physical Education and School Sport	PESS
Physical Education Teacher Educating	PETE
Physical Education	PE
School Sport	SS
United Nations Organization for Education, Science and Culture	UNESCO
United States	US
University of Namibia	UNAM
World Health Organization	WHO

CHAPTER 1: INTRODUCTION

1.1 Background to the thesis

1.1.1 The Context of the Physical Education discipline in the Namibian Primary Schools

Regarding the National Curriculum for Basic Education (2010, p. 1) as published by the National Institute for Educational Development (NIED), relating its policy, legislation and previous developments, the curriculum has embraced various changes since the 1990's whereby provision for adaptations about concerns such as education for all, language policy, ICT policy, learner-cantered education, special education, and human capital and knowledge development with equity for economic growth in Namibia, were granted. Currently the curriculum responds to emerging challenges such as globalisation and HIV and AIDS in the Namibian society. The curriculum is also directed towards helping an achievement of the national development goals as set out in the *National Development Programmes* 2 and 3, the *Education and Training Sector Improvement Programme (2007),* based on the long-term perspective of Namibia Vision 2030 (2005)."

Contained in the aims of Basic Education for "The society of the Future" in a subsection the following specific aims are defined in relation to the developing a healthy society: to develop attitudes, practices, knowledge and activities which promote *physical* and mental health; to support and stimulate learners through childhood and youth; to promote the optimal development of the individual learner's potential, including those with special learning needs; and to foster the highest moral, ethical and spiritual values such as integrity, responsibility, equality and reverence for life (p. 8). Pertaining the development of *physical health*, as one of the key learning areas, Physical Education (Pre-Primary to Grade 12), is included (p. 14). Justifying the endorsement of the subject as a fully-fledged key learning area, the following has reference:

> "As societies become more and more affluent, life-style diseases such as obesity, circulatory problems, diabetes and stress increase accordingly. Lifelong physical activity is a crucial factor in the prevention of life-style diseases, in contributing to personal wellness, and in maintaining physical fitness to be a fully productive citizen. Physical Education is the physical activity-based component of Health and Wellness Education across the curriculum. In the Natural Sciences learning area, the health and wellness education focus is on understanding biological and psycho-social aspects of health in order to develop positive attitudes and practices. In the Social Sciences learning area, the health and wellness education focus is on developing personal and social responsibility, and understanding health in society.
>
> Physical Education consists of physical activities which, apart from developing psycho-motor skills, also develop self-esteem through an appreciation and enjoyment of one's body; experiencing how the relationship of mind, body and feeling is essential for wellness; learning how to maintain fitness throughout life; developing social skills through co-operation and positive competition with others; and motivation for continued lifelong physical activity. Learners' reflections on what they

experience develop their understanding of themselves and the importance of lifelong physical activity and how it contributes to health and wellness."

Regarding the Phase Competencies for primary school Physical Education, the following core skills as holistically emerging, are indicated:

- Pre-Primary Phase: Learners should participate to the best of their ability in a variety of physical activities that promote movement and motor development
- Lower Primary Phase: Learners should participate to the best of their ability in a variety of games, sports, and physical activities
- Upper Primary Phase: Learners should have developed co-operative activity and game skills, monitor their own progress and achievements, and explain why continued physical activity is important for health and wellness (pp. 20-21)

Since the formal learning set out in the curriculum is only part of the life of the school, therefor co-curricular activities can contribute towards the enrichment of life at the school, making it also an enjoyable place for learners to be after lessons. Co-curricular activities should be organised to support particularly important areas of learning or to supplement areas of learning with little curriculum time. Examples of areas that have too little curriculum time but where co-curricular activities can supplement are particularly in the arts (drama groups, music groups, choirs, dance groups, art groups) and sports and games.

Time allocation for Grades 1-10, for schools with or without computer laboratories, based on a 5-day week and 40 minutes per period, the following is indicated in the curriculum with specific reference to Physical Education: Pre- and Lower Primary 2 periods; Upper Primary 1 period. The syllabus consists of eight themes, but only four should be covered. Most of the activities can be carried out using simple equipment such as sticks, poles, bean bags, rope, etc., as suggested in the teacher's guide, and schools should be able to offer activities from all the four themes to give breadth and variety to Physical Education. Time allocation should be adjusted to the situation of a particular school, availability of facilities, interests of the learners, areas of competence of the teacher and availability of other instructors from the community.

According to Kholl III and Cook (2013, p. 217) the following medical professional associations such as the American Cancer Association, American Diabetes Association, and American Heart Association, have long acknowledged the importance of physical education and have even endorsed policies designed to strengthen it. A position statement in 2012, on physical education by all those associations, called for the support of quality physical education as an important part of a student's comprehensive and well-rounded education program, based on its positive impact on lifelong health and well-being. Based on this statement, justification could thus be motivated for the inclusion of physical education as one of the key learning areas, in the Namibian broad curriculum for Basic Education. Physical education policy should make quality a priority while also aiming at the increasing of the amount of time physical education is offered in all schools.

1.1.2 Current Situation Regarding Physical Education in Namibia

Currently the National Curriculum for Basic Education in Namibia is under review based on a proposal as formulated by the Cabinet after a National Conference on Education in June 2011. Consent were attained to adjust the current curriculum framework towards a more relevant, flexible and career-orientated curriculum. As a new subject to the curriculum a proposal were also made to introduce Life Skills as a new support subject inclusive of Life Skills, Physical Education and Religious and Moral Education. The Physical Education (PE) aspect in the syllabus will change to address concepts of physical wellness, while physical activities are developed via extra-curricular activities like sport and cultural activities.

Hango (2012, para. 1) is alarmingly concerned about the current status of the subject as he indicates that according to his understanding Physical Education is one of the neglected subjects in the Namibian schools. In support to this comment, according to research done by Swart it was denoted that PE was neglected in the Namibian schools (Greyling, 1987, as cited in Swart, 2000, p. 58). Despite the subject's valuable attributes to children's physical, social and emotional development, most often learners are just send outside to the playground to play, perceiving it as a free lesson and least of all as an opportunity to learn about how to gain physical conditioning through enjoyment filled activities. Hango (2012, para. 3) states that according to his understanding, many researchers have indicated that the teaching of physical education must be given serious consideration as it enhance learners academic performance, attitude and fitness, however most schools are still failing to implement physical education rightfully, claiming a lack of qualified teachers to teach the subject. Zealand (2001, p. 7), signified the importance of PE in the Namibian schools as it is the only curriculum subject which is solely responsible for the child's physical development and as such PE is the greatest contributor to enhanced concentration (Schurr, 1975, as cited in Zealand, p. 72).

In 1996, the Surgeon General of the United States identified the lack of physical activity as "Public Health Problem #1." This "problem" has produced several health issues among children, adolescents, and adults. Reported cases of obesity and diabetes are increasing at alarming rates. Evidently, the importance of effective physical education courses is critical to the total development of students. Quality physical education programs provide the foundation for healthy, active lifestyles that support all learning and help ensure success in future pursuits. Statistics related to chronic disease, disability and death, health care costs, and quality of life issues clearly illustrate that there are severe problems associated with attending to the intellectual but not the physical being ("Michigan Merit Curriculum", 2007, p. 6). To varying levels, most of those health related aspects are thus also under scribed in the Namibian PE curricula.

According to Hango (2012, para. 3) teachers in the Namibian schools are often forced to teach subjects that they have no passion for, or have little to no experience of. Research as conducted by Swart (p. 66) indicated that in the formerly disadvantaged Namibian schools only 22.1% of the teachers teaching PE were proper qualified. Hango is thus concerned about the covering of certain theoretical themes and topics as contained in the Grade 5-7 Ministry of Education's Physical Education Curriculum such as, knowing your body, health, nutrition, sports injuries, harmful practises and devices (para. 3). The National Coordinator of the

Namibian Schools Sport Union, bemoans the alarming downward spiral in the quality of Physical Education being taught in the Namibian Schools, if taught at all (Hembapo, 2013, para.1). The Union coordinator is thus concerned that if this trend continues the subject is destined to die a natural death. A similar concern was indicated by Swart since it was reported that PE periods have almost disappeared altogether from school timetables in some African countries like Botswana, Kenya, Mali, Tanzania and Uganda (Andrews, 1996; Katzenellenbogen, 1994, as cited in Swart, 2000, p. 67). The Union coordinator also pleads to the educational authorities to reconsider the status of the subject by making it a compulsory subject and to produce specialist teachers for the teaching of PE, via the relevant tertiary educational institutes involved in teacher training. Educational policy makers therefore should not shy away from physical education in favour of the more academic subjects, which will cause harm in the long run. According to Duiker, (Hembapo, 2013, para. 6) global studies have proved that regular participation in school physical education could be directly linked to improved academic performance amongst learners. In support to this statement, according to a position statement as proclaimed by the National Association for Sport and Physical Education (NASPE), research has shown positive impacts on student attendance, participation and enthusiasm for academic subjects through physical activities and physical education. Numerous studies have also shown a significant positive relationship between physical fitness and academic achievement, including improved performances on standardized test results (Physical Education is Critical to Educating the whole Child, 2011, p. 6).

In March 2014, more dramatic changes to the school curriculum were announced by the Ministry of Education. ("Dramatic changes to school curriculum announced." 2014, para. 1, *Namibian Sun*). Mother tongue instruction, a new grade beyond Grade 12, new rules regarding repeaters, and a host for technical subjects were amongst some of the changes to the Namibian basic education curriculum, as approved by the Cabinet. The revised curriculum for the junior primary phase for grades 0-5 will include Mathematics, Environmental Studies and Physical Education for implementation in 2015, were also mentioned during this announcement. According to the Minister of Education Dr David Namwandi, the reviewed education system and curriculum shall provide opportunities for diversified growth, learning and development conducive for a healthy sense of responsibility. Learners will also obtain knowledge, skills, values and attitudes needed in life to further their studies and lead a meaningful life in a democratic society.

Assurance was thus granted that Physical Education will remain and still being recognized as a valuable subject in the Namibian basic school curriculum. Whether Mr Duiker's concerns (Hembapo, 2013), regarding the status of the subject, will be addressed can only be realized after implementation of the revised curriculum. Former Minister of Education, John Mutorwa, revealed a similar concern as Duiker during a speech as delivered at the national sports conference in Windhoek, March 2014 ("Physical education neglected in education system." 2014, para. 1, *Namibian Sun*). According to the minister physical education is being overlooked and thus neglected in schools and tertiary institutions. Mutorwa (2014) also specifically mentioned that before independence in 1990, teachers took physical education seriously and that learners, who excelled in school, were those who managed to keep a balance between studying and relaxation by participation in reading and physical education. Mutorwa (2014) also mentioned that schools and tertiary institutions in their missions

of being true to the school curricula must never ignore physical education. Effort must be made to at least offer physical education as an organized extra-curricular activity as PE enables children to learn about basic concepts of good conduct and fair play. At the same event several policy makers have indicated that physical education is seen as part of future investments for well-being in support to the minister's statement.

Kudumo (2014, para. 1, 2) states, at the 2014 National Sports Conference in Namibia during his presentation of the topic "The importance of physical education in education", that he would continuously argue that any debate on the importance of physical education should be located within the philosophy underpinning such education system. Physical education constitutes part of holistic education, so therefore if education is important, then it is logical to argue that physical education is also important. Good education systems are diverse in their design, and include domains such as: cognitive, physical, emotional, social, aesthetic, spiritual and ethical developments. The aim is to develop analytical individuals contributing to the advancement of societies, hence the notion of education as a public good. He also contended that the pre-independence Namibian education system notwithstanding its ideological objectives, understood the place and role of sport in education. As many would recall, schools had structured sports, spiritual and cultural activities. Acknowledging that physical education is indeed a domain of education is critical and Namibia should therefore pay particular attention to the effective implementation of physical education in the Namibian education system (2014, para. 8)

According to Kudumo (2014) scientific knowledge and common sense confirm that investment in sport and recreational activities yields societal returns in social cohesion, crime prevention, healthy lifestyles and learner academic performance. He suggested that in moving forward, Namibia should define the place and role of sport in education and society, including by learning from international perspectives as contained for example, in the outcome document (2013 Declaration of Berlin) of the 5th International Conference of Ministers and Senior Officials responsible for Physical Education and Sport (MINEPS V) and the pre-independence practices. Kudumo is also convinced that current constraints, such as lack of trained physical education teachers and inadequate sport facilities are, in his view, symptoms emanating from the lack of understanding and appreciation of the place and role of sport in learner academic achievement and sustainable development (para. 9, 10, 11).

1.2 Significance of the thesis

In line with Kudumo's (2014, para. 9, 10, 11) concerns regarding the current state and status of physical education in Namibia, this research is intended to investigate the causal factors contributing to the negligence of the subject specifically in the primary schools in the Khomas education regional council, with the assumption that findings will be appropriate to primary schools in the rest of the country. Focus will also be granted to which curriculum requirements or prerequisites do the teachers and stakeholders like, school principals, curriculum developers and policy makers, in the Khomas educational region consider as being crucial to the sustaining of a successful physical education program.

Investigating the perceptions of all stakeholders with regards to physical education, might prove that there are no misunderstandings related to the value of physical education, but that the crucial causal factors for the negligence of the subject are indeed a lack of adequate support. This research might provide evidential support to the statement of Kudumo (2014) that the lack of properly trained physical education teachers and the lack of proper facilities and equipment is causal to the fact that the sustaining of a successful Physical Education program in the Namibian schools, is a very challenging task or most often even practically, impossibly viable. This research might evoke an increased awareness amongst stakeholders regarding the knowledge of the importance of physical education in the field of education with a holistic approach as the educational system in Namibia is rightfully a follower of. It might rekindle motivational forces amongst all stakeholders to find innovative ways of keeping the subject viable despite the limited resources and various challenges as currently prevalent in most of the Namibian primary schools. The results of this study are thus especially of imperative importance for educational administrators and teachers, in line with the statement of Shannonhouse (2012, p. v) that a sustained quality physical education programme and increased physical activity experiences have the potential to impact cognitive, physical and academic outcomes in schools.

According to the Center for Advancement of Standards-based Physical Education Reform (CASPER) of all the different subjects that children do study in school, there may be none more important than physical education. Through participation in a high quality physical education program children develop the skills, concepts and values needed to be physically active for life. For example, sufficient, regular physical activity through the participation in physical education, not only helps prevent major diseases, or combats obesity, but it also promotes learning, reduces stress, anxiety and depression and improves the general wellbeing of learners (www.supportrealteachers.org).

A major focus in this research will also be granted towards the investigation of participants' perceptions with regards to physical education and physical activity. This study will also focus on participants' perceptions concerning the essentially positive association between school-based physical activity, physical education and academic performance. According to a publication developed for the 'Centers for Disease Control' ("*The association between school based physical activity, including physical education, and academic performance"* 2010, p. 5) physical activity should be perceived through its broader context, thus including physical education, recess, extracurricular activities, but most importantly also inclusive of additional classroom-based physical activity breaks. This report focussed primarily on identified peer-reviewed studies and published reports addressing the association between physical activity, including physical education, and indicators of academic performance, including those related to cognitive skills and attitudes, academic behaviours, and academic achievement. Results eminent from this report suggest that physical education and physical activity may help advance academic performance for many students and should not hinder academic progress (p. 33). The author is thus convinced that if evidential results may be attained through this particular research, valuable suggestions regarding the incorporation of additional physical activities to the existing programs could be then submitted by the author to all relevant stakeholders in the Namibian Educational sector.

CHAPTER 2: PHYSICAL EDUCATION IN THE CONTEXT OF EDUCATION

2.1 Physical Education and Physical Activity

2.1.1 Introduction

The struggle for bestowing Physical Education its rightful place is globally an on-going battle for many years now. Regarding Physical Education in the context of schooling, PE became a subject matter in intuitional schools, in the form of German and Swedish gymnastics, at the beginning of the 19th century (Hackensmith, as cited in Kholl & Cook, 2013, p. 199). In institutionalized education, initially the main goal focused on the developing of children's cognitive capacity primarily in the sense of learning knowledge in academic disciplines. This goal above all dictates a learning environment in which seated learning behavior is considered appropriate and effective and is rewarded. Thus physical education as part of education provides the only opportunity for all children to learn about physical movement and engage in physical activity during school hours. As noted, its goal and place in institutionalized education have changed from the original focus on teaching hygiene and health to educating children about the many forms and benefits of physical movement, including sports and exercise. The National Association for Sport and Physical Education (NASPE) (2004, p. 6) states that with a dramatic expansion of the content beyond the original Swedish and German gymnastics programs of the 19th century, physical education has since then evolved to become a content area with diverse learning goals that facilitate the holistic development of children.

Sollerhed (2006, p. 26) also indicates that physical education could be seen as health education for young individuals, but that health education for young people has to be meaningful, appropriate and encompasses achievable goals and objectives. Other school subjects or disciplines focus almost entirely on knowledge and cognitive skills, while physical education in addition also contains behavioral and tactical aspects to a large extent. In physical education one of the challenges is that while the principal tool is education, the outcomes sought after are most often behavioral and physical development. School staff has access to large numbers of children in a given environment and as such has thus the potential to support healthy behavior among young people originating from all different socio-economic groups.

Young people obtain most of their structured physical activity in two behavior settings, indicated by Papaioannou (as cited in Sollerhed, 2006, p. 26) as school physical education and local sport clubs. But, not all children have any prior experience of sport activities in leisure time, and therefore the role of physical education and experiences of it becomes central in the total development of the young. Schools are the only societal institutions where the opportunity, mechanisms, and personnel are already in place to deliver health education, fitness activities, and the teaching of new motor skills to children. According to Blair, LaMonte and Nichaman (2004), recommendations for physical activity are 30 minutes of moderate-intensity activity daily for adults. School-age youth should though participate every day in 60 minutes or even more of moderate to vigorous physical activity (Biddle et al.; Corbin & Pangrazi; Blair et al., as cited in Sollerhed, 2006, p. 26). The

allocated curricular time in physical education though, does not reach the recommended level, as it is assumed that young people are active in their leisure time to a sufficient level.

One can also say with reasonable certainty that over the past 30-40 years, probably even longer, the volume and intensity of daily physical activity among youth have gradually declined. During about half of their waking hours, youth generally engage in activities with low rates of energy expenditure and therefore is predominantly engaged in what is commonly called sedentary activities. From a health perspective though, evidence is clear for adults as well and is accumulating for children that transferring time spent in sedentary activities to even light-intensity physical activity is beneficial. Substantial evidence exists that the volume of student's vigorous- or moderate-intensity physical activity can be increased through daily physical education, recess, classroom physical activity, active transport to school, and before- and after-school activities. For example, most states and districts have policies regarding physical education, but few require daily physical education or a minimum number of minutes of physical education per week. Although some comprehensive national guidelines exist, more are needed to define quality standards for school-based physical activity policies so that more uniform programs and practices can be created across states, school districts, and ultimately all schools ("Michigan Merit Curriculum", 2007, pp. 87-88).

A major concern, which is commonly shared by a wide spectrum of researchers worldwide, is the decrease in physical activity (PA) accompanied by an increase in childhood obesity, resulting in placing PE in the spotlight and therefore it is considered important to revisit the issues and to investigate what factors are currently the cause of impeding classroom teachers from delivering meaningful PE (Morgan and Hansen, 2008, p. 508). Nader, Bradley, Houts, McRitchie and O'Brien (2008), indicated that school-based physical education programs face numerous challenges including prevalent inactivity among children and families. A key contributor to the maintenance of healthy weight and fitness is exposure to an adequate amount of PE class time during which physical activity is maximized with a resultant increase in students' energy expenditure (Bevans et al., 2010). Based on estimation, it is believed by Ogden, Carroll, Curtin, Lamb and Flegal, (2010) that over a third of school-aged children are overweight or obese and rates of childhood obesity are apparently not declining. A healthy weight and weight loss maintenance has been associated with maintaining an adequate level of childhood physical activity, leading to a greater likelihood of sustained physical activity in adulthood (Jakicic, 2009; Telama, as cited in Perna et al., 2012). Tester, Ackland and Houghton (2014, pp. 127-128) indicates that physical inactivity contributed to the deaths of more than 13, 000 Australians. The sixth most important factor contributing to the overall burden of diseases worldwide is excess body weight, with an alarming 10% of children now being classified as overweight. Another alarming problem identified by Haslam and James (as cited in Tester et al., 2012, p. 128) is that children's activity levels are low and declining. Multiple researchers worldwide recognized that it is easier to change and promote healthy behaviors in children than to change poor health habits among adults (Tester; Tester & Watkins as cited in Tester et al., 2012, p. 128).

Optimizing children's physical, social, cognitive and psychological development, participation in physical activity is considered as being essential (Strong; Tomporowski, as cited in Lubans et al., 2012, p. 2).

Since physical fitness is a better predictor of metabolic health than total PA, activities of a vigorous nature though, may have additional benefits for young people (Ekelund et al., 2001; Rizzo, Ruiz, Hurtig-Wennlof, Ortega & Sjostrom, 2007). A lack of PA among children and adolescents is unfortunately currently a global concern and estimates suggested that about 50% of Australian primary school-aged children are really meeting the presently PA guidelines of 60 min/day of moderate to vigorous physical activity (MVPA) (Guthold, Cowan, Autenrieth, Kann & Riley, 2010; Hardy, King, Espinel, Cosgrove & Bauman, 2010). Therefore promoting PA among youth especially from disadvantaged backgrounds should be considered a public health priority, since these individuals specifically, have reduced access to PA facilities and resources and tend to be less active than those from middle to high socio-economic income positions (Moore, Diez Roux, Evenson, McGinn, Brines, 2008; Hardy et al. 2010). An ideal environment for promoting PA among youth, is the school setting as schools already have the necessary equipment, personnel, facilities and curriculum to promote and provide ample opportunities for PA (Centers for Disease Control & Prevention, 2011; Dobbins, De Corby, Robeson, Husson &Tirilis, 2013).

2.1.2 Physical Education Interacted to Physical Activity

An active lifestyle has been well established in various related research literature to health benefits (Department of Health, Physical Activity, Health Improvement and Prevention 2004; Toussaint, Willem, & Evert, 2011 p. 1). Not only is sedentary lifestyles a major health problem internationally, but the same tendencies is also recently emergent in the Netherlands. A study revealed that less than 10% of the primary school children achieve 30 minutes of physical activity per day, whereas the guidelines state a minimum of 60 minutes PA per day (Department of Health, Physical Activity, Health Improvement and Prevention, as cited in Janssen et al., 2011). Children's PA has been identified as a modifiable risk factor for lifestyle related diseases such as osteoporosis and coronary heart disease. Low levels of PA during early childhood will thus compromise the current and future health and well-being of the population, therefore promoting PA in younger childhood should be considered as major public health priority (Department of Health, Physical Activity, Health Improvement and Prevention, 2004; Berenson; Bailey, as cited in Janssen et al., 2011). Schools have also been identified as the ideal settings in promoting PA, since next to home the school is the environment where children spent the most of their time. Physical education lessons and regular playtime breaks or recess, represents the two main concepts in which children are provided the opportunity to be physical active, within the school (Stratton & Mullan, 2005).

In addition to these structured and frequent PA opportunities, schools can also cater for irregularly and non-daily physical activities through sporting days and other extracurricular activities. During recess though, all children have the opportunity to be physical active on a daily basis. It has also been noted that younger children are more likely to participate in moderate to vigorous physical activity within unstructured play settings as opposed to more structured contexts (Pate et al., as cited in Janssen et al., 2011 p. 2). To stimulate PA among children, different playgrounds were developed in Dutch neighbourhoods (Bakker et al., as

cited in Janssen et al., 2011). An unpublished pilot research undertaken by Janssen et al. (2011) indicated though that children participated in not specifically stimulating playgrounds in 10-30% of MVPA of the play time. A significant increase in children's participation in MVPA both in the short- term and the long-term, were indicated in a research done in the UK in children aged 4-11 years, after the application of simple multicolour markings on the school's playground (Ridgers, Stratton, Fairclough, & WR Twisk, 2007). The ability to provide children with execrably low PA levels, the opportunity to be physical active on a daily basis during school recess by means of a simple and inexpensive intervention, has thus great potential for public health gain (Wat beweegt kinderen?..., as cited in Janssen et al., 2011). To support physical activity even further, the PE teacher has the ability to link the playground to the PE curriculum (Bakker et al., as cited in Janssen et al., 2011).

2.1.3 Physical Activity in Perspective

Undeniably physical activity has multiple benefits related to the health and well-being of school-aged children and adolescents (Janssen & LeBlanc, 2010). Various studies have also successfully linked physical activity to learning, cognitive functions and academic performance (Hillman, Pontifex, Raine, Castelli, Hall et al., 2009). There is also some evidence that apart from those benefits, various physical activity settings can improve social development through opportunities for social interactions, meeting friends, co-operating with others, and problem solving in children and adolescents (Bailey; Blatchford; Weiss & Stuntz, as cited in Haapala H. L. et al., 2014). Recess provides children with the opportunity of engagement in free play and thus may improve their social development, and as such recess is an important area for the postulating of learning social skills and experiencing social life (Ramstetter, Murray & Garner, 2010). Opportunities for informal social interactions without the structure of the classroom and adult control are supported during recess and through the process of play children are learning the skills needed in everyday life, inclusive of negotiation, problem solving, and co-operation. Sport and physical activities bring people together in a shared interest, where they may build co-operative experiences and strengthen their sense of cohesion. These experiences may often result in improved social capital and promote social inclusion (Bailey, 2005; Glover & Hemingway, as cited in Haapala H. L. et al., 2014, p. 2).

2.1.4 Trends and Status of Physical Activity in Schools

The Webster's third new international dictionary (2002), defines activity as the state of being active, the exertion of energy, physical motion or exercise, vigorous or energetic action. Sollerhed (2006) also indicates that activity and occupation is often used interchangeably, but occupation has been accepted as more appropriate when referring to all types of activity. Since human beings are occupational beings, occupations are thus important for adaptation to environmental changes, and to develop and exercise genetic capacities in order to maintain a healthy status. According to Wilcock (as cited by Sollerhed, 2006, p. 13) humans engage in

occupation, with a purpose of individuality, therefore they think about the effects, conceptualize, and plan before undertaking activity and as they are able to reflect they can mentally alter future behavior as a result of outcomes.

The distinction between physical activity and exercise is not always clear, and there seems to be an overlap between the constructs. Physical activity is part of our evolutionary heritage as history indicates that people were physically active in order to survive. In view of our biological heritage, in our current lifestyles we do not live according to our natural way of life. We were designed for physical activity, but currently we live in an environment in which opportunities to be physical active are limited or even quickly disappearing. Today physical activity has declined to a minimum and most people lead a sedentary lifestyle, spending the majority of their waking hours sitting. Physical activity is undertaken at will and not for necessity. Therefore, a great deal of the physical activity needed for health must be freely chosen in leisure time or consciously integrated into one's daily routine. Very few people are running or walking daily for several hours as early humans did, and most people live their daily life with an activity level close to the resting level (Hetzel & McMichael, as cited in Sollerhed, 2006).

According to Whitehead (as cited in Sollerhed, 2006 p. 24) children are born and motivated intrinsically to be physically active. If this motivation is being kept alive by physical success, freedom and fun, it will do more than to promote fitness behaviors, as it will also maintain the physical zest as added to the leading of a meaningful. Childhood is considered to be an active stage of life, but in the recent decades, many studies have indicated that children have become less physically active with a definite decline in physical fitness and endurance, and this tendency could be seen as troubling for future generations (Boreham & Riddoch; Luepker; Westerståhl, as cited in Sollerhed, 2006 p. 16). Even in developed countries many children have shown to become more obese, physically inactive and spending a great part of their free time with sedentary pastime activities (Booth; Goran et al.; Falkner & Michel; Donnelly et al., as cited in Sollerhed, 2006). Many studies have shown that the human individual is programmed for susceptibility to later disease through early biological events, and it has also been suggested that degenerative biological processes will manifest themselves in chronic diseases in later life (Barker; Malina; Telama et al.; Taylor et al.; Janz et al.; Raitakari et al.; Togashi et al., as cited in Sollerhed, 2006.) These events could be triggered and even worsened by environmental influence such as inadequate nutrition, smoking and physical inactivity (Van Lenthe, F., Boreham, C. A., Twisk, J.W. R., Strain, J. J., Savage, et al., 2001). Besides the physical benefits, childhood physical activity is also important for socialization into a physically active lifestyle (Riddoch et al., as cited in Sollerhed, 2006). Physical activity is regarded as a habit that is established in childhood, where significant others such as parents play an important role for the modeling thereof (Sääkslahti et al., 1999). Since many adult diseases have their origins in childhood, this finding, together with the finding that health-related behaviors and disease risk factors may track from childhood into adulthood, contemplates the need for early and ongoing opportunities for physical activity (Kholl & Cook, 2013, p. 139).

2.1.5 The Association between School-Based Physical Education and Physical Activity

Kelder et al., (2009, p. S222) indicated a prevalence of obesity among children in Texas, more than the national estimates for the United States. The 77th Texas legislature Senate Bill 19 were passed in 2001, in response to health consequences and projected health care costs, requiring elementary school children to participate in 30 minutes of daily physical activity or a total of 135 minutes per week (Texas Department of Health, as cited in Kelder et al., 2009). In 2007 Senate Bill 19 also required Texas education Agencies to adopt recommended school health programs and to receive implementation training in approved programs. Such coordinated school health programs must address amongst others, at least some components that are inclusive of classroom curriculum, physical activity, child nutrition services, and parental involvement. Although the Senate Bill 19 was ordained to improve the health of Texas children, it also entreated to improve unintended negative consequences of Texas academic testing results. When performance standards were introduced, many schools cut back or eliminate the so called enrichment elements in their curriculum, specifically those not considered as foundation elements. This often meant the limiting of physical and health education contact hours and reduced recess time (Kelder et al., 2009, p. S223). Based on evidence of a high prevalence of obesity among certain groups of children in some Texas schools, enhanced intervention efforts were undertaken to reduce and prevent childhood obesity in these areas, resulting in the implementation of more moderate to vigorous physical activity during physical education and more recess time. Notably lower obesity rates were reported in the school which specifically adhered to the appeal of a greater adoption and implementation of the approved coordinated school program, greater school health advisory council and school-level health committees, more moderate-to-vigorous physical activity during physical education, and more recess time (Kelder et al., 2009, p. S241).

Various studies indicated that physically active youth may be less likely to experience chronic disease factors, become less obese and might be more likely to remain active throughout adolescence and even into adulthood, than physically inactive youth (Strong et al., 2005; Moore et al.; Malina; Tomporowski, as cited in Carlson et al., 2008, p. 721). The US Department of Health and Human Services as well as Haskell et al. (as cited in Waters, Reeves, Fjedlsoe & Eakin, 2011, p. 1) indicated that physical activity is also implicated in the prevention and management of numerous chronic diseases such as cancer, diabetes, musculoskeletal disorders, anxiety and depression. But there are also numerous indications that physical activity has beneficial influences on behavior and cognitive functioning that might result in improving students' academic achievement (Coe et al., 2006; Tomporowski; Pivarnik, Womack, Reeves & Malina, 2006). Several intervention studies were conducted to examine the effect of more physical activity and physical education programs during school hours with a focus on behaviours related to academic achievement (Coe et al., 2006; Mahar, et al., 2006; Ahamed et al., 2007). There were though concerns that maintaining or increasing time in physical education classes could take away time from other subjects and thus have a negative effect on academic achievement outcomes on those subjects (Strong et al., 2005; Kahn et al., as cited in Carlson et al., 2008). A study was thus undertaken by Carlson et al. (2008, p. 721), examining the influence of physical education in US elementary schools focussing

on direct measures of academic achievement in mathematics and reading from kindergarten through fifth grade. Results from this study indicated that girls obtained a small benefit from having the highest exposure of physical education, ranging between 70-300 minutes per week, but no associations were observed for boys. Undoubtedly students might perform academically better by spending more time in physical education. Even though, physical education should be promoted for its many benefits and legitimacy for the reducing or elimination of programs in PE could not be found in fear of the possibility that increased PE could negatively affect academic achievements. Schools should at all times strive to meet the national health objective of daily physical education and keep on offering students a balanced program inclusive of opportunities for physical activity (Carlson et al., 2008, p. 726).

According to Erwin, Beighle, Morgan and Noland, (2011, p. 455) it is well documented that American youth exhibit low levels of physical activity and is considered as the #1 cause of overweight and obesity. The majority of youth attend school and therefor schools are the ideal locations for promoting PA and for the implementation of interventions (Kropski, Keckley & Jensen, 2008; Wechsler, McKenna, Lee & Dietz, 2004). Tudor-Locke et al. (as cited in Erwin et al.,2011, pp. 455-456) indicated that it has been shown that two recess periods given per day and two 30 minute physical education periods per week are attributing to 40.5% of overall daily PA. Different sections of the school day combined with engagement in an afterschool program of at least 60 minutes of moderate to vigorous physical activity, can eventually make contributions to overall required PA. Thus, as suggested by these studies, if properly conducted, the school day and environment can offer the opportunity of engagement in meaningful amounts of PA. Research studies, though, also suggested that including movement in classroom settings improves students' on-task behaviour and academic skills and thus creates an increase of their PA intensity levels and sessions (Mahar et al., 2006; Honas, Washburn, Smith, Greene & Donnelly, 2008). It has also been reported that the devotion of time to PA during the school day, does not detract at all from academic performance (Ahamed et al., 2007).

Economic recession has though led to budget reductions in schools across the US nation, resulting in the reduction of physical education programs and recess, in order for schools to save money and to make more room for academic time during the school day. Concurrently, classroom teachers and administrators have been pressured, through legislation requiring schools to achieve high standards of academic performance, to increase their standardized test scores result (Burton et al., as cited in Erwin et al., 2011, p. 456). Erwin et al., (2011, p. 460) denoted though that based on the fact that PA has been positively associated to influencing the facilitating of learning and that it does not diminish academic performance, administrators and teachers should still be trained and held accountable for the integration of PA throughout the school day. There is thus indeed a need to keep integrating physical activity into the school day apart from physical education and recess. To increase physical activity among children, simple, low-cost unobtrusive methods for teachers could thus help in this regard. A study was therefore undertaken by Erwin et al. (2011) to determine the effect of a low-cost, unobtrusive classroom-based PA intervention on the PA levels of elementary school children during the school day. Results from this low-cost teacher-directed intervention advocated that the incorporation of one additional PA break per day in the classroom setting can significantly increase the child's PA by one third. This is

important based on considerations from the Obama administrator's reform plan, which is encouraging states to make improvements in teacher effectiveness and to still ensure that all schools have high-quality teachers.

The US Department of Health and Human Services (2008, pp. A2-A3) also indicated that children and youth receive numerous physical health benefits form physical activity that includes improved overall fitness, improved cardiovascular function, metabolic function and bone health. But despite all these proven health benefits, many children still fail to meet PA recommendations (Centers for Disease Control and Prevention, 2010). Howie and Pate (2012) indicates that despite many efforts to sell PA to school administrators and policymakers emphasizing its health benefits to promote increased physical activity in school settings, it still displays little success. Therefore, advocates for the inclusion of PA during the school day, have to seek for alternative approaches to persuade decision makers. The association of PA with academic achievement has been identified as one approach. The primary goal of schools is given as student academic achievement and therefor the key to increasing PA in schools would thus be to prove that PA improves academic achievement. If scientific evidence verifies and supports a positive connection between PA and academics, administrators would therefore most likely also be eager to increase PA opportunities during the school day. Academic achievement and PA have been studied by researchers over the past 50 years and many researchers are contend that sufficient evidence do exists to institute school PA policies that will improve, or at least not detract from, academic achievement (Howie & Pate, 2012, p. 161).

According to Howie and Pate (2012, p. 166) researchers have made considerable progress over the past 5 years in examining PA and academics, but results are still inconsistent. The optimal type of PA to improve academic outcomes is still unknown. Diamond (as cited in Howie & Pate, 2012) argued that sport participation compared to physical exercises only, is more beneficial to the development of executive functions. Participation in sports such as martial arts, embraces character development and other social skills that contribute to and benefit complex, higher-order executive functions. The varied types of school day PA, such as physical education, recess, classroom exercise breaks and extracurricular activities have rarely directly been compared through proper experimental designs. PA have though been associated to likely influence multiple pathways including physiological, neurological, psychological and social factors that may lead to improved academic achievement. Regular PA, physiologically, has though shown an increase of the Brain-Derived Neurotrophic Factor and hippocampal neurogenesis to improve brain function (Van Praag, as cited in Howie & Pate, 2012). Mayes et al. (as cited in Howie & Pate) state that neuroelectric measures have also shown improved cognitive control and attention in children after acute and chronic PA. Additionally, PA may also influence fitness, other social cognitive factors and other health characteristics that may serve as mediators or moderators of this relationship (Tomporowski et al., as cited in Howie & Pate, 2012). But Howie and Pate (p. 166) recommended that to build an impenetrable case, careful and continued identification of the type, dose, and relevant outcomes based on strong research designs, should still be endeavoured on by researchers.

In coherence to the above, Haapala et al., (2014, p. 2) indicated that only a few cross-sectional studies have compared different types of PA and sedentary behaviour in relation to measures of academic achievement, such as reading and arithmetic skills, among children and adolescents. They thus undertook an

investigation on the association between the different types of PA, sedentary behaviour and reading and writing skills in Grades 1-3 children from a sample of Finnish primary school children. Their findings indicated that in the whole sample of children, higher levels of PA during recess and active school transportation were associated with better reading fluency. Better arithmetic skills were related to any engagement in organized sports and sedentary behaviour related to academic skills was also associated with better reading fluency. Higher levels of total PA were related to better reading fluency and reading comprehension academic skills among boys. Higher levels of computer use and playing of video games were also related among boys, to better arithmetic skills. Total PA and different types of PA had weak inverse or no associations with academic skills among girls. Even total sedentary behaviour and sedentary behaviour related to music, arts, crafts and games were inversely associated with arithmetic skills among girls (Haapala, E. A. et al., 2014, p. 9). In conclusion Haapala et al., (p. 11) suffice by an indication that more time spend in PA during recess, physically active transportation, engagement in any organized sports and sedentary behaviour related to academic skills were associated with better academic skills during the first school years in children.

2.2 Benefits and Value of Physical Education and Physical Activity

2.2.1 Introduction

Developmentally appropriate physical education programs should help children become aware of their movement potential, move competently and confidently, understand and apply the movement fundamentals, become versatile movers, and value healthy play (Buschner 1994, p. 4). Regarding early childhood, the main philosophy behind introducing the young child to physical education, is the use of movement to facilitate children's social interaction and to help them acquire the basic knowledge for maintaining a healthy active lifestyle. General perceptions regarding a healthy lifestyle can be applied largely to the behavioral choices people make in retrospect to activity levels, development of physical fitness, cardiorespiratory condition, emotional health and well-being, relationships, personal safety, smoking, alcohol consumption, drug abuse, and nutrition. All these choices can be viewed as positive since they can lower the risk of becoming seriously ill and thus contribute to an extended lifespan. Research have shown that young people who engage in regular physical activity are more likely to make healthy lifestyle choices, and that children who are regularly active, have increased levels of concentration and higher academic attainment (Zachopoulou et.al. 2010, p. v). Supportive research also shows that higher levels of physical fitness in children are linked to improved academic performance (Currie, 2013, p. 39).

Currie (2013, p. 18) also states that participation in regular physical activity is linked with improved psychological wellbeing such as reduced stress levels, positive mood, body image and self-esteem. In the development of early childhood, young children, middle childhood, and adolescence, physical activity is considered as a rock solid cornerstone. Today's way of life, however is undeniably favoring sedentary pursuits

through the advancement of technology and innovation. This lack of engagement in active pursuits eliminates valuable opportunities for the modern youth to enjoy physical stimulation and social-emotional development. Short and long term health impacts of a sedentary life is low energy expenditure with the risk of developing obesity, inadequate motor skill development, lack of competence to engage in regular sport or exercise, and an overall risk for a low quality of life. Inactivity in youth irrefutably leads to inactivity in adulthood and thus carrying with it the risk of developing cardiovascular diseases, diabetes, high blood pressure, certain cancers and even premature death. Therefore physical activity is a crucial aspect for young people for optimizing their physical development and health promotion (Ward, Saunders and Russell 2007, p. ix).

2.2.2 Benefits of Physical Education

A report as produced by the Scottish Physical Review Group indicated that a general perception about physical education entails that physical education is not only about "learning to move", but also about "moving to learn". The principle of *learning to move* is possibly the area most commonly understood, but the principle of *moving to learn*, comprises a range of important educational outcomes, such as social skills, team work and problem solving, inter alia (O'Neill, 2004, p. 24). The only school subject that focusses on children's efforts and learning about their body and its potential development, is physical education. Furthermore, physical education links to cognitive and social processes and thereby makes a true connection between the development of mind and body. The health and well-being of children affect their ability to achieve and their confidence to learn, thus when children and young people are fit and healthy, they are able to concentrate better, learn better and do well in school (O'Neill, 2004, p. 14). According to Bailey et al. (2006, p. 1) the International Council of Sport Science and Physical Education (ICSPE) claims that physical education helps children to develop respect for the body and as such contributes towards the integrated development of mind and body. It also improves the development of an understanding of the role of aerobic and anaerobic physical activity in health, positively enhances self-confidence and self-esteem as well as improves social and cognitive development and academic achievement. Kholl III and Cook (2013, p. 216) indicate that the importance of physical education to the physical, cognitive and social aspects of child development has been acknowledge by various federal states, local health and education agencies.

Physical education, unlike any other school related physical activity such as extracurricular sport or recess, represents the only time and place for every child to learn knowledge and skills related to physical activity and to be physically active during the school day. Currently it is also the only time and place where all children could be engaged in moderate- to-vigorous-intensity physical activity safely, due to the structured and specialized-supervised instructional environment of PE. Eventually the expectation is that children will carry the knowledge and skills gained in PE into other physical activity opportunities in school, such as active recess, active transportation and extramural or intramural sports. Based on these reasons, the PE program has been identified as the foundation on which multicomponent or coordinated approaches to the incorporation of other physical activity opportunities can be designed and promoted (Kholl III & Cook, 2013, p. 215). NASPE defied

physical education as a curriculum area offered in schools that provides students with instruction on physical activity, health-related fitness, physical competence, and cognitive understanding about physical activity and thus PE enables students to adopt healthy and physical active lifestyles (Centers for Disease Control [CDC], "The Association…", 2010, p. 10).

Shannonhouse (2012, p. 2) emphasizes the importance to differentiate between physical activity, physical education and physical fitness since most often, there tends to be a confusion among these terms. Physical education involves developmentally appropriate curricula, normally conducted by a qualified physical education professional, who focusses on developing physical educated persons who have the knowledge and skills needed for lifelong physical activity. Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. Physical fitness refers to a set of attributes people have or deliberately attain, and are related to their ability to perform physical activity with ease. Generally physical fitness can be distinguished as health-related fitness such as cardiovascular fitness, body composition, flexibility, muscular endurance and muscular strength, as well as skill-related fitness such as, agility, balance, coordination, power, speed and reaction time. Similarly Kholl III and Cook (2013, p. 140) state that children require frequent opportunities for practice to develop skills and confidence that will promote ongoing engagement in physical activity. Curricula for PE are thus structured to provide developmentally appropriate experiences to children, based on the building of motor skills and self-efficacy that are underlying to lifelong participation in health-enhancing physical activity, and trained physical education specialists are uniquely qualified to deliver these aspects of the PE curricula. Physical education is however, usually only offered during a single session. Other opportunities of physical activity are therefore needed to supplement physical education through the addressing of the need for more frequent exercise during the day. Telama et al. (as cited in Hills, Dengel & Lubans, 2015, p. 369) denotes that traditionally, investments in PE has been established on the notion that physical skills developed during the elementary school years and consolidated during the secondary school years, would eventually provide the foundation for engagement in physical activity in adulthood. The expectation is that in parallel with the development of motor skills, PE is beneficial for the health of the developing child and therefore delivers persistence or tracking of PA into and across adulthood that would provide ongoing health benefits.

2.2.3 Benefits of Physical Activity and Sport

Bailey et al. (2006, p. 9) states that around the mid 1990's a number of key events moved matters, related to physical education and school sport (PESS), forward and the main catalyst was a series of robust longitudinal studies that identified the importance of regular physical activity across lifespan. Physical activity then emerged as an important public health issue and remained ever since as such in the political spotlight (Health Education Authority [HEA]; Scottish Executive, as cited in Bailey et al., 2006). The role of PESS in the promotion of engagement in lifelong physical activity has then been widely accepted (Penney & Jess, 2004; Green, as cited in Bailey et al., 2006). A strong focus on physical fitness apparently may be a

productive focus for PESS, from a behavioral perspective, as it has also been suggested that young people need to gain appropriate knowledge, understanding and behavioral skills to ensure that physical activity becomes a regular part of their daily life (Fairclough & Stratton, 2005). According to Bailey et al. (2006, p. 11) a key recommendation emerged with the focus on the accumulation of at least one hour of physical activity per day for inactive children, and a secondary recommendation was suggested as twice-weekly strength and flexibility activities. Guidelines, critically recommended though, that the physical activity performed could be of a general nature as opposed to a planned exercise regime, and can also be accumulated in different ways and can vary in type, setting, intensity, duration and amount. It is also important, for the sake of many young people that these physical activities do not need to be strenuous, but should at least be of moderate intensity and could involve activities such as brisk walking.

The CDC ("The Association…", 2010, p. 10) indicates that physical activity could be defined as any bodily movement produced by the contraction of skeletal muscles that increases energy expenditure above the resting level. Physical activity can thus be repetitive, structured and planned movement such as entailed in fitness classes or recreational like hiking. It could also be attained leisurely through gardening, sport focused through participation in competitive sports such as basketball, volleyball, etc. or work-related by the moving and lifting of heavy objects such as boxes, and even transportation-related by walking or cycling to school. Ruskin (as cited in Amusa, Toriola & Goon, 2012, p. 994) indicates that in its simplest form PA includes activities such as routine walking and jogging. It normally involves series of bodily movement aiming at the maintenance of health and bodily functions and could entails for example a walk in the park, play, all forms of hobby activities as well as all forms of children's activities. Some physical activities with the purpose of promoting and developing fitness can be strenuous such as sport participation and games for example soccer or bicycling. Most people though prefer not to exert themselves and would rather pursue activities for enjoyment and leisure, although the same activities could be used deliberately to develop fitness and a good quality of life (Amusa et al., 2012).

Various studies also explored the possibility of physical activity occurring in classroom apart from physical education and recess (CDC, "The Association…", 2010 p. 6). These studies also examined how short physical activity breaks of 5-20 minutes introduced in classroom settings affected cognitive skills such as aptitude, attention and memory; attitudes like mood changes; academic behaviors such as on-task behavior and concentration; academic achievement based on standardized test scores, reading literacy and math fluency scores. Most of these studies under review by the CDC ("The Association…", 2010), found positive associations between classroom-based physical activity and indicators of improved cognitive skills and attitudes, academic behavior, and academic achievement. Notably none of the studies reviewed, found any negative associations. Resultantly the CDC suggested that increasing or maintaining time dedicated to physical education and physical activity may improve and do not appear to adversely impact academic performance at all. Participation in regular PA breaks during the school day is another way of promoting PA, but tends to be a more common practice in middle school than elementary and secondary schools. Strategies for increased PA include the use of short energizers, which is short physical activity breaks conducted in the classroom. This

integration of PA assisted learning notably, in other curriculum areas such as mathematics and science (Katz et al., 2010; Riley, Lubans, Holmes & Morgan, 2014). A growing body of evidence indicates a positive association and even perhaps a causal relationship, between PA and executive functioning, concentration and on-task behavior in young people. This evidence provides further justification to explore innovative opportunities of integrating PA into the classroom setting (Hills et al., 2015, p. 371).

Shannonhouse (2012, p. 4-5) states that physical activity is a factor in healthy living and the benefits of regular physical activity for children and adolescence includes the building and maintaining of a healthy bone structure, muscles and joints, it also reduces feelings of depression and anxiety and promotes a sense of psychological well-being. Additionally PA helps control weight, reduce fat, built lean muscle and assists academic performance. A mutual agreement among researchers and educators is that movement is essential to learning since the brain is activated during physical activity. By the incorporation of physical activity, physical education can thus have beneficial influences on both academic learning and the physical patterns of students. Several researchers indicated that when the brain is activated during physical activity, existing brain cells are rejuvenated and new ones are stimulated (Etnier et al.; Hillman et al.; Hollmann & Struder; Ploughman; Shepard; Trudeau & Shepard; Sibley & Etnier, as cited in Shannonhouse, 2012). Physical activity is specifically associated with an increased cerebral blood flow, enhanced arousal level, changed hormone secretions and an enhanced nutrient intake (Shannonhouse, 2012).

Kholl III and Cook (2013, p. 217) state that in response to this initiative the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) took a holistic approach to the promotion of physical activity in schools and launched the Comprehensive School Physical Activity Program (CSPAP) with a focus on the strengthening of physical education and promoting all opportunities of physical activity in schools. The intended approach of CSPAP in all schools is to provide a variety of school-based physical opportunities that would enable all students to participate in at least 60 minutes of moderate-to-vigorous physical activity every day and to provide coordination between and among the CSPAP components aimed at maximizing the understanding, application and practice of knowledge and skills learned in physical education so that all students will be fully physically educated and well equipped for a lifetime of physical activity participation. The five components considered vital for the developing of a physical educated and physically active child according to CSPAP, are physical education, physical activity during school, physical activity before and after school, staff involvement as well as parent and community involvement (AAHPERD, as cited in Kholl III & Cook, 2013).

2.3 Perceived Ways of Sustained Teaching of Physical Education

2.3.1 Instructional Strategies

Throughout the world, health and physical education programs are challenged to provide relevant and meaningful learning experiences for children and youth. Especially in the 21st century, learning strategies will be dramatically different, requiring children and youth to gain critically thinking and problem-solving skills, the ability to operate with agility and adaptability, effectively analyze information, communicate in various oral and written forms, reflection of greater curiosity, imagination, being innovative in their thinking and develop healthy active lifestyles (Gut; Kay & Greenhill, as cited in Chin & Edginton, 2014, p.2). A broader global/international perspective of health and physical education pedagogy is needed, as the world is continuously changing. Self-evidently, we can and need to learn from one another throughout the world, as an increasingly globalized and technologically connected world culture enables outstanding professional practices in one part of the world to be reviewed and adopted locally wherever needed and deemed appropriate. Unquestionably, knowledge of global/international practices can and should assist in the advancement of health and physical education pedagogy worldwide (Chin & Edginton, 2014).

NASPE ("Appropriate Instructional Practice…", 2009, p. 3) indicates that a quality physical education program is both developmentally and instructionally relevant for all children. Practices that recognize children's development and changing movement abilities, as well as their individual differences, are considered as appropriate instructional approaches. In the lesson and program design and delivery, children's past motor skills, sport, cognitive and social experiences must also be considered. In the designing of lessons and the selection of instructional strategies, individual characteristics such as physical maturation and fitness, skill levels and age should be reflected. Worldwide recognized appropriate instruction in physical education incorporates the best-known practices as derived from both research and teaching experiences, into a pattern of instruction that maximizes opportunities for learning and success for all children. Quality lessons and programs must be designed to reflect the goals of national, state and/or local standards for physical education. NASPE (p. 4-7) suggests that the following five major premises should guide teachers', administrators' and legislators' thinking about, planning for, and evaluating of physical education programs:

The ultimate purpose of any physical education program is to help children develop the skills, knowledge and desire to enjoy a lifetime of physical activity.

- Children should engage in physical activity that is appropriate for their development levels.
- Recess and physical education are important but different parts of the school program.
- Physical activity and physical education are not the same.
- Physical education and youth sports programs are different.

Siedentop et al. (2011) state that when advocating for education through the physical, it should clearly be stated that the main goals of most physical education curricula should remain educating about and in movement. Educating through the physical may thus become the main core of the curriculum in order to certain

clinical goals such as the teaching of self-control, respect for others, and self-regulation. PE teachers, who choose to adhere to educating through the physical, should understand that its implementation entails at least two consequences. Firstly, teachers should be committed to the instilling of educational goals into and through the PE curriculum, and they should be willing to allocate sufficient time for the explicit teaching of social skills that may occasionally come at the expense of more implicit teaching of psychomotor skills. Secondly, teachers should acquire specific knowledge and tools for education through the physical and should have strong content knowledge and pedagogical knowledge that might require adapting the content and context properly for optimal achievement of the education goals (Chen & Ennis, as cited in Eldar & Ayvazo, 2009).

Despite all the above guidelines, Lee, Burgeson, Fulton and Spain (2007, p. 460) indicate that some inappropriate practices at the PE classroom are still being reported. Some teachers tend to use bombardment, elimination games and elimination tag, such as “dodge ball” or “king-of-the-hill”, as part of the required PE program. Some other inappropriate classroom practices during PE also include the tendency of having students standing in lines or on the sidelines watching others and awaiting a turn, having team captains choosing teams, and organizing games in such a way that leads to the elimination of students. These types of practices and activities normally result into the reduction of opportunities for students to be physically active during the PE class and unfortunately, typically those students in need of both more activity and more confidence in their ability to be physically active, are eliminated first (NASPE, as cited in Lee at al., 2007). All of these practices, if not prohibited, can eventually lead to negative attitudes toward physical activity and physical education and thus lessen the importance of regular participation in physical education. It is therefore imperative that states and districts should have policies that also prohibit the use of physical activity as punishment or prohibit the exclusion of students from all or part of physical education for bad behavior in PE or any other class (Lee et al., 2007).

To promote best practices in schools, Achterstraat (2012, p. 20) suggests that educators should tap into the significant quantity of information on physical education that are available on websites, including guidance and resource materials for principals, teachers, parents and the community. Materials normally include information on current programs and instruction on the teaching of fundamental movement skills, aerobics, dance and gymnastics. There are also vast amounts of information available on the internet about practices adopted over the world to improve the delivery of physical activity and physical education in schools. Despite all these significant amounts of information readily available, principals still indicate the lack of information as one of the major impediments to improved school physical activity, and seem to be looking at the Department of Education to identify and implement contemporary good practices suitable for schools. These practices should include lesson plans and exemplar programs with details of how to maximize movement during class, improve levels of participation, progressively improve the skills of the students as well as the teachers, and to integrate physical activity successfully into other parts of the curriculum.

Bailey et al. (as cited in Thorburn & Gray, 2010, p. 46) state that the direction of physical education in the 21st century in Scotland appears to be changing towards an endeavor to contribute to the improving of health and well-being of the nation, by ensuring that the aim of physical education in primary and

secondary schools, is based on the encouragement of individuals to pursue a physically active lifestyle. The notion that pupils are disengaged from physical education and physical activity because they cannot relate to the activities presented to them within the traditional curriculum, is a key assumption on which this change is founded. Children become disengaged from, or uninterested in physical education, not because of the activities themselves, but because of other factors such as the perception of competence and enjoyment, all those, however, are factors that teachers have some control over. According to Capel and Light (as cited in Thorburn & Gray, 2010, p. 47), the task of teachers, policy makers and those involved in teacher education is not only a great, but indeed a critical one. All stakeholders should understand that learning is a complex process, fortified by theory, and that such an understanding should guide them towards the adoption of teaching approaches that offers learners a wider and more diverse range of experiences that will enhance their capacity for learning (Light, as cited in Thorburn & Gray, 2010). A proper understanding of theory may also encourage teachers and teacher educators, to question their current beliefs about teaching and to adopt alternative, more pupil-centered approaches focused on the enhancement of pupils' learning and performance at appropriate rates and levels. Such an approach will impact positively on the affective responses that are critical to engagement and continued participation in physical education and physical activity (Li et al.; Wigfield & Eccles, as cited in Thorburn & Gray, 2010).

2.3.2 Learning Environment

Regarding the learning environment for physical education NASPE (2007, p. 7) indicated the following subsections for consideration: establishing the learning environment; exercise as punishment; safety; diversity; equity; inclusion; competition and cooperation; Indoor as well as outdoor facilities with ample physical education equipment should be made available to preschools. According to Fjørtoft and Gundersen as well as Powell and Ambardekar (as cited in Zachopoulou 2010), research findings support the importance of the physical environment, therefore governments and communities should guarantee that there are appropriate and safe playgrounds for children in neighborhoods as well as in all kindergarten schools.

Morgan and Hansen (2008, p. 507) indicated that the perceived two key factors to have an impact on primary school PE programs, are being defined as either being teacher-related or institutional. Teacher-related is commonly mentioned as difficulties or barriers that include factors directly related to the teacher such as, lack of confidence, lack of knowledge and lack of interest. Institutional factors are commonly considered as not within a teacher's control namely, crowded curriculum, inadequate equipment and/or resources and funding issues. A study conducted by Morgan and Hansen (p. 513), confirmed that classroom teachers still experienced difficulties in teaching PE with a number of barriers inhibiting their efforts and capacities to implement regular and developmentally appropriate PE lessons. A major concern is that many of these barriers addressed in their study were also identified almost 15 years ago in a recommendation from an Australian Senate Inquiry into Physical and Sport Education in 1992.

Regarding teacher related difficulties, according to “Her Majesty’s Inspectorate of Education” (HMIE) (as cited in Thorburn & Gray, 2010, pp. 3-4) new challenges in PE teaching are particularly focused on the encouragement of a greater sense of responsibility, autonomy and independence in learners and helping them to improve their self-confidence when working collaboratively. An improved development of these attributes can be attained if teachers adopt a more learner-centered teaching approach, making content more meaningful, guiding learners towards the developing of their ability to think critically, solve problems and transfer their learning to a variety of contexts. In such learning environments, learners become more interested and more engaged. From such perspectives, learning in physical education is thus supported by more complex theories of learning, for example constructivism and situational learning, of which both methods emphasize the interactions of the learner within the environment in the construction of knowledge (Oslin & Mitchell; Kirk & MacPhail, as cited in Thorburn & Gray, 2010). The HMIE (Thorburn & Gray, 2010, p. 35) states that teachers’ success in improving pupil learning is largely dependent upon the environment for learning, the teaching, learning strategies adopted and ways of organizing the learning. Light (as cited in Thorburn & Gray, 2010, p. 42) suggests that teachers should develop their understanding of learning in PE with the perceiving of learning not as linear, but as an much more emergent, dynamic, interactive and complex process. Such an approach would encourage them to adopt different teaching approaches that offer learners a wider and more diverse range of experiences that hold more potential for learning.

Regarding institutional barriers, Morgan and Hansen (2007, p. 106) indicate that inadequate resources can have a detrimental effect on the motivation of PE teachers and thus add an additional substantial barrier to the delivering of meaningful learning experiences. Education authorities and school communities should therefore develop strategies for improving the quality and quantity of resources, facilities and equipment to support the sustained presenting of meaningful learning experiences. Achterstraat (2012, p. 21) suggests that for improved best practices in school physical education, proper space, adequate sports equipment in good condition and funding for ongoing maintenance of sporting facilities and equipment is imperative to sustained delivering of PE programs. Noteworthy, according to Achterstraat (2012), the Australian Government’s Building the Education Revolution Program has provided many schools with multipurpose halls which may be used as gyms or indoor sporting centers. Some schools have also installed storerooms for sporting equipment, and many schools have installed covered outside learning areas which can also be used for physical activities.

Edginton and Chin (2014, p. 8) mentioned that the Global Forum for Physical Education was established in 2010 to address issues emerging as a result of globalization, the knowledge explosion, and changing of demographics that influence health and physical education worldwide. Such challenges will require a more personalized or individual connection between the learner and the teacher. The ability to think critically, solve problems, innovations, operation with agility and adoptability, effective communication, as well as the employing of technology effectively, will predominately craft educational environments in future. Therefore twenty-first century learning environments must include: increased capacity and efficiency to promote learning for a relatively large number of learners at the same time; improved effectiveness of promoting deeper learning approaches with linkages to real-world settings; removing of barriers for improved accessibility; initiation of a

competitive mind-set with greater choices and conveniences for learners; promoting a resource-based learning processes with emphasis on more learner-centered approaches; enabling of a personal connection between learners and teachers.

2.3.3 Professionalism for Physical Education Teachers

According to Green and Hardman (2010, p. 51), in the UNESCO Charter, Article 4 is devoted to qualified personnel as well as voluntary personnel responsible for the delivery of physical education and sport programs. All personnel who take the responsibility for PE must be capable of taking physical education and sport activities that are suited to the needs and requirements of the pupils in order to ensure that their safety is not jeopardized. Therefore the acquisition and development of the necessary relevant skills should be acquired in teacher training programs and constantly updated throughout a teacher's career through in-service (INSET) or continuing professional development (CPD) programs. Blair and Capel suggested that specialist primary teachers should be specifically trained to deliver curriculum PE as it would result in providing the best learning experience for the child which surely should be considered the most important factor in the development of the child (as cited in Kirk, 2012, p. 43).

NASPE (2007, p. 1) states that it is critical to have highly qualified physical education teachers delivering a standards-based curriculum that will assist children in adopting and maintaining healthy lifestyles. Highly qualified physical education teachers should possess the skills and knowledge to facilitate improved teaching practices, strengthen the quality of physical education instruction, and empower students to achieve and maintain healthy, active lifestyles. NASPE also acknowledges that highly qualified physical education teachers should be certified to teach by virtue of having completed an accredited physical education teacher education program. Regarding the code of conduct for physical education teachers, NASPE (2011, p. 1) denotes that each physical education professional must be responsible for achieving and maintaining competency of knowledge and integrity of practice as demonstrated through fair, honest and respectful behaviours toward students, colleagues, the profession and society. An acceptable code of conduct should speaks to the core values of the profession, including nurturing students' development, collaborating with others to expand physical activity opportunities for all members of the school community, showing dedication to personal growth and to the profession, and exhibiting personal and professional integrity. Each physical education professional should therefore be expected to uphold a recommended code of conduct (NASPE, 2011, p. 3).

Lubans et al. (2012, p. 9) indicate that alternatively through interventions focusing on the provision of professional learning opportunities for teachers for the promotion of PA within existing PE lessons throughout the school day including lunch time and recess, may provide a valuable framework for sustainable practices. But, unfortunately despite these interventions undertaken, many primary school teachers still lack the confidence and skills to teach PE effectively. This tendency might be explanatory to teachers' reluctance to teach PE in favor of the traditional academic subjects such as mathematics and science (Morgan & Hansen,

2008). In general education literature, teachers have specifically indicated that professional development in PE and the teaching of fundamental movement skills (FMS) particularly, are important and need an urgent placement of high priority for the improvement of PA-related outcomes in primary schools (Morgan & Hansen, 2007; Avalos, 2011). The findings of the Lubans et al., study could be used to guide pre-service teacher education towards professional learning and the development of school policy in primary schools (Lubans et al., 2012, p. 11).

Teacher education literature also suggests that a strong knowledge of the subject matter taught is a prerequisite to be considered a competent and effective teacher (Baumert et al., 2010; Belfort & Guimares, 2002). Pedagogical content knowledge is affected by teachers' subject content knowledge and thus enters into their teaching process and influences their confidence about teaching the subject matter (Kallery & Psillos, as cited in Santiago et al., 2012). Scholars also indicated that there is a definite tendency among PE teachers with a strong subject matter to recognize problems in student learning, accommodate for individual skills differences and abilities, exhibit confidence and enthusiasm for teaching, use more learning tasks per lesson, and hold students accountable for quality performances (Hastie & Vlaisavljevic; Shempp et al., as cited in Santiago et al., 2012). Furthermore, PE teachers with strong subject matter expertise tend to include a high level of detail in planning and organizing instruction, design activities that were more likely to stimulate students' interest, motivation and participation, resulting in a decrease of incidences of off-task behavior (Mckenzie et al.; Placek & Randall, as cited in Santiago et al., 2012, p. 396).

Santiago, Disch and Morales (2012, p. 397) undertook a study to determine the content knowledge of physical activity and health-related fitness of elementary in-service physical education teachers. Various aspects were researched in the Santiago et al. study, but the most noteworthy finding for purposes of this study was that teacher content knowledge of physical activity and health-related fitness was significantly influenced by years of teaching experience. The designing of effective and ongoing professional development for physical education teachers, especially for those with more than 19 years of teaching experience, is thus accentuated by these results. In order to improve the teaching of physical activity and health-related fitness in schools, the Santiago et al. study also warranted further investigation into PA and health-related fitness content knowledge of physical educators to identify areas of weakness in Physical Education Teacher Educating (PETE) programs. It is also crucial that PETE programs develop meaningful opportunities that knowledge obtained from training programs be applied in real-life contexts such as activity courses, field-based experiences and service learning. Additionally, it is imperative that school administrators provide meaningful and relevant staff development to physical educators to improve the delivery of instruction of physical activity and health-related fitness content in schools (Santiago et al., 2012, pp. 406-408).

In recapping this section, the following considerations as emergent from the various abovementioned researchers is worth comprehending when concerned about the establishing of a quality school PE program. Education authorities, schools and teacher educators must advocate together ensuring that obstacles that inhibit primary school PE are seriously addressed. Teachers must be appropriately supported in terms of resources, skills and safe environments for the sustained teaching of PE (Morgan & Hansen, 2008, p.

515). Comprehensive approaches to improve PE effectiveness and the ultimate health and well-being of children must consider the implementation of amongst others, state-level policies that mandate appropriate physical educator-to-student ratios and allocate adequate funds for equipment and facility maintenance. Instructional practices should be enhanced by providing teachers with professional development opportunities with emphasis on proper class time-management skills (Bevans et al., 2010, p. 579). PE state laws should codify both requirements and specific minimum time allotment for primary school PE, approximated at 60 minutes per week (Perna et al., 2012, p. 1598). When communities are prepared to support PE programs in their schools, through trained and committed teaching personnel, combined with the right plan and ownership by all key stakeholders, children have the capacity to improve their overall health and eventually take ownership of their own lifestyle choices in this uncertain journey of life (Tester et al., 2014, p. 135).

CHAPTER 3: PHYSICAL EDUCATION IN THE SCHOOL CONTEXT

3.1 Perceptions on Primary School Physical Education

3.1.1 Introduction

A study with the major aim to examine the relationship between teachers' curriculum preferences in the Australian primary schools and the relative value they place on PE when compared to other key learning areas (KLA) in the primary curriculum, were undertaken by Morgan (2008, p. 46). Findings from this study indicated a range of implications for PETE and PE professional development for teachers (Morgan, 2008, p. 53). Ongoing professional development and its role were magnified as it appears that in-service teachers' perceptions of the value of PE remained stable although their attitudes regarding the teaching of PE appears to change. A possible explanation for this tendency was provided by Zeichner and Tabachnik (as cited in Morgan, 2008) as they suggested that many of the effects of teacher education on an individual's attitudes and beliefs tend to be merely temporary. In light of the so called dropout effect that occurs during the first year of employment in schools, the importance of early successful PE teaching experiences is again highlighted for the reinforcement of favorable improvement in attitude and perceptions as developed during pre-service education. In order to counteract the confirmed dropout effect, Morgan suggested that as emergent to some extent from his study, additionally, in-service courses and improved access to quality resources and facilities for classroom teachers should be provided.

Generally, teachers in Morgan's (2008, p. 53) study believed that PE is beneficial for students and that PE is an important key learning area in the primary curriculum. Nevertheless, most would prefer to teach, if given the choice, rather other key learning area subjects than PE. Most would also prefer specialist teacher involvement in the implementation of the PE programs in the primary school. The preference to teach other KLAs is justified by a range of reasons by teachers, including lack of time, training and expertise. Results from Morgan's study also indicated that PE specialists would indeed widely be accepted by most non-specialists as an asset to primary education. As a potential solution to the problems faced by primary school PE, recommendations for the full-time employment of specialist teachers should be weighed up against the reality that governments seem largely reluctant to finance such positions. But since the employment of specialist PE teachers on a part-time basis or at least an assistant in a supervisory role to classroom teachers, seems to be a more viable solution, it appears that attention therefore must focus on pre-service and in-service education for the classroom teacher responsible for the delivery of the PE programs in the Australian schools (Morgan, 2008, pp. 53-54).

3.1.2 Global State and Status of School Physical Education

According to Hardman (2008, p. 5) The Physical Education World Summit were held during November 1999 in Berlin, Germany. As a matter of historical record, during the Berlin PE Summit attention was drawn to a widespread concern regarding a perceived decline in physical education provision in schools (Hardman & Marshall, as cited in Hardman, 2008). An encouragement of action were led at international, continental, regional and national levels with an overabundance of inter-governmental and non-governmental agencies' declaration statements of commitment and resolutions. Aspects regarding PE, curriculum time allocation, inferior subject status, quality programs concerns, of which variously addressed access to delivery, financial investment, human investments, such as teachers' initial and continuous professional training and development and material investments regarding facilities and equipment as well as capacity building were broad to table. Alarmingly, Hardman indicated that since the 1999 Berlin World Summit, developments in PE across the world have been diverse, as positive initiatives were contrasted with evidence of increasing incidence levels of obesity with numbers of overweight children and young people, accompanied by rises in sedentary lifestyle-related illnesses and a high drop-out rate from sporting activities. A survey was thus undertaken as a contribution to the United Nations dedication of 2005 as the "Year of Sport and Physical Education", as well as in response to a call of inter-governmental agencies for regular monitoring of developments in Physical Education in schools. The overall purpose of this survey, also known as the 2005-2007 "reality check", was to assess the worldwide situation of PE in schools, since the Berlin Summit. The International Council of Sport Science and Physical Education (ICSPE), the Council of Europe, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Health Organization (WHO), endorsed this survey (Hardman, 2008, pp. 5-6).

Hardman (2008, p. 22) indicated that evidently after the 1999 Berlin Physical Education Summit, followed by the dedication of 2004 as the *European Year of Sport* and the 2005 *Year of Sport and Physical Education*, combined with ongoing conferences and seminars, collectively there were a demonstration of a broad-spread political will and suggestive of an international consensus that issues pertaining to PE in schools deserve serious consideration in problem resolutions. Evidence also suggested that nationally and where applicable regional governments have committed themselves through legislation in making provision for PE, but still some were either slow or restrained in translating these dedications into action through actual implementation and quality assurance of delivery. The 2005-2007 "reality check", generally revealed several areas of persisting concern such as:

Failure to strictly apply legislation on school PE provision, subject status, materials, human and financial resources

- Continuing deficiencies in curriculum time allocation
- Widespread inadequacies in facility and equipment supply, especially in economically developing countries, portraying a related issue in the facility/equipment concern as insufficient funding

- Teacher supply and quality embracing still revealed insufficient numbers and inadequate appropriately qualified PE/Sport teachers
- Quality and relevance of the PE curriculum, especially in countries where there is a unrelenting pre-disposition towards sports competition and performance-related activities such as Games, Gymnastics and Track & Field Athletics
- Some improvements related to gender and disability inclusion policy and practice could be identified, but barriers to equal provision and access opportunities for all still remained
- Declining fitness standards of young people and high youth drop-out rates from physical/sporting activity engagement, worsened in some countries by insufficient and/or inadequate school-community coordination physical activity participation pathway links

In principle, the situation especially in economically under-developed and developing countries has changed little since the 1999 Berlin PE Summit and evidently children are still being denied the opportunities that will transform the quality of their lives in still too many countries. Such denial of opportunities is totally contradictory with the policy principles of the 1978 UNESCO *Charter for Sport and Physical Education;* the 1975/2001 revised Council of Europe *Sport for All* Charter, as well as with all the well-intentioned interest-vested groups' *Declaration and Commitments Statements* (Hardman, 2008, p. 23).

3.1.3 African State and Status of School Physical Education

Regarding the general status of PE in Africa, Hardman (n.d., p. 2) indicated that a shortage of facilities and adequately trained personnel are widely being reported throughout the continent, as well as a nonessential value placement on the curriculum. In Benin, Botswana and Uganda PE is regarded, especially in primary schools, as non-educational and non-productive use of time, and often treated as mere recreation/play time. Generally, priority is rather bestowed to language and mathematics and accompanied with a measly allocation of physical education/sport resources. In Botswana and Malawi, physical education is granted an optional status and as such the subject is suffering as many girls prefer not to take the subject. This situation is even further exacerbated with a lack of amenities such as changing rooms. In South Africa, physical education as a school subject no longer exists though it still has a focus on physical and movement development, in the learning area of "Life Orientation" along with health promotion, social development, personal development and orientation to the world (Van Deventer, 2003, as cited in Hardman, n.d.). The majority of the African countries also have either none to minimal provision of PE for children with disabilities.

Amusa and Toriola (2008, p. 357) indicated that in South Africa PE as a school subject has been neglected, misunderstood as seen as of little benefit and importance and thus considered as inferior in comparison with other curriculum subjects. They undertook a study with the purpose of assessing students' perceptions, value and understanding of outcomes of PE and school sport (SS). Notable findings pertaining to the outcomes and utility values were attained. Compassion for the subject showed that PE and SS are still

perceived as a valuable subject that could help learners develop perceptual motor skills as well learning activities that could be used outside school. Suggestions offered by learners posed a challenge to curriculum development. Given the overall positive feelings of the students, Amusa and Toriola (p. 369) suggested an educational reform. The perceptions and expressions of students' values placed on PE and SS, should seriously be considered, and as consumers of education a revamp and provision of quality PE and SS should thus be undertaken. A curriculum based on students' perceptions, preferences and value orientation could eventually result in a more meaningful and dynamic PE and SS program (Fung & Ng, as cited in Amusa & Toriola, 2008).

3.1.4 Namibian Perceptions on School Physical Education

Swart's (2000, p. 68) research findings indicated that even though PE do appear on the Namibian school timetables, the periods are not used for the teaching of PE. PE was also considered as of less importance than the other school subjects. A lack of facilities and equipment was indicated by all the different school categories, involved in the Swart study. Some schools had specialists teaching PE but the majority of schools lacked qualified teachers. Despite all the stated negative factors, the majority of the learners still indicated a positive attitude towards PE and showed an affinity for the subject. Learners were motivated to participate in the PE lessons and considered PE as an important school subject. Swart suggested that the PE syllabus and curricula should be revised and adjusted to the needs of the majority of Africans in general and particularly in the Namibian context (p. 69). Swart also suggested that the government should develop a policy on PE in the Namibian schools. More facilities and equipment should be made available for the teaching of PE. Funds should be regularly availed for the upgrading and maintenance of PE and sports facilities. In-service training courses for unqualified PE teachers should be organized. Workshops and seminars about the importance of PE should be offered to teachers, school principals, parents and members of the community. The University of Namibia (UNAM) must continue producing qualified PE specialists that could take the responsibility for the teaching of the subject. Collaboratively, the Ministry of Education, NIED, UNAM, and the National Sports Council should work together to improve the status of PE in the schools and should prioritize the improvement of sport and recreational activities in schools and the community at large (Swart, 2000, p. 69).

According to a study conducted by Zealand (2001, p. 72) the future of PE in the Namibian schools lies in the hands of the teachers. Attitudes towards PE are instilled at school, either being positive or negative, and as such, what teachers do as well as how they are doing it, is considered as absolutely critical to the future of PE in Namibia. The Ministry of Education (MoE) has thus a moral duty to provide student-teachers the best instructional opportunities by availing excellent lecturers and supervisors supported through continual guidance, evaluation and assistance to attain there goals and objectives. Provision of facilities and equipment, should also be considered as of equal importance, since skills need to be taught, drilled and mastered by student- teachers. Zealand recommended that the MoE should urgently re-assess the situation in schools and should enforce the teaching of PE and enhance the status of the subject by making it a promotional subject (p. 73). Zealand also suggested that within the MoE structure, provision should be made for a

department/directorate of physical education with the responsibility of coordinating communication among all stakeholders, appointment of educational officers, curriculum development, teacher evaluation, period allocation, as well as pre- and in-service training of teachers (p. 74). Zealand suggested that in light of some issues of greater concern in the country, such as hypokinetic effects of and influence of exercise on diseases like coronary diseases, HIV/AIDS and other sexually transmitted diseases, through the proper administration and control over the subject of school physical education, all those mentioned issues, could be alleviated. The best place to start inculcating the importance of PE in relation to these issues, though still remains at the instructional institutions (Zealand, 2001, p. 76).

3.2 Characteristics of a Successful Physical Education Program

3.2.1 Curriculum Requirements

According to Sääkslahti and Liukkonen (2010, p. 6), for the construction of any quality physical education program a good place to start would be with the local national standards. Gagen and Getchell, as well as NASPE indicates that physical education in early childhood entails promoting children's physical activity and overall development through developmental appropriate practices (as cited in Zachopoulou, Liukkonen, Pickup & Tsangaridou 2010, p.4). According to Bredekamp and Copple as well as Getswicki (as cited in Zachopoulou et al., 2010), physical education in kindergarten and preschool should aims at offering children activities that support sound personality development and through which they develop intrinsic motivation towards physical activity.

With reference to curriculum considerations the following is suggested by NASPE (2007, p. 8) for inclusion in a quality physical education program: productive motor skill learning experiences; concept knowledge; regular participation; developing of health-related fitness; self-responsibility and social skills; valuing of physical activity; interdisciplinary instruction; special events. The Canadian Association for Health, Physical Education, Recreation and Dance (CAHPERD), denotes that teachers, school principals and administrators should ensure that schools have adequate resources in order to provide quality physical education programs, which includes proper equipment, facilities and support. They also affirms the importance of providing the necessary funding that is needed to acquire and maintain developmentally appropriate equipment to achieve the learning outcomes of a quality physical education program (Fischburn & Hickson, 2005 p. 2, 5). In coherence with NASPE, Morgan and Hansen (2007, p. 107), states that a quality physical education program should ensure that children develop the knowledge, understanding, skills, values and attitudes needed to lead healthy and fulfilling lifestyles.

Physical education curricula must at all times remain true to child-centered approaches to learning and teaching. These approaches should place the developmental and learning needs of children at the heart of the planning, teaching, and assessment processes. Physical education curricula must therefore be conceived

with developmental goals in mind while still maintaining a sense of flexibility allowing the teacher to change, omit or add more relevant learning opportunities (Zachopoulou et.al. 2010, p. 1). It should though be stated clearly that the main goals for most physical education curricula should remain educating through the physical and therefor entails education about and in movement (Siedentop et al. 2011). Eldar and Ayvazo, (2009) states that the main core of the curriculum should always endure educating through the physical in order to accomplish certain clinical goals such as the teaching of self-control, respect for others, and self-regulation. Lee et al. (2006, p. 456) indicate that based on data collected over 50 states in the US, including the state of Columbia, the majority of elementary teachers also taught about the following topics in physical education: the difference between moderate and vigorous physical activity; the difference between physical activity, exercise and fitness; health-related fitness, phases of exercise sessions; physical, psychological, or social benefits of physical activity; injury prevention during physical activity; the role of physical activity in the reducing risk for chronic diseases and skills-related fitness. Physical education-related activities such as movement, physical activity, play and sport will and always have constituted an integral part of the natural activity of children and human culture (Siedentop et al., 2011; Gallahue, as cited in Eldar & Ayvazo, 2009 p. 474). Through play and sport, children learn about their world and the surrounding environment, about wining and loosing, achievements and frustrations, goal-setting and decision making. They also learn to abide by rules and how to confine to organized practices individually or in cooperation with others (Eldar & Ayvazo, 2009).

In a study conducted by Bevans et al. (2010, p. 579) it was found that adequate exposure to high-intensity PE is believed to be an effective contributor to the fostering of a healthy lifestyle among children that lasts across the life span. However, many PE programs still fall short of national recommendations both in terms of class time and intensity of physical activity. The Institute of Medicine's (as cited in Bevans et al., 2010 p. 578) recommendation for moderate to vigorous physical activity per day is indicated as 60 minutes. To enhance student's opportunities for adequate physical activity, Bevan et al.'s study suggested that quality PE can be enhanced by the establishing, protecting and improving of both activity promoting resources and instructional practices. Particularly consideration for the provision of access to an adequate number of physical educators per student ratio as well as well-maintained, safe, and appropriate facilities and ample sport and exercise equipment, is advised (Bevans et al., 2010 p. 579).

Perna et al., (2010, p. 1594) also indicated that quality PE programs that meet school health guidelines and the NASPE standards for PE participation, provide standards for time allocation, curriculum and staffing. One of the characteristics of a quality PE program is a designation of 150 minute per week of PE instructional time (Le Massurier & Corbin, 2007, p. 45; Lee et al., 2007, p. 449). NASPE (2001) indicate a student/teacher ratio of 25:1 for safe PE practices. Some evidence indicated that in meeting those standards it has been associated with increased overall physical activity (Kahn et al.; Pate et al.; NASPE, as cited in Perna et al., 2010). Even though despite school health guidelines supporting recommendations for school-based physical activity and national standards specifying the amount of time for PE, there is great variations in PE practices across schools because states and schools districts vary in their degree of implementing these policies, which undoubtedly affect both the quality and quantity of PE. Advancing public health goals, when considering PE

time, both quantity and quality are important, since quantity is reflected in minutes allocated to PE and quality is indicated by the amount of physical activity that actually occurs in PE lessons (Perna et al., 2010). NASPE, (2007) as well as CAHPERD (Fischburne & Hickson, 2005), along with other leading medical and child-development specialists, recommends a minimum of 150 minutes per week of quality physical education for all elementary-age children The national Physical Activity Guidelines for Americans also recommended that children receive a minimum of 60 minutes of daily physical activity (US Department of Health and Human Services, 2008, as cited in Perna et al., 2010).

Tester et al., (2014, p. 127) conducted a study in Australia with primary school-age children to identify secular trends in data collected over three decades. Of great concern from these data, is the fact that it was found that over the past 20 years a decline in the skill level for younger children was detected (Tester et al., 2014, p. 132). An emergent trend in Australian schools over the past two decades has been to reduce the number of qualified PE staff in primary schools. Fundamental movement skills were thus not taught consistently through the Australian schools system, and as a result this important aspect of motor development was left to family activities and community programs. Current day children are less active and an alarming rise in obesity is again indicated among this cohort. Contributing to this problem is, less PE time in schools, fewer trained PE teachers, fewer children riding or walking to school, combined with the advent of the computer and an increased sedentary behavior (Tester et al., 2014, pp. 133-134). After an intervention strategy as conducted with a Singaporean primary school and Sport Challenge Australia, significant improvements in children's skill quotient scores were found within 12 months. This intervention also provided evidence that when there is ownership by the key stakeholders such as the family, the principal and well-trained PE staff, involved in students' PE development, significant improvements in the physical quotient scores occurred. This 30 year research project also provided evidence in support to the author's observations that positive health outcomes can be achieved when there is a systematic commitment by all stakeholders in a community school (Tester et al., 2014, p. 135).

Fundamental movement skills (FMS), is considered to be the foundation for an active lifestyle. Proficiency in movement skills development and the consolidation thereof, are idealistically represented by the primary school years, the so called "golden years". Loco-motor movements such as running and hopping, object control like throwing, kicking and catching as well as stability, for example balancing and twisting skills, are considered as typical FMS (Gallahue & Ozmun; Clarke & Metcalfe, as cited in Lubans et al., 2012, p. 2). Childhood therefore is considered perfectly for the development of these skills that could then subsequently be refined into context- and sport-specific skills (Stodden et al., 2008; Clarke & Metcalfe, as cited in Lubans et al., 2012). Socio-environmental factors could be the cause of low PA and poor FMS competency among children living in low-income communities, but may also be a reflection of failure in the current school-based programs and strategies (Crawford, 2009). The Crawford report though, highlighted both the role that schools play in the promotion of PA and the evident dire state of PE and school sport in the Australian schools. Morgan and colleagues conducted a formative research which indicated that the crowded school curriculum along with

inadequate teacher training programs as well as the poor quality of existing PE programs, contributed to teachers' reluctance to teach PE (Morgan & Hansen, 2008).

Regarding the teaching of physical education in the twenty-first century Thorburn and Gray (2010, p. 30) suggested a policy repositioning in relation to the aims and objectives of physical education in line with the curriculum for excellence (CfE) as aspired by the Scottish Governments' endeavors to improve the health of the nation. The outcomes for physical education should be considered alongside with physical activity and sport as they all are subsumed under the heading of health and well-being. Being considered as such, it incorporates aspects of mental, social and physical well-being, planning for choices and changes, food and health, substance misuse, relationships, sexual health and parenthood. The development of knowledge and understanding, skills capabilities and attributes necessary for mental, emotional social, social and physical well-being for now and in the future, are being considered as the main aims of health and well-being. Contributing aspects to these aims are physical education, sport and physical activity by providing learners with the concepts and skills for a lifetime of physical activity. In satisfying the public and political concern about the nations' health and well-being, consequently, a shift in the way which physical education is understood is required. It is imperative to recognize that physical education is more than just the pursuit of health-promoting behaviors and attitudes, since a key characteristic of physical education is that it can enhance pupil learning and development in the physical, cognitive and affective domains.

Chin and Edginton (2014, p. 9) suggested that school health and physical education curricula should be rethought and refocused to promote new concepts as gained and understood worldwide. Most importantly, school health and physical education curricula should be linked to community resources as such expansions of schools' resources bases are aimed to situate learning in the actual environment where individuals spend their lives. Imperatively, there is a need during children's and adolescents' school years to find ways of complementing school physical activity with opportunities in the community. In the crafting of future health and physical education curricula, technology should play an important role, since the use of technology can make learning environments more engaging, dynamic, meaningful and relevant for learners. Numerous challenges and opportunities are provided through living, working and playing in the 21st century and it might be necessary that educators from throughout the world should reach out to each other to develop and adopt new strategies, methods, procedures and programs to address new emerging needs. Health and physical education pedagogy will have to be rethought and even perhaps reinvented in many respects. Such explorations of new and different models of best practices could serve as a starting point for the rejuvenation and renewal of sustained health and physical education approaches on a worldwide basis (Chin & Edginton, 2014).

3.2.2 Assessment in Physical Education

Siedentop, Hastie and Van der Mars (2011, p. 157-158) denotes that assessment can be defined as multiple tasks and settings whereby students are given the opportunities to demonstrate their level of understanding, knowledge, skill and application of a context, allowing them continued learning and growth. Assessment provides important information about where students are in the learning process and the effectiveness of the instructional efforts. A good practice for physical educators is to assess students' learning both informally and formally. Informal assessment occurs when teachers observe students and then provide positive feedback, corrective feedback, prompts, and encouragement. Assessment becomes formal when the PE teacher develops some type of permanent product or record of students' performance. Assessment in physical education is not as easy as in the theory orientated setup in the classroom. Most outcomes in the classroom subjects are cognitive; therefore teachers can assign homework, require essays, give quizzes, and give end-of-course exams. All these tools create a series of permanent products serving as performance indicators providing students with feedback about how they are doing and also includes information about their strengths and weaknesses. Physical Education teachers can also to a certain extent give quizzes and even require some written homework. However, primarily many of the unique outcomes in physical education are lying in the psychomotor domain and therefore assessment needs to be done while students are engaged in physical activities. Much of the PE assessment is thus taking place in real time, and someone must observe the performance as it occurs and record the performance.

Buschner (1994, p. 48), indicates that guidelines regarding assessing children's progress in the learning of movement concepts and motor skills, should describe why and how to collect frequent and multidimensional data about psychomotor, cognitive and affective development. NASPE (2009, p. 20-22) suggests that teachers in the process of assessing all domains, thus cognitive, affective and physical systematically, should use a variety of assessment techniques. Assessments should also include clearly defined criteria that are articulated to students as part of instruction prior to the assessment, e.g. a rubric could be provided and explained during instruction. As part of an ongoing program of physical education, students should be physically prepared in each assessment component, so that they will be able to complete the assessment safely. Teachers must also make deliberate efforts to create testing situations that are private, nonthreatening, educational and encouraging. Physical education grades should be based on thoughtfully identified components that are aligned with course goals and national standards. All data gained on student achievements should be used to evaluate the effectiveness of PE programs on a regular basis.

Morgan and Hansen (2007, p. 105) indicate that in schools were PE teachers are not required to assess their students in physical education, PE is being considered as unsuccessful and therefor many teachers rather opt to not teach the subject at all. According to Brubaker (2011, p. 18) in order for physical education to become a more credible and a viable area in the school, grade determination needs to be aligned with set objectives, a notion of fairness and reflected on report cards to award the subject accountability and credibility. Mood, Jackson and Morrow (as cited in Brubaker, 2011, p. 19) indicate that in the 21st century the focus should

be on how to accurately determine levels of physical fitness and activity in children, youth and adults because of the important economic and health impacts on a healthy society. Schools should thus ensure that whole-school PE planning occurs, that all PE teachers teach from a sequential and syllabus-oriented program of learning experiences. Imperatively a definite PE policy should guide teachers in terms of allocated curriculum time, assessment procedures, evaluation and reporting (Morgan & Hansen, 2007). The Lee et al. study (2006, p. 450) states that were US schools followed national, state or district physical education guidelines the majority of the schools used standards or guidelines based on the National Standards for Physical Education. Such schools provided physical education teachers with a variety of materials, a physical education curriculum, and charts describing the scope and sequence of instruction for physical education, plans for how to assess or evaluate students in PE, lesson plans and learning activities in physical education. Furthermore all those schools provided their physical education teachers with clear goals, objectives and expected outcomes for physical education. In schools were student assessment in physical education were implemented, the majority of schools gave students a letter or numerical grade, some schools used a pass/fail system and few schools used alternative assessment grades or did not give grades at all. In more than half of those schools, grades accumulated for physical education, were considered the same as those from other subject areas where determining of grade point averages, honor roll status, or other academic standing indicators, were required.

3.3 The Context of the Physical Education Syllabi for Basic Education in Namibia

3.3.1 Physical Education Syllabi for Grades 1-3 and 4-7

Different syllabi, describing the intended learning and assessment for Physical Education are available in the Pre- and Lower Primary as well as Upper Primary phases (Physical Education Syllabus English Version Grades 1-3 Draft 2013, p.1; Physical Education Syllabus Grades 5-7 2007, p.1). As a subject, Physical Education forms a major part of the *physical* area of learning, but also has thematic cross curricular links to other subjects. Three main types of learning experiences in this area are indicated in both syllabi. The first type is concerned with the development of psychomotor skills, which is fundamental for daily life. The second type includes play, movement education, dance, and sports, which is thus concerned with the development of co-ordination, social skills, the aesthetic sense as well as the mastery and enjoyment of movement. The third type is concerned with the development of a positive attitude towards one's own body, and includes learning experiences that promote an understanding about the development of human sexuality, how the body functions, and how to stay healthy. The Physical Education component of the physical area of learning consists of fitness, games and sports activities.

The rationale for Physical Education in both syllabi are based on the principle that Physical Education forms an integral part of the general education process, which aims to make a meaningful contribution towards improving the quality of life of young people, enabling them to maintain a healthy

lifestyle and to function effectively in the society. The Physical Education syllabus for Grades 1-3, indicates that there is a link between a healthy body and the capacity to *achieve* academically and therefore, it is very important that learners participate in Physical Education activities on a regular basis (p. 1).

The aims of Physical Education as contained in both syllabi are as follows (pp. 1-2):

- develop attitudes and practices, and further knowledge and activities which promote physical and mental health
- promote co-operation, positive competition, sportsmanship and fair play through participation in games and sports
- develop and improve the learners' perceptual motor skills through participation in a variety of movement forms (movement development)
- widen learners' movement experience and build up a movement vocabulary through participation in a variety of movement forms (movement development)
- help maintain and develop physical fitness and efficiency (physical development)
- develop an understanding of good health through an interest in and respect for their own bodies (health development)
- provide experiences of the joy of movement and develop a positive attitude towards Physical Education
- enhance emotional stability including a positive self-image, self-control, independence, confidence, own decision making and creative ability, based on a well-grounded system of values (affective/emotional development)
- develop healthy interpersonal relationships (social development)
- develop an understanding of good normative behaviour based on a healthy value system (normative development).

Grades 1-3 can be characterised as the discovery phase in Physical Education. Therefore learners should discover movement possibilities through participation in play-like movement activities in which enjoyable, challenging, self-expressive and self-discovery situations are created. The major perspective of Physical Education is to educate the learner holistically; physically, cognitively, emotionally and socially. The main focus of Physical Education thus must be to educate the whole child (p. 2). (See Appendix 6, Table 1, for phase end competencies as expected to be attained on completion of Grade 3).

For Grades 4-7, Physical Education can be characterised as the development phase. In Grade 5 learners are physically and emotionally energetic and motivated to such an extent that they should start with the development of various movement techniques, while sports skills will be taught more systematically in Grade 7. (See Appendix 6, Table 2, for phase end competencies as expected to be attained on completion of Grade 7).

3.3.2 Learning Contents, Standards and Assessment

Grades 1-3:

According to the Physical Education Syllabus Junior Primary Phase (2015, p. 6) on entry to the Junior Primary Grade 1, all learners are expected to be able to start school with motivation to move and use their energy, and have experiences of playing games and sports. Physical Education should build on and sustain this motivation and those experiences. The first five weeks of Grade 1 should be dedicated to school readiness activities.

3.3.3 Assessment

Grades 1-3:

In order to capture the full range and levels of competence, a variety of continuous assessment situations is needed in Lower Primary to give a complete picture of the learner's progress and achievements. Continuous assessment (CA) must be clear, simple and manageable, and explicitly anchored in learner-centred principles and practice.

The competencies in the syllabus state the understandings and skills a learner must demonstrate, and which will be assessed. However, it is intended that the syllabus be learning-driven, not assessment-driven (p. 54).

Grades 4-7:

Assessment includes informal continuous assessment over a period of time during normal classroom activities. The assessment specified in this syllabus is related to the Basic Competencies of the syllabus and to Life Skills Competencies (Investigating, Interpreting, Applying Knowledge and Skills, Communicating, Valuing and Participating) and how well each learner achieves within the competencies (p. 22).

3.3.4 Summary

The major aim of this study is to determine the perceptions of Namibian primary school teachers and stakeholders in the Khomas education regional council, regarding the sustaining of a successful physical education program. A major focal point will be placed on the investigation of the causal factors contributing to the negligence of the subject, specifically in the primary schools. Evidently the subject still forms part of the curriculum for Basic Education in the Namibian schools, and is considered to form a major part of the physical area of learning. A similar trend is thus followed as indicated by Amusa and Toriola (2008) that in South Africa, despite some major school curricula changes, physical education is still perceived as a valuable subject. Namibian primary school learning experiences as covered in the subject are being indicated as entailing the

developing of psychomotor skills, co-ordination, social skills, the aesthetic sense, and a positive attitude towards the body, through participation in play, dance, sports and aspects related to healthy living (Physical Education Syllabus English Version Grades 1-3 Draft 2013, p.1; Physical Education Syllabus Grades 5-7 2007, p.1). Learning experience aspects, characterized as typical to a quality physical education program, as indicated by NASPE (2007) for example, productive motor skills, health related fitness, and social skills, are thus covered in the Namibian PE syllabi for Grades 1-7.

This study also aims to establish to what extend the decrease in physical education and thus negligence of the subject is still practised in the Khomas education regional council as indicated by the Swart (2000) study, and claimed in the local newspapers (Hango, 2012; Mutorwa, 2014). The concern is thus, that despite the Namibian notion to recognize the value of school physical education (Hembapo, 2013), and justifiably incorporate the subject in the curriculum, the reality might reflect that there is indeed a need for an apprehension as evidently also being portrayed globally. Strong indications emerged that physical education provision is declining as raised already during the 1999 Berlin World Summit, and yet still rising as an on-going concern by the so called 2005-2007 "reality check" (Hardman, 2008). Reconnaissance in this study will be granted towards the determining of participants' perceptions regarding curriculum time allocation, subject status, access to the delivery of quality programs related to financial investment, human investment, professional physical education teachers training and material investment concerning facilities and equipment as indicated by Hardman (2008).

A major focal point will also be placed on participants' perceptions about physical activity. In the Namibian PE syllabus for Grades1-3, it is mentioned that that there is a link between a healthy body and academic achievement and that participation in physical education activities, are thus very important to learners (Physical Education Syllabus, English Version, Grades 1-3, Draft 2013, p.1). Apparently provision is made for the inclusion of aspects as indicated in literature that physical education-related activities such as movement, physical activity, play and sport is forming an integral part of the natural activity of children (Eldar & Ayvazo, 2009) and should thus be included in the physical education curricula to be considered as being true to child-centred approaches to learning and teaching (Zachopoulou, 2010). The author will thus strive to investigate the perceptions of participants' related to physical activity such as recommended time, classroom physical activity, and that physical education should be considered alongside with physical activity and sport as indicated by Thorburn and Gray (2010).

Participants' perceptions related to their satisfaction with the current Namibian PE curricula will also be investigated. The author will also ponder on participant's perceptions and level of receptivity as indicated by Chin and Edginton (2014) that challenges in the 21st century compel educators worldwide to rethink physical education curricula and to refocus curricula in line with global trends. Valuable evidence based suggestions could perhaps be then forwarded to the Namibian educational administrators and policy makers after completion of this study. Aspects could also be suggested, such as the linking of PE curricula with community resources, inclusion of technology, new strategies, new methods, procedures and programs, not only adhering to new concepts as gained and understood globally, but also eventually accomplishing the

rejuvenation and renewal of sustained health and physical education approaches in the Namibian Primary school physical education curricula.

CHAPTER 4: RESEARCH TASK AND RESEARCH QUESTIONS

4.1 Scope of Research

Kirk (2010, p. 12) argued that research in the field of physical education is of great importance, but still does not matter enough and thus has bearing on researchers in the same field to work harder and make it matter more to more people. Noteworthy is Kirk's ambition that research in physical education should not only stretches beyond the research community, but ought also to include children, their parents, educational practitioners, policy makers, politicians, and indeed the general public. Kirk noted, especially in the European countries, that the field of research in physical education has experienced substantial growth over the past two decades, despite claims that school physical education has been declining and that the sub-disciplines of sport and exercise sciences are dominating the research field in universities. Kirk (pp. 20-21) also denotes that the pedagogy field in physical education is thriving and that a good portion of this growth can be placed on the contribution of European-based researchers. Kirk observed similar practices of physical education in many economically advanced counties around the world, but Gray (as cited in Kirk, 2010, p. 27) argued convincingly that globalization does not necessarily means that all societies become more and more alike in their responses to challenges such as economic recession and climate change. Therefore Kirk (p. 33) suffices by stating that the carrying out of research that can actually make a difference, requires the development of theories that could allow European researchers to connect the practice of physical education and sport pedagogy to the broader physical culture of societies and that should permits them to locate themselves in a reflexive act within the 'bigger picture'. Hopefully this particular research, will contribute to the shaping of the collective future of physical education research which according to Kirk (2010, p. 34) is an issue that lies entirely in the hands of all practitioners in the field of physical education.

Based on the tendencies indicated in the abovementioned section and previous chapter, on the status of physical education in the Namibian schools, undeniably the situation regarding the issues as indicated by Swart (2000) and Zealand (2001), has not changed much.

The approach would therefore be to determine if teachers still underestimate the value of PE by placing a higher rating of importance on other key learning areas than on PE. Or, alternatively, teachers and stakeholders do appreciate the value of PE and PA by placing a major focus on the health related benefits of physical activity and physical education, but fails to draw the connection between PA subsequently to PE, and proven academic improvement. Teachers feel inadequately equipped to teach the subject and would prefer specialists to take the responsibility of teaching the subject. Schools are still lacking proper facilities and equipment that would enable them to teach the subject adequately. Some schools do not even make provision on their timetables for PE, and those who do provide teaching time for PE, might not adhere to the required time of 60 minutes PA per day (The Institute of Medicine, as cited in Bevans et al., 2010; US Department of Health and Human Services, as cited in Perna et al., 2012; Tudor-Locke et al., as cited in Erwin, Beighle, Morgan & Noland, 2011) and 150 minutes of PE per week (NASPE, 2013).

4.2 Objectives of the study

The major aim in this study will be to investigate the causal factors contributing to the negligence of the subject physical education specifically in the primary schools in the Khomas regional council, with the assumption that findings will be appropriate to primary schools in the rest of the country. Focus will also be granted to which curriculum requirements or prerequisites do the teachers and stakeholders like, school principals, curriculum developers and policy makers, in the Khomas education region council consider as being crucial to the sustaining of a successful physical education program. The author will attempt to determine to which extend do the participating PE teachers and stakeholders in this study agree with the notion of Sallis and McKenzie (as cited in Masurier and Corbin, 2006, p. 50) regarding the following aspects of physical education: that physical education is considered as being the only subject in school where children have the opportunity to learn the motor skills and acquire knowledge for participation in a variety of physical activities; it is the only subject in which accomplishment of educational objectives is primarily attained through the means of physical activity; quality physical education programs is unique in providing children with self-management skills to eventually become independently physical active adults, and that physical education is critical to the educating of the total person and as such requires a quality program taught by physical education specialists. The author will also place a major focus on the outcome of this study regarding the extend of participants' realization that in addition to the well-known positive physical health benefits outcomes, that there indeed do exist evidence that regular participation in physical activity is linked to enhanced brain functioning and cognition, and thereby can positively influence students' overall academic achievements. Conversely it has been proven through research that replacing PE with additional classroom instruction time does not improve scores on standardized academic achievement tests (Lafleur et al., 2013, p. S123).

The author strongly assumes that participants in this study might agree with Masurier and Corbin's opinion (2006, p. 50), that even though physical education is generally supported in the Namibian Basic Educational curriculum for the good health and well-being of the Namibian child, but that this support is not always reflected when critical decisions about children's education are made. Unfortunately, physical education, similarly to other subjects such as music and art, are facing increased scrutiny and the potential of being completely eliminated when budgets are tight. The author also assumes that in the Namibian context there is a strong prevalence of similarities to findings from Lafleur et al. (2013), where research has shown that children and adolescents living in low-income communities tend to engage less in physical activity due to a lack of sufficient venues and facilities for physical activity within the communities in which those children and adolescents are living. The author will thus focus on to which extend do participants in this study realize that overall conclusions from studies reviewed indicated that the introduction of physical education into the school curriculum has no striking effect on students reported academic grade point average.

Available data also suggested that at least in primary schools, the physical activity required to optimize the healthy development of a child, indicated as an additional 60-90 minutes per day, can actually be

provided without jeopardizing the academic performance. In particular, a specific study demonstrated that if time allocated to physical education and arts were to be reduced, as preferred by some school boards, such a change would not at all enhance performance in the subjects mathematics and reading, therefor increasing the time allocated for physical education is not in the least detrimental to test scores for academic subjects (Volle et al., Jansen, Strong, as cited in Trudeau, 2009, p. 9). Sasikala, Varalakshmi, and Amuldoss (2013, p. 235) specifically mentioned that whereas a majority of research into the health and development impacts of physical activity and sports has been conducted in developed countries, there are studies supporting a similar relationship in developing countries. According to Sasikala et al. (2013) a study on sports involvement among children and young people in Namibia has indicated that learners who participated in sport and physical activity were more likely to pass the grade 10 examinations.

The author will also attempt to determine to which extend do participants realize and are appealed to the possibilities of incorporating daily classroom physical activity breaks for purposes of academic enhancement. In a study with the focus on determining the effect of classroom physical activity interventions on student academic performance outcomes, Erwin, Fedewa and Ahn (2013, p. 121) denotes that the allotting of about 20+ minutes per day of curricular-based physical activity breaks to students did not appear to detract from student performance outcomes, behaviour or physical activity levels. In actual fact, reading and mathematics scores, as determined by curriculum-based measurements, significantly improved due to the successful Erwin et al. (2013) PA intervention. PA levels also showed a trend of being increased, due to this intervention. The author would thus strive to attain the participants' extend of susceptibility towards the encouragement of incorporating physical activity breaks during lessons in the classroom setting. Ultimately the author aspirers to use results from this study and built credible compelling advocacy arguments for a changed knowledge and perception towards physical education amongst all Namibian teachers, school leaders and stakeholders. Smith and Lounsbery (2009, p. 39) indicate that accountability for producing academic achievement in order to meet the mandates of "No Child Left Behind", is today, more than ever, a major responsibility of schools. Unfortunately, educational budgetary deficits, created a need of prioritizing funding, and often have negative consequences for physical education. Thus physical educators are constantly facing challenges such as reduced staff, large class sizes, inadequate facilities and equipment. Imperatively, successful advocacy at local, state or national levels, holds the only hope for improving the quality and sustaining of physical education by the demonstration that the value of physical education not only lies in its potential to help children and adolescents achieve national health goals, but that PE undeniably has also the potential to contribute to broader educational goals like student achievement (Smith & Lounsbery, 2009).

4.3 Research Questions

The following questions will specifically guide this research:

1. What are stakeholders', teachers' and school principals' perceptions regarding ways of sustaining the teaching of physical education?

2. How are stakeholders, teachers and school principals aware about the resent emergence of physical activity as part of the daily teaching routine?
3. What are stakeholders', teachers' and school principals' perceptions regarding the characteristics of an effective physical education program?
4. How do stakeholders, teachers and school principals understand the comprehensive value of physical education and physical activity?

CHAPTER 5: METHODOLOGY

5.1 Research Design

In this study a mixed method approach is followed. According to Williams (2000) approaches to the study of physical education and other allied subjects, such as sport studies, sport sciences, human movement studies, and so forth, have changed over the past 20 years with a steady movement towards aspects of the subject rather being related to physical science and away from those elements based in social science. The choice of research approach though, depends on partly the aspects of physical education to be investigated and partly on the individual view of the researcher based on the nature of the topic of investigation. These choices often are being diverged as positivist-interpretative, quantitative-qualitative or objective-subjective. The positivists perceive the world as being parallel to the world of natural phenomena, and as such it has an objective reality, measurable and capable of analysis through surveys or experimental work (pp. 3-4). Thomas, Nelson and Silverman (2011) indicated that mixed-method research is pragmatic, and that the questions are having an influence over the method being selected, therefor a study may be primarily quantitative with a part that is qualitative. When the quantitative and qualitative components occur at the same time, the design commonly is labeled a parallel or concurrent, mixed-methods research (p. 372). Caruth (2013, p. 112) also indicated that recently mixed-method research has become a valid alternative to the use of either a quantitative or a qualitative research design. The value lies in its offering of richer insights into the phenomenon being investigated and allows the capturing of information that might be missed by utilizing only one research design. It also enhances the body of knowledge, and generates more questions of interest that might evoke future studies and thus could handle an extensive range of possible research questions because the researcher is not limited to one research design only.

For purposes of this study the author has followed the same principles as indicated above, since the author has constructed a questionnaire in such a way where provisions were made for respondents to indicate their strength of agreement or disagreement with some statements or to cite the relative frequency of some behaviors on a 5-point Likert scale, where the intervals between responses were assumed to be equal to: Strongly disagree; Disagree; Partially agree; Agree; Strongly agree (Thomas et al., 2011, p. 276). In the questionnaire a subsection to each investigative topic were provided where respondents could voice or indicate any additional comments, suggestions and/or opinions that they would like to add to the topic. According to Onwuegbuzie and Leech (2004) mixed methods research can be effectively used to enhance the interpretation of significant findings in educational evaluation research studies. Conducting mixed method analysis thus can be used for enrichment of the interpretation of significant findings in both quantitative and qualitative evaluations (pp. 786-787). Justification for the particular construction of the questionnaire for purposes of this study can therefor easily be grounded on the theory of Onwuegbuzie and Leech (p. 787) that a concurrent mixed analysis, either being primarily a quantitative or qualitative investigation, still can be used for purposes of triangulation, complementary, development and initiation. Ultimately the author aimed at the achievement of

'verstehen', through this research, as it is being considered to be the real gold standard for using mixed methods data-analytic techniques (Onwuegbuzie and Leech, 2004).

The author's approach in this study is thus predominately based on a mixed method approach through the integration of quantitative and qualitative methods in one study. Quantitative research relies primarily on the collection of quantitative or numerical data. Qualitative research relies primarily on the collection of qualitative or nonnumeric data like words or pictures. Mixed research involves the mixing of quantitative and qualitative methods and approaches. The exact mixture of methods appropriately, is depended on the nature of the research questions, the situational and practical issues involved in the specific research process. Recently there is growing evidence of compromise and a realization amongst researchers that both forms of inquiry could be used in research (Denzin and Lincoln, as cited in Hastie and Hay, 2012). According to Pitney and Parker (2009), mixed methods research has gained popularity over the past decade because of its comprehensive nature. The nature of a specific research study, including the researcher's interest, the audience, and the focus of the study, determines the dominant form of the inquiry (Creswell, as cited in Pitney and Parker, 2009). For purposes of this study a quantitative method will be used by the author through the compiling of a questionnaire, but also in this survey, provision will be made to incorporate a qualitative method, by encouraging participants to voice their own personal views on each aspect as covered in the questionnaire.

The questionnaire was pilot-tested in two pilot studies as Thomas et al. (2011, p. 278) strongly recommend for any type of research, but as being imperative for a survey. During the first trial run the author approached 4 fellow colleagues as well as the study leader to read over the questionnaire. This exercise indeed provided the author with valuable critiques as indicated by Thomas et al. about the questionnaire format, content, expressions, importance of items, and in this particular case the feasibility of rather separating the questionnaire into two questionnaires with slight wording amendments suited according to the perspectives of the two different target groups as indicated above. After revision of the questionnaire in accordance with the criticism as obtained during the first trial run, two respondents who were part of the intended population were then selected by the author for the second pilot study whereby the questionnaire were administered to the two respondents. Their responses was examined by the author to determine whether the items seemed clear and appropriate (Thomas et al., 2011, p. 279), as well as the time it took them to complete the questionnaire, which were indicated by them as more or less 10-15 minutes.

Participants were selected by making use of the purposive sampling method. The main focus group consisted out of only those teachers from randomly selected primary schools, state owned as well as private, from the Khomas Regional Council of the Directorate of Education, that were responsible for teaching physical education in the lower primary and upper primary school phases, respectively. The secondary focus group consisted out of school principals from the selected schools, curriculum developers and policy makers, in the Khomas education regional council. The setting for data collection has been information-driven and not so much theory-driven, as the author's approach was primarily based on the assumptions that most teachers and stakeholders in the Khomas education regional council education system still do not fully comprehend and appreciate the value of regular school physical education and activity.

5.2 Target Groups

School principals of participating schools and at least 2 to a maximum of 5 teachers responsible for the teaching of physical education in the Pre- and Lower Primary as well as the Upper Primary phase per school, were requested by the author to complete the questionnaire. State owned, semi state owned and private schools were approached by the author for participation in this study. Regarding the stakeholders, the author approached the lecturers responsible for the lecturing of Physical and Health Education at the Khomasdal campus of the University of Namibia, the sport officers at the Windhoek campus of the University, Educational Officers at the National Institute of Educational Development in Okahandja and the National Coordinator of the Namibian Schools Sport Union in Windhoek. Eventually a total of 18 out of a possible 70 primary schools in the Khomas education regional council consented to take part in this research study. Combined with the responses of all stakeholders the total number of respondents was 76. The following table has reference:

Table 3: Case Processing Summary

Cases:	**N**	**%**
Total	76	100.0

Regarding the general background information of the participants the following tables summarises some frequency data regarding aspects of type of school, teaching position, relevant and qualifications:

Table 4: Description of Participating Schools:

Type of School	**Frequency**	**Percent**
Private Schools	17	22
Semi Private/State Owned	4	5
Stakeholders	5	7
State Owned	50	66
Total	76	100

Table 5: Reflection of Participating Respondents Professional Status

Current Position	**Frequency**	**Percent**
Assistant Teacher	10	13
Head of Department	3	4
Physical Developer	1	1
Principal	9	12
Senior Educational Officer	3	4
Subject Head	1	1
Teacher (PE and other subjects)	44	58
Teacher (PE only)	2	3
Trainee Teacher	1	1
No indication	2	3
Total	76	100

Table 6: Summary of Professional and Academic Qualifications

Nature of Qualification	Frequency	Percent
A first degree with reference to sport science, human movement studies and physical education	12	16
A honours degree with reference to sport science	2	3
A diploma with reference to human movement education, sport development and sport education	31	41
Unrelated qualifications with no reference to sport science, human movement studies or physical education	24	32
No indication of any qualifications	7	8
Total	76	100

5.3 Data Collection Methods

Two questionnaires (appendices 5 and 6) as constructed by the author entails one for the school principals and the physical education teachers responsible for teaching PE in the Lower and Upper Primary phases, and one for all the stakeholders such as curriculum developers and policymakers at the Directorate of Education in the Khomasdal Regional Council, as well as other experts in the field of PE teacher training and sport. Both questionnaires were though designed with similar parts. The first part requested general background information about the participants regarding their current position, respective grade(s) responsible for teaching PE, in the case of the teachers, years of experience, professional and academic qualifications and gender. The following parts 2-8, contained various statements where the participants were requested to indicate the strength of agreement or disagreement on the 5-point scale, as indicated above.

The statements were arranged under the following topics: instructional strategies; benefits of physical education; physical education versus physical activity; learning environment; curriculum; assessment and professional development. Statements as constructed under the topics related to instructional strategies, learning environment, and professionalism were carefully selected by the author to investigate participants' perceptions regarding ways of sustaining the teaching of PE. Statements of the topic related to physical education versus physical activity were selected to investigate to what extend are participants aware of the recent emergence of physical activity as part of the daily teaching routine. Statements associated with the topics about the curriculum and assessment was aimed at the investigation of participants' perceptions regarding an effective physical education program. Statements belonging to the topic about the benefits of physical education were aimed at the investigation of to what extend participants understand the comprehensive value of physical education and physical activity.

Each topic also contained a subsection for the textual reflections of open ended responses regarding personal opinions, suggestions, or additional comments. Statements were designed for perusing an understanding of participants' perceptions, beliefs, values, feelings and attitudes they portrayed towards each of

the relevant topics. According to Rikard and Banville (2006, p. 385) attitudes are generated from beliefs that persons have about people and things, shaping their behaviors in innumerable ways and determining their involvement in activities, the goals that they set as well as those that they decide to abandon. Statements were thus designed as such that responses could easily be measured, compared, and used to seek or find relationships or causal links between different responses as provided by various respondents.

All questionnaires were hand delivered by the author to consented participants. Due dates were indicated and constant follow up actions were undertaken by the author either via telephone conversations or physical visits to the relevant parties regarding the collection of completed questionnaires.

5.4 Data Collection Process

Data collection of completed questionnaires was organized into two separate phases. Some schools as approached by the author indicated their preference to rather participate in this study preferably during the beginning of the academic year and rather not during the academic year-end. The first collection process was thus completed towards the end of the Namibian academic school year with the final date of 5 December 2014. Only 7 out of a total of 18 potential consenting schools, managed to have their completed questionnaires ready for collection before/on the due date. Some consented schools, although they indicated their accordance with the due date of 5 December 2014, just could not manage. Since the author only manage to collect less than half of the questionnaires from the participating schools, it was, apart from the initial agreement with some schools, necessitated that the second phase of data collection thus had to continue in the beginning of the 2015 Namibian school year, allowing the author to collect a viable amount of completed participants' questionnaires. The final date was then indicated by the author as 5 May 2015.

5.5 Data Analysis

Questionnaire data were analyzed by using three computerized programs. Quantitative data were initially organized by the author with Microsoft excel to record all information and responses to statements as required or posed to respondents. A statistician from the Statistics Department at the Windhoek campus of the University of Namibia assisted the author with the data analysis of all the quantitative data by using SPSS version 22. Based on the nature of the questionnaire a descriptive statistical analysis and Spearman's correlation was carried out to analyse the data as emergent from the questionnaires. Frequencies and percentage was used to describe the data and variation. The Spearman rank-order correlation coefficient is normally suggested when using a questionnaire as it is a statistical nonparametric measure of the strength and direction of association that exists between two or more variables measured on at least an ordinal scale (Vincent & Weir, 2012, p. 277).

Ordinal variables in the questionnaire developed by the author for purposes of this study were based on a 5-point scale ranging from "strongly disagree" through to "strongly agree".

Gratton and Jones (2010, p. 229) indicate that the Spearman's rank-order correlation is considered to be the non-parametric equivalent of the Pearson's correlation and is normally used when data is ordinal or ranked. The Spearman's rank-order correlation was then initially performed within all the statements of each topic in the questionnaire by the author. This action was aimed at to determine the emergence of any significant positive or negative correlations. Thereafter certain topics as specifically related to the research questions were grouped together and the Spearman's rank-order correlation was then performed across the selected topics. Significance for quantitative results is set at $p < 0.05$. Spearman's correlation coefficient is denoted as r_s and is constrained by design as $-1 \leq r_s \geq 1$. The strength of correlation is then described by using the following guide for the absolute value of r_s: .00-.19, *very weak*; .20-.39, *weak*; .40-.59 *moderate*; .60-.79, *strong*; .80-1.0, *very strong*.

The analysis of the qualitative data collected, was based on the content analysis method as well as the discourse analysis method. Content analysis as a qualitative as well as quantitative approach is often used in nursing and education research (Graneheim & Lundman, 2004). Powers and Knapp state (as cited in Vaismoradi, Turunen, & Bondas, 2013), that content analysis is considered as a general term that includes a number of different strategies to analyze text. It comprises a systematic coding and categorizing approach for exploring textual information unassumingly to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication (Mayring, Pope et al., Gbrich, as cited in Vaismoradi et al., 2013).

Busch et al., (as cited in Graneheim & Lundman, 2004) states that to conduct content analysis on any form of text, the text is coded, or broken down, into manageable categories on a variety of levels. The concepts associated with content analysis are, manifest and latent content, unit of analysis, meaning unit, condensing, abstracting, content area, category and theme. Manifest content is based on the process of analyzing what the text says; it deals with the content aspect and describes the visible, obvious components. Latent content, in contrast, is based on analyzing what the text talks about and deals with the relationship aspects and involves the underlying meaning of the text (Downe-Wamboldt, Kondracki et al., as cited in Graneheim and Lundman 2004).

The author's approach was thus to seek meaning in the data as it is gathered. The qualitative data in this research originated not from spoken language but from written language based on the opinions, views and beliefs of participants as some of them reflected their open ended responses in the relevant spaces provided for in the questionnaire. Data similar in meaning was clustered together into preliminary categories by making use of a relevant coding system. The author used ATLAS.ti 7, the latest version (2015) as a computer-assisted tool for engagement in qualitative data analysis. ATLAS.ti is one of the various software products available, which fall under the umbrella genre of Computer-Aided Qualitative Data Analysis Software (Bonnycastle, 2015, p. 84). All responses as reflected per some respondents (N40) were recorded by the author in a word document. Through the process of coding, memoing and linking (Rambaree, 2014) the author analyzed the data

by the identifying of meaning units, condensed meaning units and codes families. The author followed the proposed method of Friese (as cited in Rambaree, 2014) based on the three principles of Noticing, Collecting and Thinking, and identified the following code families: sustaining of the teaching of physical education; awareness of physical activity; characteristics of an effective physical education program; value of physical education and physical activity.

A mixed method theory approach as one of the recognized qualitative research methods, combined with the resultant quantitative findings from the questionnaire, was then used by the author to integrate the findings of both the qualitative and quantitative analyses. The author thus followed a *'within-stage mixed-model design'* as suggested by Johnson and Ongwuegbuzie (2004, p. 20) since the author used the qualitative data analysis findings as gained from the open ended response section to compare and integrate it with the quantitative data findings as obtained from a summated rating scale as emergent from the questionnaires. The author compared the data from the qualitative and quantitative sources, and then integrated both data sets in a coherent whole as suggested by Johnson and Onwuegbuzie (2004, p. 22). The author's approach was thus starting from the qualitative phase with a small sample (N40) and then compared and integrated it with the quantitative phase with a large sample (N76) as indicated by Hylok (2011).

5.6 Validity and Ethical Issues

According to Creswell (as cited in Caruth, 2013, p. 115) ethical considerations pertaining to mixed-method research contains aspects of qualitative as well as quantitative design methods. Quantitative studies require researchers to obtain permission, protect anonymity, avoid disruption of sites, and accurately communicate the purpose of the study. Qualitative studies on the other hand, require researchers to also communicate the purpose of the study accurately, avoid deceiving practises, respect the population involved in the study, respond to power concerns and ensure confidentiality. The author has thus obtained a letter of approval for the conduction of empirical data collection from the study leader, followed it up with the construction of a letter for the requesting of research authority initially from the Director of Education of the Khomas regional council, and after permission was granted, only then principals of primary schools was approached by the author seeking their consent to take part in this research study (Appendices 1-4).

Hammersley and Traianou (2012) indicate that among others, researchers should also respect participant autonomy in the sense that people are allowed to decide for themselves about whether or not to participate. The author has therefor used an address list of all primary schools in the Khomas education regional council, started from the first cluster on the list, working through to the last cluster and contacted the principals initially via telephone requesting their permission for participation. The author has thus also followed the principle of treating people with equity in the sense that no school was unjustly favoured or discriminated against (Hammersley & Traianou, 2012). With those who consented to take part, appointments were made for the delivering of all relevant documents. Some principals immediately indicated their approval for participation, some denied approval and some expressed a preference based on difficulties pertaining peculiar workload

requirements, to rather not be involved during the end of the Namibia academic 2014 year, but preferably in the beginning of the new 2015 academic year. The author was thus necessitated as indicated previously, to separate the data collection process into two phases.

The fundamental principle of mixed research should often involve the combining of quantitative and qualitative methods approaches and concepts that have complementary strengths and non-overlapping weaknesses (Brewer & Hunter; Johnson & Turner, as cited in Onwuegbuzie & Johnson, 2006, p. 51). This principle though should be broadly viewed, not limited to triangulation or corroboration, since complementary strengths are meant to be inclusive of all strengths of qualitative and quantitative research (Onwuegbuzie & Johnson, 2006, pp. 51-52). Onwuegbuzie and Johnson (2006, p. 60) also recommend that validity in mixed research should rather be termed '*legitimation'* in order that a bilingual categorisation could be used by both quantitative and qualitative researchers. Therefor mixed methods researchers should keep in mind that the legitimation process is represented by analytical, social, aesthetic, emic, etic, political and ethical processes.

Gliem and Gliem (as cited in Hylok, 2011) indicated though that regarding reliability in the quantitative part of mixed methods research, the calculation and reporting on Chronbach's alpha coefficient for internal consistency reliability, is still important on any Likert-type scale as in this study was designed by the author. Cronbach's reliability coefficient normally ranges between 0 and 1, therefor the closer the Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale (Gliem & Gliem, 2003, p. 87). According to George and Mallery (as cited in Gliem & Gliem, 2003) the following rule of thumb is indicated: "≥.9 – Excellent, ≥.8 – Good, ≥.7 – Acceptable, ≥ .6 – Questionable, ≥.5 – Poor, and≤.5 – Unacceptable". Notably an alpha score of 0.8 is considered to be probably reckoned as a reasonable goal. Tavakol and Dennick (2011, p. 54) state that the alpha score is an important concept in the evaluation of questionnaires and assessments and that it is required that researchers and assessors should estimate this quantity to add validity and accuracy to the interpretation of their data. The author has thus with the assistance of the statistician applied the Cronbach' alpha reliability test and the results is seen as good (.744) and reflected in the following table (Table 7):

Table 7: Cronbach's Reliability Statistics

Cronbach's Alpha	N of Items
.774	72

Evidently with the alpha score indicated as 0.8 (rounded off), the questionnaire could thus be considered, confidently, as having attained the set goal, reasonably (Gliem & Gliem, 2003). Pitney and Parker (2009, p. 62) state that reliability refers to the consistency of measures and quantitative studies should use some kind of measurement instrument to provide evidence of consistent results as the author in the case of this study has done. Qualitative research does not rely on measurements and researchers tend to rather use the term 'dependability' (Merriam, as cited in Pitney & Parker, 2009). Dependability refers to the ability to learn and

understand what was really occurring and has bearing on how believable the results are (Pitney & Parker, 2009, p. 63). In a mixed research Hylok (2011) suggested that reliability should be established through the checking of consistency between the findings of the open ended survey responses and the results from the questionnaire as obtained from the respondents. In the following chapter (Chapter 6: Results and Discussion) for purposes of validation of the findings the author has congregated the qualitative and quantitative data with the literature and reported only significant findings either fully supportive or discrepant and countered to the themes as discussed in the literature.

CHAPTER 6: RESULTS AND DISCUSSION

6.1 Introduction

This chapter is organized according to the four primary research questions as posed in Chapter 4. Results is presented concurrently, starting with the qualitative results as attained from the smaller sample of respondents (N40), since not each and every one of the participants opted to share any opinions in the open ended section as provided in the questionnaire. Significant qualitative results are summarized for each research question. Significance is determined after clustering of quotes whereby quotes with similar meanings were united and separated from quotes with different meanings (Bibble et al., as cited in Gratton & Jones, 2010, p. 243). A frequency count is then placed after each category, since it is indicated by Krane et al., (as cited in Gratton & Jones, 2010) that a number value is considered as a tantamount, representing the significance of importance from the participants' perspective (Appendix 7, Table 8). Thereafter quantitative data analysis as gained from the larger sample of participants (N76) is presented. Even though a 5-point Likert scale for responses was used in the questionnaire, after consultation with the statistician, for purposes of handling the myriad of data comfortably, the author has thought it best to rather group all responses into two categories based on those who primarily disagree and those who agree with statements. Questionnaire topics (2-8) as displayed in the questionnaires are also categorized according to the research questions. Regarding the quantitative results, only significance as emergent according to each research question is presented in the text and statistical tables are displayed in Appendix 7, Tables (8-22).

6.2 What are stakeholders', teachers' and school principals' perceptions regarding ways of sustaining the teaching of physical education?

Sustaining of the teaching of Physical Education (Appendix 7, Table 8) has reference to the first research question and contains various qualitative categories based on citations about issues such as community involvement, amongst others. Recommendations include that the community should be involved especially regarding financial support for maintaining of facilities. Indications that Private Schools are following a different system than state owned schools were also grouped together, for example:

> "Our school is running a different children development program and Phys. Ed. Program" (Teacher, 35).

Notifications about the lack of sustained support from the ministry consist out of specific relations about lack of proper facilities, lack of resources and properly trained teachers:

> "There are no school facilities at the school" (Assistant teacher, 74).

> "Even though a well-planned developmental appropriate PE program is available, it is not followed by the teachers because some teachers are not trained for PE. There are also not enough resources" (Teacher, 21).

Suggestions of a positive nature are represented by categories based on recommendations such as that participants indicated a need for more information about PE and PA, that more parent involvement should be encouraged, that services as provided by professional bodies should also be involved and that the PE syllabus should be revised. Areas of concern consisted out of indications about the fact that PE is indeed neglected in schools. In order of importance respondents indicated a lack of proper PE facilities and resources as a major concern.

> "Our school is in dire need of PE facilities such as swimming pools, indoor PE hall for PE activities such as volleyball, basketball, and donor funding to upgrade our school soccer field to a green grass field" (Teacher, 33).

The following quantitative topics from the questionnaire have reference to question 1: topic 2: Instructional strategies; topic 5: Learning Environment; topic 8: Professionalism. Based on the quantitative frequency analysis of questionnaire results regarding the lack of facilities and resources 63% of participants indicated that a dedicated adequate space for the teaching of all indoor PE activities were not available. Lack of facilities for the teaching of swimming activities was indicated by 82% participants. It was also indicated by 55% participants respectively, that neither changing rooms with close by drinking fountains, nor enough equipment for all sport activities as included in the curriculum, were available. The availability of outdoor facilities such as sport fields, pitches, courts or paved areas were though indicated by 65% (Table 9).

Table 9: Quantitative frequency analysis regarding perceptions of ways for sustaining the teaching of physical education; lack of proper PE facilities and resources

No	Statement	Disagree	Agree
2d	The school has adequate resources to provide a quality PE program (sample schemes of work/lesson plans, manuals, DVD's, etc.)	40.8%	59.2%
5a	A dedicated, adequate space (PE hall, multifunctional room, etc.) is available for the teaching of all indoor PE movement activities where learners can move freely and safely	62.7%	37.3%
5b	Outdoor facilities such as a sport field, pitches, courts, paved areas, etc. are available for the teaching of all outdoor PE activities	34.7%	65.3%
5c	Changing rooms and drinking fountains are available closely to instructional areas	54.7%	45.3%
5e	Enough small and large equipment for all sport activities included in the curriculum (gymnastics, dance, athletics and all team sports) are available	54.7%	45.3%
5f	A dedicated secure, spacious, easily accessible storage room for equipment is available	45.3%	54.7%
5h	Facilities for the teaching of swimming activities is available	81.7%	18.3%
5l	Maintenance of school sport facilities is too costly and should rather be allocated to the development of academic materials and IT equipment	45.9%	54.1%

A Spearman's nonparametric rank-order correlation (rho) were conducted to determine if there was any relationship between the different aspects as indicated of relevance to the lack of proper facilities and resources. A two-tailed test of significance indicated that there were significant positive relationships between a lack of adequate space for the teaching of indoor PE activities with a lack of changing rooms and drinking fountains with a moderate correlation $r_S(75) = .592$, $p < .001$, also with a lack of enough equipment for all sport activities as included in the curriculum, with strong a correlation $r_S(75) = .686$, $p < .001$, and with a lack of the availability of swimming facilities with a moderate correlation $r_S(75) = .447$, $p < .001$. Adequate resources such as sample schemes of work, lesson plans, manuals and DVD's were indicated by 59%, and 65% of the schools are having outdoor facilities for the teaching of PE available, also 55% indicated access to a dedicated secure, storage room for equipment. The Spearman rho and the two-tailed test of significance revealed that there were significant positive relations between schools who are having adequate resources with strong correlation with the availability of outdoor facilities for PE $r_S(75) = .693$, $p < .001$, and a moderate correlation with a dedicated storing room for available equipment $r_S(75) = .507$, $p < .001$. Despite a predominantly indication of a lack of facilities by participants, 54% participants indicated that maintenance of school sport facilities are too costly and funds should rather be allocated to the development of academic materials and IT equipment. A similar two-tailed test of significance indicated though that the predominately positive vote amongst participants of sacrificing the maintaining of sport facilities in favour of rather allocating funds towards the development of academic material and IT equipment portrayed unrelated relationships with correlations ranging from very weak to weak with the lack of indoor PE facilities, $r_S(74) = .127$, $p = .280$, and lack of swimming facilities $r_S(70) = .231$, $p = .054$, (Appendix 7, Table 10).

Regarding the lack of facilities and resources the primary schools in the Khomas regional education council experience similar aspects of concern as portrayed in the literature. NASPE (2007) indicated inter alia that indoor as well as outdoor facilities with ample PE equipment should be made available to schools. Zachopoulou (2010) mentioned that governments and communities should guarantee appropriate and safe playgrounds for children not only in schools, but in neighbourhoods as well. Morgan and Hansen (2007) pointed out that inadequate resources are having a demotivation effect on PE teachers and thus hamper the delivering of meaningful learning experiences. Achterstraat (2012) is of the opinion that it is crucial for the sustaining and delivering of quality PE programs that proper space, adequate sports equipment and funding for the maintenance of sport facilities and equipment is provided. It is thus with great concern that the author has to mention that other than indicated by research, primary school teachers in this study portrayed a majority affirmation that maintaining of sport facilities should be sacrificed in favour of the development of academic materials and IT equipment. A tendency was reported (Erwin et al., 2011) that for purposes of saving funds, PE and recess programs were reduced in the US in order to make more room for academic programs during the school day. Ward et al. (2007) denoted that sedentary pursuits through the advancement of technology and

innovation is favoured by current life and as such modern youth is being denied valuable opportunities to enjoy physical stimulation and social-emotional development through the lack of engagement in active pursuits.

An indication that teachers experience a lack of support from the Ministry of Education and that that schools need more support from the ministry was also reflected.

> "The teachers receive no relevant information or support from regional Education Directorate. No PE advisor with the subject knowledge" (Stakeholder, 76).
>
> "The Ministry does not provide concise instructions to PE teachers or even materials. Schools cater for themselves. Support from Ministry would be great" (Teacher, 7).

The quantitative frequency analysis regarding the lack of support from the MoE indicate the following: 64% of the participants experienced a lack of proper funding per pupil ratio for the purchasing of all needed PE equipment as well as facilities and the maintenance thereof and 94% were in accordance that the single most important factor for successful sustenance of PE and PA programs, is indeed sufficient support from educational instructors and national educational board members (Table 11).

Table 11: Quantitative frequency analysis regarding perceptions of ways for sustaining the teaching of physical education; lack of support from the Ministry of Education

No	Statement	Disagree	Agree
5k	Proper funding per pupil ratio, is available for the purchasing and maintenance of all needed equipment and facilities	64.0%	36.0%
5l	Maintenance of school sport facilities is too costly and should rather be allocated to the development of academic materials and IT equipment	45.9%	54.1%
8i	The single most important factor for successful and sustainable PE and PA programs, is sufficient support from administrators, educational instructors and national educational board members	5.6%	94.4%

The author then conducted a series of Spearman rank-order correlations in order to find out if there were any relation between the lack of proper funding for the purchasing and maintenance of all needed PE equipment and facilities and the preference portrayed by participants to rather allocate funds towards the development of academic materials and IT equipment, as well as their conviction that the single most important factor for sustaining PE programs is sufficient support form educational instructors and national education board members. Results of a two-tailed test of significance indicated that lack of funds was having a unrelated relationship to proper support with a very weak correlation, $r_S(71) = .041$, $p = .733$, as well as the preference to reallocate funds, $r_S(74) = .153$, $p = .192$, (Appendix 7, Table 12).

Sollerhed (2006) reported and cite that many studies indicated that over the recent decades there is a marked decline in physical fitness, endurance and physical activity amongst the childhood youth. Even developed countries reported an increase in obesity accompanied with children becoming more physical inactive as they are spending mostly their free time with sedentary pastime activities. Carlson et al. (2008) mentioned that there is a tendency of concern that maintaining or increasing time in PE classes might have a

negative effect on academic achievement outcomes. Carlson et al. (2008) however came to the conclusion that schools at all times should strive to meet national health objectives. Schools should thus promote PE for its many benefits as no legitimacy for the fear that PE programs should rather be reduced or delimited based on the possibility that increased PE could negatively influence academic achievements do exist. According to literature, (Erwin, Beighle, Morgan and Noland, 2011; Kholl III & Cook, 2013; Achterstraat, 2007; Morgan & Hansen, 2008) policy makers have put efforts into place to develop PE in several countries and worldwide, as it has been seen as one of the core development areas in education.

A lack of properly trained teachers in the field for the teaching of Physical Education was also expressed by participants.

"Need well-trained teachers. Just specifically to teach Physical Education" (Principal, 10).

"PE is not given by specialized teachers and often neglected" (Principal, 46).

Quantitative frequency analysis regarding the lack of properly trained PE teachers revealed an absolute positive accordance amongst the majority of the participants as 95% indicated that PE teachers must be professionally qualified and should possess recognized qualifications, 96% agreed that PE teachers must be physical activity experts and 67% indicated that schools could incorporate specialist activities offered by external coaches in the PE school program (Table 13).

Table 13: Quantitative frequency analysis regarding perceptions of ways for sustaining the teaching of physical education; lack of properly trained PE teachers

No	Statement	Disagree	Agree
8a	PE teachers must be professionally qualified and should possess recognized qualifications in Physical/Human Movement/Sport Education or Science	5.3%	94.7%
8b	PE teachers must be physical activity experts, gained through experience and personal interest	4.0%	96.0%
8g	Specialist activities offered by external coaches or experts are incorporated in the PE program	32.9%	67.1%

The summary of professional and academic qualifications of all participants (Chapter 4, Table 5) indicate that a total of 60% of the participants are in possession of either a firsts degree, a honours degree or a diploma related to sport science, physical education, human movement studies/education or sport development/education. The Spearman's rank-order correlation conducted to determine the relation between the perceptions that PE teachers must have relevant qualifications and that they must be physical activity experts indicated on the two-tailed test of significance, a definite significant positive relation with a moderate correlation, $r_S(75) = .562$, $p < .001$, (Appendix 7, Table 14).

Green and Hardman (2010) indicate that all personnel responsible for the teaching of PE must be capable of taking PE and sport activities and must acquire the necessary skills through training programs that are constantly updated. NASPE (2007) specifies that it is critical to have highly qualified PE teachers, capable of delivering standard-based curricula, possess skills and knowledge to strengthen the quality of PE instruction and empower students to achieve and maintain healthy, active lifestyles. Santiago et al. (2012) proclaims that

PE teachers with strong subject matter are indeed able to deliver quality PE programs. Morgan (2008) recommended that one of the best's practises to ensure sustaining of PE programs, is to employ full-time specialist for teaching primary school PE, but yet governments still seem largely reluctant to finance such positions. Morgan also suggested that in cases were the classroom teacher is responsible for the delivering of PE programs focus must then be placed on pre-service and in-service education for them. Similarly Hardman (2008) indicate that the 2005-2007 "reality check", revealed that teacher supply and quality encompassing still portrayed insufficient numbers and inadequate appropriately qualified PE and/or sport teachers, as one of the persisting areas of concern.

A following category of concern that needs to be mentioned is the indication by participants that Physical Education is indeed neglected in the primary schools of the Khomas education regional council to such an extend where the subject is not offered at all or that time allocated for physical education is used for other academic subjects.

> "Learners in Grade 1 are a bit slow in completing Mathematical writing tasks in class, as a result of this, time allocated for PE is spent on these subjects" (Teacher, 21). "Time for PE is not sufficient and was cut from the curriculum. This discouraged teachers and they are not serious with the subject any more" (Head of Department, 23).
>
> "Basically no PE is happening at my school!!"(Teacher, 43).

Based on results from the quantitative frequency analysis 54% participants indicate that a well-planned developmental appropriate PE program is followed by teachers responsible for the teaching of PE, and 59% indicate that PE has indeed that same status as the other academic subjects. Unfortunately 55% indicate that PE teachers do not receive student health information and that they do not have a clear plan for handling emergencies. Learners are not wearing proper required sportswear during PE classes as indicated by 58%, PE class sizes do not range around the ratio of 25:1 to ensure safe, effective instruction were indicated by 51% of the participants. Lack of programs designed and implemented to support and complements each other between school and community facilities, in serving learners' educational needs, is indicated by 55%. Lack of ample support for the sustaining of efficient PE programs, from the community parents/caretakers and donors are indicated by 58% of participants (Table 15).

Table 15: Quantitative frequency analysis regarding perceptions of ways for sustaining the teaching of physical education; PE is neglected in the primary schools of the Khomas education regional council.

No	Statement	Disagree	Agree
2b	A well-planned developmental appropriate PE program is followed by all teachers in this school, responsible for teaching PE	46.1%	53.9%
2e	PE has the same value and status as the other academic subjects	40.8%	59.2%
2f	PE teachers receive student health information and have a clear plan for handling emergencies	54.7%	45.3%
5d	All learners are wearing the required PE sportswear during PE classes	58.1%	41.9%
5g	The PE class sizes ranges around a ratio of 25:1 to ensure safe, effective instruction	51.4%	48.6%

5i	School and community facilities (e.g. sport centres, swimming pools, sport fields, sport courts, etc.) and programs are designed and implemented to support and complement one another in serving learners' educational needs	54.7	45.3
5j	This school is receiving ample support for the sustaining of efficient PE and sport programs, from the community parents/caretakers, and donators	57.7	42.3

The series of Spearman's rho as conducted to determine the relationship between the availability of an appropriate PE program and the other aspects of relevance to the negligence of PE in the Khomas primary schools indicated that there were significant relationships, based on results of the two-tailed test of significance with correlations school and community with a strong correlation, $r_s(74) = .701 = p < .001$, as well as with lack of support from the community, parents/caretakers and donors with a moderate correlation, $r_s(70) = .543$, $p < .001$, (Appendix 7, Table 16).

The Swart (2000) study clearly indicated that based on research findings although PE do appear on school timetables, the periods are not used for the teaching of PE. Based on comments as emergent from the qualitative part of this study, it also indicate that similar practises are still persistent in 2015 as one respondent mentioned that time allocated to PE is rather used for other subjects like mathematics. One respondent even indicate that PE was cut from the curriculum and this practise was confirmed by another respondent's comment that no PE is taking place at the respondent's school. Swart proclaimed that to convey the value of PE, workshops should be conducted with teachers, school principals, parents and community members, with a focus on the importance of school PE. Tester et al. (2014) proclaimed that to ensure positive health outcomes through PE can be attained when all stakeholders in a community are systematically committed to this achievement. Chin and Edginton (2014) also suggested that community resources should be linked to school health and PE curricula as expansions of school resources. Bevans et al. (2010) suggested that quality PE can be enhanced if adequate numbers of physical educators per student ratio is provided.

6.3 How are stakeholders, teachers and school principals aware about the resent emergence of physical activity as part of the daily teaching routine?

Awareness of Physical Activity (Appendix 7, Table 8), have reference to the second research question and contains participants' testimonies that they need more information about PE and PA.

> "I would please like to gain more information on PA programs for use in the daily classroom sessions" (Teacher, 28).
>
> "Is PA a new development? Do teachers know about it?" (Teacher, 7).

The majority of participants portrayed a positive attitude towards the inclusion of physical activities during classroom sessions, followed by an indication of an eagerness to gain more information about physical education in general and particularly about physical activity.

"Schools need more information regarding PE and PA programs for better development to teacher and principal" (Teacher, 24).

"According to me, I would like to see programs that integrate physical activity sessions into the existing educational standards that are feasible for teachers be developed in addition to current PE curriculum hence it promotes the refinement and mastery of movement skills of learners and guides learners to lead lifelong physical active and healthy lifestyles" (Teacher, 33).

Topic 4: Physical Education (PE) vs. Physical Activity (PA) has thus reference. Results from the quantitative frequency analysis revealed a completely positive dominant line of evidence regarding the fact that teachers in the Khomas primary schools portrayed a positive attitude towards the inclusion of PA as part of the daily teaching routine. An agreement 96% participants, that learners' attitude towards PE and PA are profoundly influenced by teachers' and school principals' perceptions, about the value of PA and PE is portrayed. The awareness that the inclusion of brief PA sessions in classroom settings positively affects cognitive skills, academic behaviours and academic achievement were indicated by 86%, and 68% agreed that short PA breaks of 5-20 minutes, requires little or no teacher preparation, nor any special equipment or resources. The realization that short exercise breaks like walking for 5 minutes or performing of simple exercises for 10 minutes, could be introduced with great success prior to the teaching of subjects requiring intense learner concentration, were concurred by 92%. Accordance that structured PA in the academic setting in addition to the existing PE program is associated with improved academic performance is supported by 93%. The indication that well developed PA programs are indeed regularly offered to all learners, is portrayed to a fair extend by 56%. Delightedly, despite an overbearing positive outcome regarding awareness about PA, 93% respondents still expressed an eagerness to gain more information on programs specifically developed for the inclusion of PA during daily classroom sessions. A perception that extracurricular activities, such as school sport, recreational activities, team events, etc., as well as unstructured free-play during recess, provide enough opportunities to learners and youth for participation in PA, were shared by 88% of the participants (Table 17).

Table 17: Quantitative frequency analysis regarding the awareness about recent emergence of physical activity as part of the daily teaching routine; positive attitude towards the inclusion of PA during classroom sessions, and eagerness to gain more information about PA

No	Statement	Disagree	Agree
4d	Learners' attitude towards PE and PA are profoundly influenced by teacher's and/or school principal's perceptions of the value of PE and PA	4.5%	95.5%
4h	Extracurricular activities (school sport, recreational activities, team events, etc.) as well as unstructured free-play during recess, provide enough opportunities to learners and youth for participation in PA	11.6%	88.4%
4i	The inclusion of brief PA sessions in a classroom setting positively affects cognitive skills, academic behaviours, and academic achievements	14.3%	85.7%
4j	Short classroom PA breaks (5-20 minutes) requires little or no teacher preparation, any special equipment, or resources	32.4%	67.6%
4k	Short exercise breaks (e.g. walking for 5 minutes, or performing of simple prescribed exercises for 10 minutes) could be introduced with great success	7.9%	92.1%

	prior to teaching subjects that require intense learner concentration		
4l	Structured PA in the academic classroom setting (in addition to the existing PE program), integrated into the teaching of academic lessons, is positively associated with improved academic performance	7.0%	93.0%
4m	I would like to gain more information on programs developed for the inclusion of PA in the daily classroom sessions	7.5%	92.5%
4n	In this school well developed PA programs are regularly offered to all learners	44.1%	55.9%

The Spearman's rho as conducted to determine if there was any relationship between the perception that existing PA programs provide enough opportunities to learners and the inclusion of short exercise breaks with great success prior to intense concentration, revealed on the two-tailed test of significance to having an unrelated relationship with a weak correlation, $r_s(69) = .245$, $p = .043$), and a negatively unrelated relationship with a very weak correlation with schools who offer regular PA programs to learners, $r_s(66) = -.118$, $p = .347$, (Appendix 7, Table 18).

Sollerhed (2006) indicated that although we as human beings were designed to be physical active fur survival purposes, current day living though created an environment in which opportunities to be physical active are limited or even sometimes disappearing. Janssen et al. (2011) denounces that globally sedentary lifestyles is considered to be the cause of major health problems. Lubans et al. (2012) suggested that promoting PA among youth and especially those from disadvantaged backgrounds should be considered as a public health priority. Promoting opportunities for PA among youth are idealistically found in school settings as they already have the necessary equipment, personnel, facilities and curriculum to provide ample PA opportunities (Lubans et al., 2012; Sollerhed, 2006). Physical education lessons, regular playtime breaks or recess extracurricular activities and additional sport days represents the main concepts in which children are provided opportunities to be physical active within the school settings (Jansen et al., 2011). Guidelines as proclaimed by The Department of Health, Physical Activity, Health Improvement and Prevention, CSPAP, The Institute of Medicine and US Department of Health and Human Services state that a minimum of 60 minutes PA per day is required (Janssen et al., 2011; Sollerhed et al., 2006; Bevans et al., 2010; Perna et al., 2010; Lubans et al., 2012). The allocated curricular time for PE does not reach the recommended level, as it can only be assumed that young people are active during recess and their leisure time to a sufficient level (Sollerhed, 2006). The Michigan Merit Curriculum (2007) indicates that substantial evidence exists that the volume of learners' MVPA can be increased in addition to PE, recess, and after-school activities by the incorporation of active transport to school, before-school activities and classroom physical activity.

6.4 What are stakeholders', teachers' and school principals' perceptions regarding the characteristics of an effective physical education program?

Characteristics of an Effective PE program (Appendix 7, Table 8), have reference to the third research question assessment and contain qualitative references about suggestions that the PE program should be revised as well as the curriculum. Some respondents lamented that the PE curriculum was unavailable, and some comments were made that PE should have the same importance as any of the other subjects.

> "PE should be just as NB as any other academic subject, as this is needed to benefit learners physically & hence academically" (Assistant teacher, 69).
>
> "Scheme of work is still the old curriculum and definitely need to be upgraded" (Teacher, 28).
>
> "Revise every now and then please – technology plays a role" (Teacher, 31).

The following quantitative topics from the questionnaire have reference to question 3: topic 6: Curriculum; topic 7: Assessment. The quantitative frequency analysis results regarding the appeal that the PE curriculum should be revised indicated that 73% of the participants are in accordance that the current PE curriculum is well-structured, developmentally appropriate and recognize learners' movement abilities. A vast amount of 62% participants indicated that PE curriculum is regularly revised and adjusted for the incorporation of practises derived from current research and documented teaching experiences. A fair amount of participants of 57% indicated that appropriate technology is incorporated on a regular and continuing basis in the planning and presentation of PE programs and lessons. A considerable amount participants of 87% agreed that the PE curriculum is designed to systematically develop the physical, cognitive, social and emotional aspects of each learner. The opinion that programs of physical activity sessions should be integrated into the existing educational standards that are feasible for teachers in addition to the current PE program is shared by a majority amount of 88%. Considerable amounts of 82% of participants are convinced that all learners should receive formal PE instruction for at least a minimum of 150 minutes per week (Table 19).

Table 19: Quantitative frequency analysis regarding the characteristics of an effective physical education program; the physical education curriculum and syllabi should be revised and PE should be granted the same status as other subjects

No	Statement	Disagree	Agree
6a	The PE curriculum is well-structured, developmentally and instructionally appropriate and recognize learners' movement abilities	26.7%	73.3%
6b	The PE curriculum is regularly revised and adjusted for the incorporation of practises derived from current research and documented teaching experiences	38.2%	61.8%
6c	All learners should receive formal instruction in PE for at least a **minimum** of 150 minutes per week	18.4%	81.6%
6f	Appropriate technology is incorporated on a regular and continuing basis in the planning and presentation of PE programs and lessons	43.1%	56.9%
6g	The PE curriculum is designed to systematically develop the physical, cognitive, social and emotional aspects of each learner	13.3%	86.7%
6j	According to your opinion, should programs that integrate physical activity	12.0%	88.0%

	sessions into the existing educational standards and that are feasible for teachers, be developed in addition to the current PE curriculum?		

The Spearman's rho as conducted to determine if there were any relationships between the indication that all learners should receive formal instruction in PE for at least a minimum 150 minutes delivered results based on the two-tailed test of significance an emergence of significant positive relations with correlations ranging from weak to moderate with, a well-structured PE curriculum, $r_S(71) = .472$, $p < .001$), a PE curriculum that is regularly revised, $r_S(76) = .353$, $p = .002$, PE programs where technology is incorporated regularly, $r_S(72) = .367$, $p = .002$, a PE curriculum that is designed to systematically develop the learner's physical, cognitive, social and emotional aspects, $r_S(75) = .485$, $p < .001$, and with the opinion that additionally to the current PE program, programs should be developed that are geared for the inclusion of PA sessions into the educational standards feasible for teachers, $r_S(75) = .551$, $p < .001$. The similar two-tailed test of significance, however indicated that there were unrelated significant relationships with very weak correlations between the opinion of the incorporation of additional PA programs into the existing educational programs and a well-structured PE program, $r_S(74) = .172$, p = .143, that the PE program is regularly revised, $r_S(75) = .168$, p = .150, and that technology is regularly incorporated into the PE programs, r_S (72) = .032, p = .788, (Appendix 7, Table 20).

A quality PE program should meet the health guidelines and the NASPE standards for PE participation and should thus provide standards for time allocation, curriculum and staffing (Perna et al., 2010). Le Massurier and Corbin, (2007) proclaimed that one of the characteristics of a quality PE program is a designation of 150 minute per week of PE instructional time. For safe practices of PE programs a student/teacher ratio of 25:1 is required by NASPE (2001). Thorburn and Gray (2010) indicated even though it is imperative to recognize that PE is more than just the pursuit of health-promoting behaviours, a key characteristic of PE is, that it can indeed enhance pupil learning and development not only in the physical but also in the cognitive and affective domains. Chin and Edginton (2014) strongly recommended that PE curricula should be rethought and refocused to promote concepts as constantly gained and understood on a worldwide level. They also suggested educators from throughout the world should reach out to each other to develop and adopt new strategies, methods, procedures and programs to address new emerging needs in the 21st century. Thorburn and Gray (2010) suggested that outcomes for PE in the 21st century should also be considered alongside PA and sport as they all are subsumed under the heading of health and well-being. Characteristic of a successful physical education program are also being denounced in literature as being based on local and national standards (Sääkslahti & Liukkonen, 2010). Assurance granted by administrators that schools have adequate resources which include proper equipment, facilities, and the necessary funding required for maintenance thereof (Fishburn & Hickson, 2005).

6.5 How do stakeholders, teachers and school principals understand the comprehensive value of physical education and physical activity?

Value of PE and PA (Appendix 7, Table 8), has reference to the fourth research question and contains qualitative categories about believes that PE has lifelong beneficial value, that PE is beneficial to academic improvement, to child development and to health.

> "A healthy body equals a healthy mind. PE [is] essential for a child on various aspects. PE is crucial for development of the child" (Teacher, 8).

Generally, majority responses in this regard reflected a fair awareness about the value of physical education and physical activity, with a slight stronger indication of agreement that physical education is beneficial to academic improvement.

> "The development of PA program at our school is very important because it helps PE teachers to gain more information of developed programs and it improves the academic performance of learners" (Teacher, 33).
>
> "Physical Education is equally important as any other subjects. Healthy body and mind work in cooperation with healthy brain concentration and all developmental stages" (Teacher, 20).

A cause for apprehension was picked up by a comment as expressed, portraying a strong feeling of animosity towards the subject.

> "The abovementioned statements sound excellent but I do not like PE [respondent refers to statements contained in topic 4: Physical Education (PE) vs. Physical Activity (PA)]. I hate this PE" (Teacher, 38).

The quantitative topic from the questionnaire that has reference to question 4 is, Topic 3: Benefits of Physical Education. Regarding the understanding of the comprehensive value of PE and PA, the quantitative frequency analysis results indicated an immense predominant line in favour of positive outcome with an average of 92% of participants that indicated their accordance that PE prompt learners to develop lifelong positive personal health habits; learners develop aerobic endurance, muscular strength and as such are less susceptible to life-threatening lifestyle illnesses such as cardiovascular diseases, obesity, osteoporosis, high blood pressure and type-2 diabetes; physical active learners develop positive attitudes towards school attendance, experience improved self-esteem and self-concept with lower levels of anxiety and stress and that participation in school years PE programs is positively associated with higher levels of adulthood physical activity. An agreement amongst 88% participants emerged that learners following a well-structured PE program, perform academically better, yet still 70% of participants indicated that to improve academic performance of learners more instructional time for mathematics, English and science should be allocated on the timetable, but surprisingly 87% participants indicated that they disagree that instructional time for PE

appears to have a negative influence on academic achievement and could therefor easily be removed from the school timetable (Table 21).

Table 21: Quantitative frequency analysis regarding the understanding of the comprehensive value of physical education and physical activity; the value of PE and PA and that PE is beneficial to academic improvement.

No	Statement	Disagree	Agree
3a	Learners following a regular well-structured PE program, perform academically better	11.8%	88.2%
3b	Physical active learners develop positive attitudes towards school attendance	9.3%	90.7%
3e	Learners develop lifelong positive personal health habits as fostered during the forming years and maintained throughout the life course	6.6%	93.4%
3f	Learners develop aerobic endurance, muscular strength and are therefore less susceptible to develop cardiovascular diseases	7.9%	92.1%
3g	Learners develop active lifestyles and are less likely to suffer from obesity, osteoporosis, high blood pressure and type-2 diabetes	6.6%	93.4%
3h	Learners experience improved self-esteem and self-concept with lower levels of anxiety and stress	5.3%	93.3%
3i	Participation in school years PE programs is positively associated with higher levels of physical activity in adulthood	9.2%	90.8%
3j	To improve academic performance of learners, more instructional time for Mathematics, English and Science should be allocated on the timetable	29.3%	70.7%
3k	Instructional time for PE appears to have a negative influence on academic achievement and could therefore easily be removed from the school timetable	86.7%	13.3%

The series of Spearman's rho correlations conducted to determine the relation between the participants' conviction that in order to improve academic performance, more instructional time for mathematics and English and science need to be allocated on the timetable, portrayed results based on the two-tailed test of significance the presence of a significant relationship with a weak correlation with the participants' indication that instructional time for PE does not have a negative influence on academic performance and should thus not be removed from the school timetable, $r_S(74) = .253$, $p = 0.29$. The similar two-tailed test of significance indicated though that the participants preference for more instructional time for mathematics, English and science to improve academic performance of learners deliver unrelated negative relationships with very weak correlations with the indication that learners do follow a well-structured PE program, $r_S(75) = -.411$, $p < .001$, with the accordance that physical active learners develop positive attitudes towards school attendance, $r_S(74) = -.310$, $p = .007$, with the indication that learners develop lifelong positive personal health habits, $r_S(75) = .-.339$, $p = .003$, with the agreement the learners develop aerobic endurance, muscular strength and are less susceptible to develop cardiovascular diseases, $r_S(-.333$, $p = .004$, with the accordance that learners develop active lifestyles and less likely to suffer from life-threatening diseases, $r_S(75) = -.250$, $p = .031$, with the indication that learners experience improved self-esteem and self-concept with lower levels of anxiety and stress, $r_S(74) = -.364$, $p = .001$ and with agreement that participation in school years

PE programs is positively associated with higher levels of adulthood physical activity, $r_S(75) = -.369$, $p = .001$, (Appendix 7, Table 22).

Undeniably multiple research studies related that the value of youth being physical active are them being less likely to experience chronic diseases, becoming less obese, and that they are more likely to remain active throughout adulthood (Carlson et al., 2008). Carlson et al. (2008) also reflected on several intervention studies that were conducted to determine the effect of more PA and PE programs during school hours with a focus on behaviours related to academic achievement. The concern was that maintaining or increasing time in physical education classes, could take time away from other subjects and thus have a negative effect on academic achievement outcomes. Undoubtedly findings in the Carlson et al. (2008) study indicated that students might perform better by spending more time in physical education. Carlson et al. (2008) suffice by their conviction that physical education programs should still be promoted for its many health benefits and that no legitimacy for the reduction or elimination of PE programs in fear of the possibility that increased PE could negatively influence academic achievements, could be found. Research studies also suggested that including physical activity movements in classroom settings, improved learners' on-task behaviour and academic skills (Erwin, Beighle, Morgan and Noland, 2011). According to Howie and Pate (2012) academic achievement and PA have been studied over the past 50 years and many researchers are convinced that sufficient evidence do exists to establish school physical activity policies that will improve, or at least not undermine academic performance.

CHAPTER 7: CONCLUSION

7.1 Summary and Conclusion of Main Results

Regarding the author's assumption that most teachers and stakeholders in the Khomas education regional council do not fully comprehend and appreciate the value of regular school physical education and activity, results from this research indicated to be partially true. Evidently the majority of participants agree with various researchers' indications as emergent from the literature that physical education indeed do contribute to the health and well-being of school going youth, prompting them to develop lifelong positive personal health habits and portray higher levels of adulthood physical activity. They are also in accordance that improved academic achievements are associated with school going youth, participating in well-structured physical education programs. They are also convinced that instructional time in physical education does not have any negative influence on academic performance and should thus not be removed from the timetable.

Yet, an alarming vast majority of 71% of the participants fully agrees that more instructional time for mathematics English and science should be allocated on the timetable to improve learners' academic performances. The assumption as indicated by the author that teachers and stakeholders even though they agree with the beneficial factors related to PE, they still underestimate the true value of PE by placing a higher rating of importance on other key learning areas than on PE, has thus reference. Albeit the indication that 59% of the participants indicated that PE do has the same status as the other academic subjects, they still are willing to sacrifice instructional time for PE in favor of the other academic subjects. If this is a true reflection of the conviction of the majority of the participants, undeniably a similar trend as observed in the US where economic recessions and budget constraints led schools to reduce physical education programs and recess in order for schools to make more room for academic time during school hours (Erwin, Beighle, Morgan and Noland, 2011), could easily be followed in the Namibian educational system. Clear indications emerged from the comments as indicated in the open ended response sections that physical education is not offered at all at some schools. One respondent even commented that physical education was removed from the curriculum and there was even an alarming comment raised by a respondent indicating a strong feeling of animosity towards physical education.

According to Shannonhouse (2012) a sustained physical education program, combined with increased physical activity experiences have the potential to impact cognitive, physical and academic outcomes in schools. If Namibian educational administrators, policy makers and teachers keep following suit of neglecting physical education in line with assumptions claimed by various parties in the local Namibian media, (Hembapo, 2013; Kudumo, 2014), and supported by research as conducted in 2000 by Swart, resultant effects on the holistic development of the Namibian children could be devastating.

Another aspect of concern evolving from this research, is the indication by 82% participants that all learners should receive informal PE instruction for at least a minimum of 150 minutes per week, however the latest requirements for PE instruction for Junior Primary, is indicated by the Ministry of Education as 2

periods per week, whereby instructional time per period is set at 40 minutes. Thus total instructional time for PE only adds up to 80 minutes per week ("National Policy Guide…, 2014). Erwin et al. (2011) proclaimed that evidence indicated that two recess periods per given school day and two periods per week of 30 minutes physical education, are only contributing to 40.5% of overall daily physical activity. It has also been reported that devoting more time to physical activity during the school day, does not detract at all from academic performance (Ahamed, 2007). Concerns should therefore be raised that if required instructional time in physical education and physical activity is not met, similar trends could be experienced amongst the Namibian school youth as indicated by Kelder et al. (2009), where the elimination of the so called enrichment subjects, like PE, let to evidences of a high prevalence of obesity amongst certain groups of children in the some Texas schools. Namibian children could also be denied opportunities for improved academic performances associated with better reading fluency and better arrhythmic skills (Haapala, E. A., 2014).

Regarding the author's assumption that PE teachers feel inadequately equipped to teach the subject and would rather prefer PE specialists to teach the subject, an overwhelming vast amount of participants indicated that PE teachers must be professionally qualified with recognized qualifications related to physical education and PE teachers should be physical activity experts. This perception as portrayed by the majority of the participants is in accordance with the indication by Kirk (2012), that specialist primary teachers should be specifically trained to deliver curriculum PE as it would result in providing the best learning experience for the child, which surely should be considered the most important factor in the development of the child.

They also indicated their accordance that alternatively schools could also incorporate the offering of specialists' activities presented by external coaches in the school PE program. The indication of the summary regarding the professional and academic qualifications of the sample participants that majorities of 60% of the participants were indeed in possession of recognized relevant qualifications, should though be cautiously considered because what exactly could be considered as *relevant qualifications*, is not specified or substantiated by research or literature as portrayed in this study, and results from this study is only applicable to the selected sample in the Khomas education regional council and might not necessarily be appropriate to the rest of the of the country.

Regarding the main objective of this study as set by the author to investigate the causal factors contributing to the negligence of PE in the primary schools in the Khomas education regional council, results indicated that evidently participants do agree that physical education per se is a valuable subject and needed. They even do agree that in addition to the well-known physical health benefit outcomes of physical education, that there is evidence that regular participation in physical education and activity is linked to enhanced brain function and cognition and can influence students' overall academic achievements. The fact that the single most important factor, for successful sustaining of PE and PA programs, is undeniably prolonged support from the educational instructors and national educational board members, were thus indicated by an enormous amount of 94% of participants. Major concerns that could be directly linked to the negligence of the subject were indicated by the majority of the participants as being: lack of indoor facilities as well as swimming pools, lack of enough equipment and lack of changing rooms and drinking fountains. Eventually it all bears down though to lack of

proper funding and lack of support from stakeholders, curriculum developers, policy makers and the community.

Nevertheless, despite an emergent accordance amongst participants that there is a severe lack of proper funding per pupil ratio a fair amount of 54% participants is still convinced that maintenance of school sport facilities are too costly and that it is better to rather relocate those funds towards the development of academic materials and IT equipment. For improved best practices in school physical education, it is suggested by Achterstraat (2010), that provision should be made for proper space, adequate sports equipment and funding for ongoing maintenance of sporting facilities and equipment. The negligence of physical education in the Khomas education region, is thus as being claimed by Kudumo (2014), a direct result of failure to fully understand and appreciate the role of physical education and sport and its role in learner academic achievement and sustainable development, as portrayed by more than half of the participants in this study.

7.2 Limitations to the Research

This study primarily focused on teachers responsible for the teaching of physical education in addition to their academic teaching load, and was restricted to primary schools in the Khomas education regional council only. Schools were randomly approached by the author and participation was conditional on the principal's consent. Conditions typically present at school year ending, November to December, and then again during the start of a new academic school year, January to February, as a characteristic practice in the Namibian schools, corresponds with the author's data collection time frame, and caused principals to be reluctant to consent to participation in this research. Conceding schools were limited to an amount of 18 out of a potential 70 primary schools, which might affect the generalizability of the findings. An ample amount of N76, with 48% male and 52% female, participants eventually participated in this study contributing to the validity of the research findings. The compilations of the sample group consist primarily out of teachers (73%), and contained inter alia out of assistant teachers and trainee teachers as well. School principals, Subject Heads and Heads of Department, representative as the supervisors over the teachers, as well as the decision makers with regards to the managing of physical education pertaining time allocation, time tabling issues student/teacher ratios and funding, consist out of 18% of the participants. The rest of the sample contained a mere 9% of stakeholders (Chapter 5, Table 3). Cross references between the responses of the different participating groups could therefore not be performed. The possibility also still remains though that primary school physical education teachers and stakeholders from other education regional councils might respond differently to the statements posed in this study.

Limitations could also be laid upon the choice of research method. Caruth (2013) mentioned that when conducting mixed method research (MMR), researchers should be aware about some weaknesses as included in MMR, especially when the two designs are used concurrently. Similarly in this study the autor has collected both quantitative and qualitative data from the research participants. The author though followed a

sequential qualitative-quantitative data analysis method, thus qualitative and quantitative data were analyzed separately before compared and then followed by merging of the data. Integration of data therefore only occurred at the data analysis stage (Onwuegbuzie & Leech, 2004). The quantitative part of this study contained the questionnaires with statements and was typically represented by a Lickert-format scale. This part was dependent on respondents' responses with the assumption that they indicated their perceptions honestly, but also understood and interpret the statements correctly. The qualitative part of the questionnaire contained an open ended section for the voicing of opinions inter alia. Since the author opted for a textual reflection of opinions etc. and not an interview, probing questions could thus not be used to fully comprehend and reflect on those opinions.

During the data analysis phase the qualitative component was given priority. Commonly as indicated by Onwuegbuzie and Leech (2004) the best way of supplementing qualitative analysis is by quantitizing the data. The qualitative data were thus transformed to a numerical form. After quantitizing of the emergent qualitative themes, significant outcomes were then compared with quantitative results and then subjected to statistical analysis. Focus was granted on major statistical significant similarities, as well as some non-significant differences only. In the process some aspects emergent from the quantitative results, but not supported by the qualitative results, were thus not statistically analysed and focus was thus not granted to those aspects.

Table 23: Some Unsupported Quantitative Results of Relevance

No	Statement	Disagree	Agree
6d	The PE curriculum provides maximum participation for every learner with no exclusions where **all (**able bodied as well as disabled learners) are actively involved	25%	75%
7a	My school have a written mission statement, and assessment criteria derived from a sequential curriculum based on national standards	18%	82%

7.3 Future Studies

Evidently this study brought forward some major issues that could be centralized around discrepancies based on participants' perceptions, as emergent from this research results. On the one hand majorities of participants were clearly in accordance that except from the well-known health benefits as being gained from school going youth participating in regular well-structured physical education programs, that they in actual fact also gain improved academic performance. They were also completely in accordance that instructional time for PE does not have any negative influence on academic performance and should not be removed from the timetable. Nevertheless the same group of participants was fully convinced that more time on the timetable should be allocated to other academic subjects, such as mathematics, English and science for purposes of enhanced academic performances. A similar trend of conviction were portrayed by the participants whereby major lacks of facilities, equipment and support, typically an indication of severe shortage or

misappropriation of necessary funds, were indicated by an ample amount of participants, however the same set of participants was convinced that funding for the maintenance of sport and PE facilities should rather be reallocated towards the development of academic material and IT equipment.

The proposal of Howie and Pate (2012), thus seem to be relevant and worth following up to prove the contrary to those convictions. Therefore the author recommends, similarly to the suggestion of Howie and Pate, that if school administrators and policymakers are still reluctant to buy into the sustaining of physical education and physical activity, despite multiple efforts to propagate PE and PA based on the emphasis of its health benefits, that alternatively, advocates for the subject should rather promulgate increased PE and PA based on scientific evidence of a positive connection between PE and PA and improved academic achievement. Endeavors in further studies, particularly based on PE and PA enhancement interventions, seem to be a directive for further exploration. Results grounded on positive outcomes after such interventions might also have bearing to the generation of increased physical education and physical activity. Participants were positively convinced that all learners should receive formal instruction of PE for at least 150 minutes per week, yet the latest revised syllabus for the Junior Primary Phase, Physical Education still suffices with only 80 minutes per week. Research studies could also embark upon to what extend do primary schools in the Namibian Education reach the required 60 minutes of PA as promulgated by various health institutes and researchers.

As mentioned previously some positive aspects as evolving from the quantitative frequency analysis of the questionnaire results, not supported by the qualitative frequency indices, might bear some importance and thus deserves further investigations. Regarding the PE curriculum and syllabus, majorities of participants (62%, Table 19) indicated that the PE curriculum is regularly revised and adjusted for the incorporation of practices derived from current research and documented teaching experiences. Regarding the statement that the PE curriculum provides maximum participation to all learners, able bodied as well as disabled, were indicated by participants (75%, Table 23). A majority assurance was shared by participants (57%, Table 19) that appropriate technology is incorporated on a regular and continuing basis in the planning and presentation of PE programs and lessons. The degree of validity related to these mentioned statements should though be further investigated. Degrees of validity should also be further investigated regarding assessment in physical education, as (82%, Table 23) participants indicated that assessment criteria in physical education are based on national standards as well as to what extend professional national physical education bodies in Namibia, are indeed recognized and fully operational.

7.4 Suggestions

Results from this study produced some clear future directives worth following up on regarding the causal factors contributing to the negligence of physical education in the primary schools of the Khomas education regional council. The single most important factor for successful and sustainable physical education and physical activity programs undeniably seems to be indeed sufficient support from administrators,

educational instructors and national educational boards. The following suggestions could thus be proposed to these relevant bodies:

a. Allegations as uttered by some participants that no physical education is offered at some schools, or that physical education is being removed from the curriculum, should urgently be followed up and acted upon accordingly.
b. Various endeavors should be undertaken by the MoE exploring innovative ways of providing primary schools access to indoor facilities with sufficient changing rooms, ample drinking fountains, swimming pools and enough equipment to cover all aspects as contained in the PE curriculum.
c. Similar endeavors should be undertaken to encourage more community, parental, and other stakeholders such as donors' involvement for enhancement and support of sustained efficient PE and PA programs at schools.
d. The PE curricula should be regularly revised and adjusted according to latest developments in the field of PE and PA.
e. Provision should be made to ensure that the teaching of physical education is taken care of by professionally qualified teachers, and that comprehensive, proper training is provided by local physical education teacher training institutions.
f. Possibilities for the incorporation of professional external coaches and/or instructors in the existing PE and PA school programs should be explored.
g. Relevant structures must be put in place ensuring that PE teachers receive proper student health information and are amply prepared and provided with required necessities for the handling of emergencies.
h. Opportunities must be created whereby teachers could be provided with more information about the inclusion of classroom physical activities.
i. Programs for the integration of physical activity sessions into the existing educational standards, feasible to teachers should be developed in addition to the current PE curriculum
j. Structures must also be put in place whereby opportunities for learners and parents/guardians are created for the communicating and familiarizing of the components, criteria and rationale for assessment aspects related to physical education, as being reflected on learners' progress reports.
k. The MoE must ensure that self-improvement opportunities to stay current, like subscription to journals, attendance of conferences and in-service professional development programs is regularly offered to all PE teachers.
l. Services of national professional bodies such as a national association for sport and physical education should be incorporated for the development of national standards and programs that could contribute to the successful sustaining of regular PE and PA programs.

7.5 Conclusion

Subsumed in the aims of the Namibian Basic Education system, the development of a "Society of the Future" is indicated and it directly relates to the advancement of attitudes, practices, knowledge and activities for the promotion of physical and mental health. To be deemed as an educational system adhering to the numerous challenges and opportunities as provided through living, working and playing in the 21st century, it might be necessary that Namibian educators should reach out to other educational practices over the world for purposes of developing and adopting new strategies, methods, procedures and programs to address new emerging needs. Health and physical education pedagogy will have to be rethought and even perhaps reinvented in many respects as indicated by Chin and Edginton (2014).

The value and centrality of physical education in the Namibian child's development, is already being acknowledged, but definite actions should be undertaken by all Namibian educational key players for the implementation of a sustained quality PE curriculum, if total development of the Namibian child is to be taken seriously. Assurances must therefore also be granted that the physical education curricula indeed do provide maximum participation to every Namibian child with no exclusions. Inclusion policy and practices must be identified in the physical education curricula and action must be taken for the elimination of all barriers to the provision and access opportunities to quality physical education programs for all. Considerations as practiced on a world-wide level could have bearing on the implementation of legislation related to the physical education curricula for purposes of attaining enhanced, comprehensive, quality primary school programs incorporative of physical education, physical activity and school sport.

It is also imperative that whenever new schools are being built, basic PE facilities should be provided. Equitable access to suitable indoor and outdoor facilities to all schools should be ensured. Ample equipment and resources as a detriment to the quality of school PE provision must be considered and provided. Challenges must be directed towards physical education teacher training institutions to ensure that physical education teachers are adequately prepared to teach the subject and continuing professional development should be made available to all practicing physical education teachers. Children's physical well-being, holistic development, health and improved academic achievement, depends undeniable on more than a quality PE curriculum in schools. It is thus imperative that local support that could be provided by sport organizations, the community and national bodies should be incorporated into the Namibian educational system, especially in order to enhance opportunities of increased physical activities to the Namibian child.

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APPENDICES

APPENDIX 1: Approval to Conduct Research:- University of Eastern Finland, Joensuu

School of Applied Education Science and Teacher Education
1 (1)

Approval letter
29.9.2014

ITÄ-SUOMEN YLIOPISTO

JOENSUUN KAMPUS
Yliopistokatu 2
PL 111, 80101 Joensuu

KUOPION KAMPUS
Yliopistonranta 1
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To Whom It May Concern

Student **Amanda Minnie** (student number 260497) as a part of her Master's degree studies is conducting dissertation. The studies consist of three different part: a) planning seminar, b) working seminar and c) research report. She has passed the first part of the studies and to be able to complete the rest of studies she needs to conduct empirical data collection. As a supervisor of the disseration, I ask Your kind support for her data collection under all ethical requirements needed.

In Joensuu, 29th September, 2014

Sari Ha-Nuut

Sari Havu-Nuutinen
Associate professor
Head of School
Supervisor of Thesis

UNIVERSITY OF EASTERN FINLAND

APPENDIX 2: Request for Research Authority:- Director of Education

Private Bag 13319, Andrew Kloppers Street, Khomasdal, Windhoek, NAMIBIA

University of Namibia
Khomasdal Campus
Tel: 061-2067272

Ministry of Education
Schools
Council
The School Principal

Primary
Khomas Regional
Directorate of Education

RE: REQUEST FOR RESEARCH AUTHORITY

Topic: *Perceptions of Namibian Primary School Teachers' and Stakeholders', in the Khomas Regional Council, Directorate of Education regarding curriculum requirements for sustaining a successful Physical Education program*

Dear Sir/Madam,
As an assistant lecturer at UNAM I am currently a registered student at the University of Eastern Finland, Joensuu, following the Master's Degree in Primary Education. I have been granted approval by my supervisor Prof. Sari Havu-Nuutinen, as well as by the Director of Education, Mr. Gerard Vries, to continue with my master's thesis research. I hereby kindly seek you permission to conduct my master's research at your school. My research method will be based on a mixed method approach with a questionnaire to be completed by the following relevant parties:

- The Principal (1)
- Some teachers teaching Physical Education in the Upper Primary phase (+/- 2-4)
- All teachers teaching Physical Education in the Lower Primary phase (+/- 2-5)

Please note that the research will be based on guidelines as prescribed by the American Psychological Association (APA) and as such all information gathered will be deemed strictly confidential. Participation in this research activity will be voluntary and highly appreciated.
I would gladly answer any questions or concerns that you may have regarding the research study.
Thank you in advance

Yours truly,
Mrs. A. Minnie

Contact Details: **AMANDA Minnie; Assistant Lecturer; Department of Maths, Science and Sport Education; University of Namibia; Khomasdal Campus;**
Tel: 061-2067232 - Fax: - E-mail: aminnie@unam.na - Web: http://www.unam.na
Private Bag 13319, 5 Andrew Kloppers Street, Khomasdal, Windhoek, NAMIBIA

APPENDIX 3: Permission to Conduct Research: The Director, Khomas Regional Council, And Directorate of Education

REPUBLIC OF NAMIBIA

KHOMAS REGIONAL COUNCIL

DIRECTORATE OF EDUCATION

Tel: [09 264 61] 293 4410
Fax: [09 264 61] 231 367/248 251
Enquiries: Mrs. L Shivute

Private Bag 13236
WINDHOEK
31 October 2014

Mrs. A Minnie

Dear Madam

RE: PERMISSION TO CONDUCT RESEARCH IN PRIMARY SCHOOLS IN KHOMAS REGION

This serves to grant you permission to do your research to Mrs. Minnie to conduct research in Schools in the Khomas Region related to, Perceptions of Namibian Primary School Teachers and Stakeholders in the Khomas Regional Council, Directorate of Education regarding curriculum requirements for sustaining a successful Physical Education Program.

Your request is approved with the following conditions:

- The Principals of different schools to be visited must be contacted before the visit and agreement should be reached between you and the principal.
- The School programme should not be disrupted.
- The School should not be forced to take part in the programme.
- Teachers and learners who will take part in this exercise will do so voluntarily.
- Khomas Education Directorate should be provided with a copy of your findings and eventual thesis.

We wish you success on your research.

Yours sincerely

MINISTRY OF EDUCATION
PRIVATE BAG 13236, WINDHOEK
31 OCT 2014
DIRECTOR OF EDUCATION
KHOMAS REGION

.....

Gerard N. Vries
DIRECTOR OF EDUCATION

APPENDIX 4: Questionnaire for Teachers

2014: Perceptions of Namibian Primary School Teachers and Stakeholders in the Khomas Regional Council, Directorate of Education, regarding curriculum requirements for sustaining a successful Physical Education program Questionnaire

This questionnaire has been developed to investigate the causal factors contributing to the negligence of the subject specifically in primary schools in the Khomas education region, with the assumption that findings will be appropriate to primary schools in the rest of the country. Focus will be granted to determine curriculum requirements or prerequisites that teachers, in the Khomas education region consider as being crucial to the sustaining of a successful physical education (PE) program.

INSTRUCTIONS

- This questionnaire will be administered to **physical education teachers and school principals**, in the Khomas education region.
- Your participation is essential for making the results of this survey comprehensive, accurate and relevant.
- This questionnaire must be completed anonymously, and all answers will be kept confidential.
- Information gathered will be used to suggest adjustments towards the physical education curriculum to ensure the sustaining of a successful PE program as well as for the enhancement of the state and status of the subject in Namibian Primary Schools.

1. BACKGROUND INFORMATION

1.1 Current teaching position

……..

1.2 Grade(s) for which you are currently teaching physical education

……..

1.3 Years of experience in teaching PE

……..

1.4 Relevant professional and academically qualifications

BETD with HME Core ☐ BETD with HME Minor ☐

Any other Educational Diploma with no specialization in Human Movement/Physical Education (Specify)…….

B Degree with specialization in Physical/Human Movement/Sport Education or Science (Specify)……..

Any other Educational Degree with no specialization in Physical/Human Movement/Sport Education or Science (Specify)…….

1.5 Gender

Male ☐ Female ☐

2. INSTRUCTIONAL STRATEGIES

2.1 Please indicate to which extend do you agree or disagree with the following statements:

1. Strongly Disagree; 2. Disagree; 3. Partially Agree; 4. Agree; 5. Strongly Agree

a. Appropriate time within the school timetable is fully utilized for the teaching of PE	1	2	3	4	5
b. A well-planned developmental appropriate PE program is followed by all teachers in this school, responsible for teaching PE	1	2	3	4	5
c. Teacher reflection on teaching practices to enhance learner success is advocated and followed by all teachers responsible for teaching PE	1	2	3	4	5
d. The school has adequate resources to provide a quality PE program (sample schemes of work/lesson plans, manuals, DVD's, etc.)	1	2	3	4	5
e. PE has the same value and status as the other academic subjects	1	2	3	4	5
f. PE teachers receive student health information and have a clear plan for handling emergencies	1	2	3	4	5

2.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

……

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……
……

3. BENEFITS OF PHYSICAL EDUCATION

3.1 Please indicate to which extend do you agree or disagree with the following statements regarding **regular participation** of learners in a quality PE program

a. Learners following a regular well-structured PE program, perform academically better	1	2	3	4	5
b. Physical active learners develop positive attitudes towards school attendance	1	2	3	4	5
c. Contemporary PE should integrate more focus on components of personal and social development	1	2	3	4	5
d. Components for the development of fundamental motor skills, fitness and basic movement should be the major focal point in PE	1	2	3	4	5
e. Learners develop lifelong positive personal health habits as fostered during the forming years and maintained throughout the life course	1	2	3	4	5
f. Learners develop aerobic endurance, muscular strength and are therefore less susceptible to develop cardiovascular diseases	1	2	3	4	5
g. Learners develop active lifestyles and are less likely to suffer from obesity, osteoporosis, high blood pressure and type-2 diabetes	1	2	3	4	5
h. Learners experience improved self-esteem and self-concept with lower levels of anxiety and stress	1	2	3	4	5
i. Participation in school years PE programs is positively associated with higher levels of physical activity in adulthood	1	2	3	4	5
j. To improve academic performance of learners, more instructional time for Mathematics, English and Science should be allocated on the timetable	1	2	3	4	5
k. Instructional time for PE appears to have a negative influence on academic achievement and could therefore easily be removed from the school timetable	1	2	3	4	5

3.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……
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4. PHYSICAL EDUCATION (PE) VS. PHYSICAL ACTIVITY (PA)

4.1 Please indicate to which extend do you agree or disagree with the following statements based on your perceptions of the inter-relationship between PE and PA

a. There is no difference between PE and PA; they are based on the same movement principles	1	2	3	4	5
b. PE is a curricular learning area integral and compulsory through the total school experience for learners	1	2	3	4	5
c. PE is a school subject designed to promote the development of skills, knowledge and attitudes necessary for participating in active healthy living amongst school learners and youth	1	2	3	4	5
d. Learners' attitude towards PE and PA are profoundly influenced by teacher's and/or school principal's perceptions of the value of PE and PA	1	2	3	4	5
e. School-based PA comprises of PE, recess (break-time) free play,	1	2	3	4	5

	classroom-based PA and extracurricular activities				
f.	PA is bodily movements that expends energy	1	2	3	4	5
g.	PA is an essential component of a quality contemporary PE program	1	2	3	4	5
h.	Extracurricular activities (school sport, recreational activities, team events, etc.) as well as unstructured free-play during recess, provide enough opportunities to learners and youth for participation in PA	1	2	3	4	5
i.	The inclusion of brief PA sessions in a classroom setting positively affects cognitive skills, academic behaviours, and academic achievements	1	2	3	4	5
j.	Short classroom PA breaks (5-20 minutes) requires little or no teacher preparation, any special equipment, or resources	1	2	3	4	5
k.	Short exercise breaks (e.g. walking for 5 minutes, or performing of simple prescribed exercises for 10 minutes) could be introduced with great success prior to teaching subjects that require intense learner concentration	1	2	3	4	5
l.	Structured PA in the academic classroom setting (in addition to the existing PE program), integrated into the teaching of academic lessons, is positively associated with improved academic performance	1	2	3	4	5
m.	I would like to gain more information on programs developed for the inclusion of PA in the daily classroom sessions	1	2	3	4	5
n.	In this school well developed PA programs are regularly offered to all learners	1	2	3	4	5

4.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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5. LEARNING ENVIRONMENT

5.1 Please indicate to which extend do you agree or disagree with the following statements based on your **perceptions** of a conducive environment (facilities, equipment, learner preparedness, etc.) available for the sustaining of a successful PE program **in your school**

a.	A dedicated, adequate space (PE hall, multifunctional room, etc.) is available for the teaching of all indoor PE movement activities where learners can move freely and safely	1	2	3	4	5
b.	Outdoor facilities such as a sport field, pitches, courts, paved areas, etc. are available for the teaching of all outdoor PE activities	1	2	3	4	5
c.	Changing rooms and drinking fountains are available closely to instructional areas	1	2	3	4	5
d.	All learners are wearing the required PE sportswear during PE classes	1	2	3	4	5
e.	Enough small and large equipment for all sport activities included in the curriculum (gymnastics, dance, athletics and all team sports) are available	1	2	3	4	5
f.	A dedicated secure, spacious, easily accessible storage room for equipment is available	1	2	3	4	5
g.	The PE class sizes ranges around a ratio of 25:1 to ensure safe, effective instruction	1	2	3	4	5
h.	Facilities for the teaching of swimming activities is available	1	2	3	4	5
i.	School and community facilities (e.g. sport centres, swimming pools, sport fields, sport courts, etc.) and programs are designed and implemented to support and complement one another in serving	1	2	3	4	5

	learners' educational needs				
j.	This school is receiving ample support for the sustaining of efficient PE and sport programs, from the community parents/caretakers, and donators	1	2	3	4	5
k.	Proper funding per pupil ratio, is available for the purchasing and maintenance of all needed equipment and facilities	1	2	3	4	5
l.	Maintenance of school sport facilities is too costly and should rather be allocated to the development of academic materials and IT equipment	1	2	3	4	5

5.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

……

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6. CURRICULUM

6.1 Please indicate to which extend do you agree or disagree with the following statements based on your **perceptions** of a well-planned, research based and effective curriculum for the sustaining of a successful PE program in your school

a.	The PE curriculum is well-structured, developmentally and instructionally appropriate and recognize learners' movement abilities	1	2	3	4	5
b.	The PE curriculum is regularly revised and adjusted for the incorporation of practises derived from current research and documented teaching experiences	1	2	3	4	5
c.	All learners should receive formal instruction in PE for at least a minimum of 150 minutes per week	1	2	3	4	5
d.	The PE curriculum provides maximum participation for every learner with no exclusions where all (able bodied as well as disabled learners) are actively involved	1	2	3	4	5
e.	Effective, high quality and varied schemes of work and lesson plans are in place and reviewed regularly	1	2	3	4	5
f.	Appropriate technology is incorporated on a regular and continuing basis in the planning and presentation of PE programs and lessons	1	2	3	4	5
g.	The PE curriculum is designed to systematically develop the physical, cognitive, social and emotional aspects of each learner	1	2	3	4	5
h.	The PE curriculum promotes the refinement and mastery of movement skills of learners enabling competency in physical activity experiences that can be used in a variety of physical activity settings	1	2	3	4	5
i.	The PE curriculum guides learners to lead lifelong physically active and healthy lifestyles	1	2	3	4	5
j.	According to your opinion, should programs that integrate physical activity sessions into the existing educational standards and that are feasible for teachers, be developed in addition to the current PE curriculum?	1	2	3	4	5

6.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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7. ASSESSMENT

7.1 Please indicate to which extend do you agree or disagree with the following statements based on your perceptions of assessment in PE as one of the best practices in ensuring a high- quality program in your school

a. My school have a written mission statement, and assessment criteria derived from a sequential curriculum and based on national standards	1	2	3	4	5
b. Formative and summative assessments of learning included in the PE program, related to meaningful content objectives, is practiced and recorded regularly	1	2	3	4	5
c. Assessments, e.g. a rubric, that include clearly defined criteria, are provided and explained to all teachers and learners prior to assessment sessions	1	2	3	4	5
d. Teachers teach and assess all learning domains systematically in PE, like the cognitive, affective and physical domains, by making use of a variety of assessment techniques	1	2	3	4	5
e. Teachers use fitness assessments as part of the on-going process of helping learners to understand, enjoy, improve and/or maintain their physical fitness and healthy well-being	1	2	3	4	5
f. PE grades are based on thoughtful identified components that are aligned with course goals and national/international standards	1	2	3	4	5
g. Teachers provide regular learner progress PE reports to parents/guardians using a variety of continuous formative evaluations and assessments	1	2	3	4	5
h. Learners and parents/guardians are familiar with the components, criteria and rationale for each assessment aspect as reflected by learners' grades	1	2	3	4	5
i. Assessment in PE is time consuming and of little to none, relevance to learners' physical developmental progress	1	2	3	4	5
j. Parents/guardians have no interest in PE assessment results, and could therefore not be practised at all	1	2	3	4	5

7.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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8. PROFESSIONALISM

8.1 Please indicate to which extend do you agree or disagree with the following statements based on your **perceptions** of PE teachers' professional requirements, professional development and continual growth in subject related knowledge

a. PE teachers must be professionally qualified and should possess recognized qualifications in Physical/Human Movement/Sport Education or Science	1	2	3	4	5
b. PE teachers must be physical activity experts, gained through experience and personal interest	1	2	3	4	5
c. Self-improvement opportunities to stay current, like subscription to journals, attendance of conferences and in-service professional development programs, is available to all PE teachers	1	2	3	4	5
d. I would like to participate in professional development through in-	1	2	3	4	5

service programs on PE and PA regularly					
e. PE teachers communicate with other teachers, administrators and parents frequently	1	2	3	4	5
f. PE teachers seek feedback for improvement from learners, peers, and parents as means for program evaluation and improvement	1	2	3	4	5
g. Specialist activities offered by external coaches or experts are incorporated in the PE program	1	2	3	4	5
h. Professional and national bodies (e.g. a national association for sport and physical education) can through the development of national standards and programs, contribute to the successful sustaining of regular PE and PA programs	1	2	3	4	5
i. The single most important factor for successful and sustainable PE and PA programs, is sufficient support from administrators, educational instructors and national educational board members	1	2	3	4	5

8.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

……

……

……

……

Thank you very much for your time and effort spend to complete this questionnaire. Your valuable participation is highly appreciated!

References

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Physical Education School Questionnaire – Final Version – Revised 10/26/99 Form Approved OMB No: 9520-0445 Expiration Date: 10/31/2002 http://www.cdc.gov/healthyyouth/shpps/2000/questionnaire/pdf/physedl2000questionnaire.pdf

Quay, P., Peters, J. Skills, strategies, sport, and social responsibility: reconnecting physical education. (2008) *Journal of Curriculum Studies* ISSN 0022-0272 print/ISSN 1366-5839 online ©2008 Taylor & Francis http://www.informaworld.com DOI: 10.1080/00220270801886071

APPENDIX 5: Questionnaire for Stakeholders

2014: Perceptions of Namibian Primary School Teachers and Stakeholders in the Khomas Regional Council, Directorate of Education, regarding curriculum requirements for sustaining a successful Physical Education program Questionnaire

This questionnaire has been developed to investigate the causal factors contributing to the negligence of the subject specifically in primary schools in the Khomas education region, with the assumption that findings will be appropriate to primary schools in the rest of the country. Focus will be granted to determine curriculum requirements or prerequisites that teachers and stakeholders, in the Khomas education region consider as being crucial to the sustaining of a successful physical education (PE) program.

INSTRUCTIONS

- This questionnaire will be administered to **physical education stakeholders** e.g., **curriculum developers and policy makers, etc**. in the Khomas education region.
- Please answer all questions relevant to your position. Questions beyond your knowledge and expertise can be ignored.
- Your participation is essential for making the results of this survey comprehensive, accurate and relevant.
- This questionnaire must be completed anonymously, and all answers will be kept confidential.
- Information gathered will be used to suggest adjustments towards the physical education curriculum to ensure the sustaining of a successful PE program as well as for the enhancement of the state and status of the subject in Namibian Primary Schools.

1. BACKGROUND INFORMATION

1.1 Current position

……..

1.2 Years of experience in current position

……..

1.3 Professional and academically qualifications

……..

1.4 Gender

Male ☐ Female ☐

2. INSTRUCTIONAL STRATEGIES

2.1 Please indicate to which extend do you agree or disagree with the following statements regarding all Primary Schools in the Khomas Region:

2.2 **Strongly Disagree; 2. Disagree; 3. Partially Agree; 4. Agree; 5. Strongly Agree**

a. Appropriate time within all the schools' timetable is fully utilized for the teaching of PE	1	2	3	4	5
b. A well-planned developmental appropriate PE program is followed by all teachers in these schools, responsible for teaching PE	1	2	3	4	5
c. Teacher reflection on teaching practices to enhance learner success is advocated and should be followed by all teachers responsible for teaching PE	1	2	3	4	5
d. All schools have adequate resources to provide a quality PE program (sample schemes of work/lesson plans, manuals, DVD's, etc.)	1	2	3	4	5
e. PE should bear the same value and status as the other academic subjects	1	2	3	4	5
f. PE teachers should receive student health information and have a clear plan for handling emergencies	1	2	3	4	5

2.3 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

……

……

……

……

3. BENEFITS OF PHYSICAL EDUCATION

3.1 Please indicate to which extend do you agree or disagree with the following statements regarding regular participation of learners in a quality PE program

g. Learners following a regular well-structured PE program, perform academically better	1	2	3	4	5
h. Physical active learners develop positive attitudes towards school attendance	1	2	3	4	5
i. Contemporary PE should integrate more focus on components of	1	2	3	4	5

personal and social development					
j. Components for the development of fundamental motor skills, fitness and basic movement should be the major focal point in PE	1	2	3	4	5
k. Learners develop lifelong positive personal health habits as fostered during the forming years and maintained throughout the life course	1	2	3	4	5
l. Learners develop aerobic endurance, muscular strength and are therefore less susceptible to develop cardiovascular diseases	1	2	3	4	5
m. Learners develop active lifestyles and are less likely to suffer from obesity, osteoporosis, high blood pressure and type-2 diabetes	1	2	3	4	5
n. Learners experience improved self-esteem and self-concept with lower levels of anxiety and stress	1	2	3	4	5
o. Participation in school years PE programs is positively associated with higher levels of physical activity in adulthood	1	2	3	4	5
p. To improve academic performance of learners, more instructional time for Mathematics, English and Science should be allocated on the timetable	1	2	3	4	5
q. Instructional time for PE appears to have a negative influence on academic achievement and could therefore easily be removed from the school timetable	1	2	3	4	5

3.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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4. PHYSICAL EDUCATION (PE) VS. PHYSICAL ACTIVITY (PA)

4.1 Please indicate to which extend do you agree or disagree with the following statements based on your perceptions of the inter-relationship between PE and PA

a. There is no difference between PE and PA; they are based on the same movement principles	1	2	3	4	5
b. PE is a curricular learning area integral and compulsory through the total school experience for learners	1	2	3	4	5
c. PE is a school subject designed to promote the development of skills, knowledge and attitudes necessary for participating in active healthy living amongst school learners and youth	1	2	3	4	5
d. School principals' and teachers' attitude towards PE and PA are profoundly influenced by the perceptions of the value of PE and PA of curriculum developers and policy makers	1	2	3	4	5
e. School-based PA comprises of PE, recess (break-time) free play, classroom-based PA and extracurricular activities	1	2	3	4	5
f. PA is bodily movements that expends energy	1	2	3	4	5
g. PA is an essential component of a quality contemporary PE program	1	2	3	4	5
h. Extracurricular activities (school sport, recreational activities, team events, etc.) as well as unstructured free-play during recess, provide enough opportunities to learners and youth for participation in PA	1	2	3	4	5
i. The inclusion of brief PA sessions in a classroom setting positively affects cognitive skills, academic behaviours, and academic achievements	1	2	3	4	5
j. Short classroom PA breaks (5-20 minutes) requires little or no teacher preparation, any special equipment, or resources	1	2	3	4	5
k. Short exercise breaks (e.g. walking for 5 minutes, or performing of	1	2	3	4	5

simple prescribed exercises for 10 minutes) could be introduced with great success prior to teaching subjects that require intense learner concentration					
l. Structured PA in the academic classroom setting (in addition to the existing PE program), integrated into the teaching of academic lessons, is positively associated with improved academic performance	1	2	3	4	5
m. Programs on the inclusion of PA in the daily classroom sessions should be developed by the Min of Education and offered to all primary school teachers	1	2	3	4	5

4.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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5. LEARNING ENVIRONMENT

5.1 Please indicate to which extend do you agree or disagree with the following statements based on your **perceptions** of a conducive environment (facilities, equipment, learner preparedness, etc.) available for the sustaining of a successful PE program in all the primary schools of the Khomas region

a. A dedicated, adequate space (PE hall, multifunctional room, etc.) is available for the teaching of all indoor PE movement activities where learners can move freely and safely	1	2	3	4	5
b. Outdoor facilities such as a sport field, pitches, courts, paved areas, etc. are available for the teaching of all outdoor PE activities	1	2	3	4	5
c. Changing rooms and drinking fountains are available closely to instructional areas	1	2	3	4	5
d. In this school all learners are wearing the required PE sportswear during PE classes	1	2	3	4	5
e. Enough small and large equipment for all sport activities included in the curriculum (gymnastics, dance, athletics and all team sports) are available	1	2	3	4	5
f. A dedicated secure, spacious, easily accessible storage room for equipment is available	1	2	3	4	5
g. The PE class sizes ranges around a ratio of 25:1 to ensure safe, effective instruction	1	2	3	4	5
h. Facilities for the teaching of swimming activities is available	1	2	3	4	5
i. School and community facilities (e.g. sport centres, swimming pools, sport fields, sport courts, etc.) and programs are designed and implemented to support and complement one another in serving learners' educational needs	1	2	3	4	5
j. This school is receiving ample support for the sustaining of efficient PE and sport programs, from the community parents/caretakers, and donators	1	2	3	4	5
k. Proper funding per pupil ratio, is available for the purchasing and maintenance of all needed equipment and facilities	1	2	3	4	5
l. Maintenance of school sport facilities is too costly and should rather be allocated to the development of academic materials and IT equipment	1	2	3	4	5

5.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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6. CURRICULUM

6.1 Please indicate to which extend do you agree or disagree with the following statements based on your **perceptions** of a well-planned, research based and effective curriculum for the sustaining of a successful PE program

a. The PE curriculum is well-structured, developmentally and instructionally appropriate and recognize learners' movement abilities	1	2	3	4	5
b. The PE curriculum is regularly revised and adjusted for the incorporation of practises derived from current research and documented teaching experiences	1	2	3	4	5
c. All learners should receive formal instruction in PE for at least a minimum of 150 minutes per week	1	2	3	4	5
d. The PE curriculum provides maximum participation for every learner with no exclusions where all (able bodied as well as disabled learners) are actively involved	1	2	3	4	5
e. Effective, high quality and varied schemes of work and lesson plans are in place and reviewed regularly	1	2	3	4	5
f. Appropriate technology is incorporated on a regular and continuing basis in the planning and presentation of PE programs and lessons	1	2	3	4	5
g. The PE curriculum is designed to systematically develop the physical, cognitive, social and emotional aspects of each learner	1	2	3	4	5
h. The PE curriculum promotes the refinement and mastery of movement skills of learners enabling competency in physical activity experiences that can be used in a variety of physical activity settings	1	2	3	4	5
i. The PE curriculum guides learners to lead lifelong physically active and healthy lifestyles	1	2	3	4	5
j. According to your opinion, should programs that integrate physical activity sessions into the existing educational standards and that are feasible for teachers, be developed in addition to the current PE curriculum?	1	2	3	4	5

6.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……
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7. ASSESSMENT

7.1 Please indicate to which extend do you agree or disagree with the following statements based on your perceptions of assessment in PE as one of the best practices in ensuring a high- quality program

a. Schools have a written mission statement, and assessment criteria derived from a sequential curriculum and based on national standards	1	2	3	4	5
b. Formative and summative assessments of learning included in the PE program, related to meaningful content objectives, is practiced and recorded regularly	1	2	3	4	5

c. Assessments, e.g. a rubric, that include clearly defined criteria, are provided and explained to all teachers and learners prior to assessment sessions	1	2	3	4	5
d. Teachers teach and assess all learning domains systematically in PE, like the cognitive, affective and physical domains, by making use of a variety of assessment techniques	1	2	3	4	5
e. Teachers use fitness assessments as part of the on-going process of helping learners to understand, enjoy, improve and/or maintain their physical fitness and healthy well-being	1	2	3	4	5
f. PE grades are based on thoughtful identified components that are aligned with course goals and national/international standards	1	2	3	4	5
g. Teachers provide regular learner progress PE reports to parents/guardians using a variety of continuous formative evaluations and assessments	1	2	3	4	5
h. Learners and parents/guardians are familiar with the components, criteria and rationale for each assessment aspect as reflected by learners' grades	1	2	3	4	5
i. Assessment in PE is time consuming and of little to none, relevance to learners' physical developmental progress	1	2	3	4	5
j. Parents/guardians have no interest in PE assessment results, and could therefore not be practised at all	1	2	3	4	5

7.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……
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8. PROFESSIONALISM

8.1 Please indicate to which extend do you agree or disagree with the following statements based on your **perceptions** of PE teachers' professional requirements, professional development and continual growth in subject related knowledge

a. PE teachers must be professionally qualified and should possess recognized qualifications in Physical/Human Movement/Sport Education or Science	1	2	3	4	5
b. PE teachers must be physical activity experts, gained through experience and personal interest	1	2	3	4	5
c. Self-improvement opportunities to stay current, like subscription to journals, attendance of conferences and in-service professional development programs, should be available to all PE teachers	1	2	3	4	5
d. Professional development through participation in-service programs on PE and PA should be offered to teachers regularly	1	2	3	4	5
e. PE teachers should communicate with other teachers, administrators and parents frequently	1	2	3	4	5
f. PE teachers should seek feedback for improvement from learners, peers, and parents as means for program evaluation and improvement	1	2	3	4	5
g. Specialist activities offered by external coaches or experts should be incorporated in the PE program	1	2	3	4	5
h. Professional and national bodies (e.g. a national association for sport and physical education) can through the development of national standards and programs, contribute to the successful sustaining of regular PE and PA programs	1	2	3	4	5

i. The single most important factor for successful and sustainable PE and PA programs, is sufficient support from administrators, educational instructors, curriculum developers, policy makers and national educational board members	1	2	3	4	5

8.2 Any additional comments, suggestions and/or opinions that you would like to add to the abovementioned statements:……

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Thank you very much for your time and effort spend to complete this questionnaire. Your valuable participation is highly appreciated!

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APPENDIX 6: Tables 1-2

Table 1: Summary of Namibian PE Learning Objectives; Grade 1-3

Learning Content	Learning Objectives
Physical Fitness	Participate regularly in physical fitness activities such as imitative, strength, endurance, flexibility and coordination. Follow instructions and routines in physical activities and games.
Gymnastics	Demonstrate and apply a combination of skills with partners such as loco-motor, rotational, jumping and balancing activities, using small and big apparatus.
Athletics	Demonstrate endurance by performing different activities such as running, jumping, throwing and competitive activities Show cooperation with others and an attitude of healthy competition.
Sport Skills	Demonstrate positive sportsmanship behaviour and safety rules such as changing into appropriate clothes, obeying commands and care of apparatus. Apply muscle control skills such as dribbling, kicking, throwing and catching.
Games in Limited Space	Explain why they need to be physically active and how their bodies feel during different activities. Describe and demonstrate how to play safely. With direction, learners work cooperatively in pairs, group settings and demonstrate fair play to achieve simple common goals.

Table 2: Summary of Namibian PE Learning Objectives; Grade 4-7

Learning Content	Learning Objectives
Physical Fitness	Participate in: preparatory activities; cardio respiratory endurance activities; muscular strength and endurance activities; flexibility activities; speed activities; fitness evaluation activities and gained knowledge about the value of general fitness.
Gymnastics	Participate in: tumbling activities; jumping/vaulting activities; balancing activities on the balance beam or benches; challenging activities and evaluation activities of gymnastic skills.
Athletics	Develop the following techniques related to: the start; sprints; middle distance running; relays; hurdles; high jump; long jump; shot put; ball/javelin throwing for distance and be able to define and demonstrate principles of good sportsmanship.
Sport Skills	Demonstrate the ability of: moving body mass in different ways during the performance of activities peculiar to sport in the correct way; moving and stopping of unsupported objects without implements; moving and stopping of supported objects without implements; moving and stopping of supported objects with implements; moving and stopping of unsupported objects with implements; participate in various games with demonstration of good

	sportsmanship skills.
Water Activities (Optional)	Demonstrate the ability of performing: different swimming strokes; different ways of entry into water; water safety and life-saving skills; water activities with apparatus and stunts; water games and competitions; portraying good conduct and as a participant and spectator.
Games	Participate in: competitions in pairs; large group activities; small group activities; tag and dodging games; races and relays; traditional games; self-designed games.
Dance	Participate in: creative dance activities; social dance activities; rhythmical movement activities with hand apparatus.
Health Promotion Theoretical Aspects	Understand aspects related to: knowing my body; a healthy living style; good posture and composure; nutrition; harmful devices, habits and/or practises (pp. 6-22).

*** To be implemented 2016**

APPENDIX 7: Tables 8-22

Table 8: Qualitative Analysis: Frequency count dispersion of number of quotes

Number Of Quotations	**Categories Codes**	**Total Number of Category Code Quotations per Family**	**Code Families**
1-0	Community involvement	N73	Sustaining of the teaching of Physical Education
3-0	Different approach in Private Schools		
3-0	Lack of adequate resources		
16-0	Lack of proper facilities		
11-0	Lack of properly trained teachers		
12-0	Lack of sustained support from ministry		
5-0	Need more information about PE and PA		
6-0	Parent involvement should be encouraged		
9-0	PE neglected in schools		
2-0	Professional bodies should be involved		
5-0	PE syllabus should be revised		
5-0	Need more information about PE and PA	N15	Awareness of Physical Activity
2-0	No knowledge about PA		
9-0	Positive about inclusion of classroom PA		
2-0	Assessment in PE should be revised	N12	Characteristics of an Effective PE program
6-0	Curriculum Should be revised		
1-0	Curriculum unavailable		
3-0	PE should have same importance as other subjects		
1-0	PE has lifelong beneficial value	N9	Value of PE and PA
3-0	PE is beneficial to academic improvement		
2-0	PE is beneficial to child development		
2-0	PE is beneficial to health		

Table 10: Nonparametric Correlations for concerns about lack of proper facilities and resources

Correlations

			Q2d	Q5a	Q5b	Q5c	Q5e	Q5f	Q5h	Q5l
Spearman's rho	Q2d	Correlation Coefficient	1.000	.546**	.693**	.607**	.570**	.507**	.102	.273*
		Sig. (2-tailed)	.	.000	.000	.000	.000	.000	.397	.019
		N	76	75	75	75	75	75	71	74
	Q5a	Correlation Coefficient	.546**	1.000	.544**	.592**	.686**	.600**	.477**	.127
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000	.280
		N	75	75	75	75	75	75	71	74
	Q5b	Correlation Coefficient	.693**	.544**	1.000	.687**	.678**	.656**	.188	.281*
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.117	.015
		N	75	75	75	75	75	75	71	74
	Q5c	Correlation Coefficient	.607**	.592**	.687**	1.000	.745**	.709**	.434**	.242*
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.038
		N	75	75	75	75	75	75	71	74
	Q5e	Correlation Coefficient	.570**	.686**	.678**	.745**	1.000	.828**	.494**	.298**
		Sig. (2-tailed)	.000	.000	.000	.000	.	.000	.000	.010
		N	75	75	75	75	75	75	71	74
	Q5f	Correlation Coefficient	.507**	.600**	.656**	.709**	.828**	1.000	.371**	.321**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.001	.005
		N	75	75	75	75	75	75	71	74
	Q5h	Correlation Coefficient	.102	.477**	.188	.434**	.494**	.371**	1.000	.231
		Sig. (2-tailed)	.397	.000	.117	.000	.000	.001	.	.054
		N	71	71	71	71	71	71	71	70
	Q5l	Correlation Coefficient	.273*	.127	.281*	.242*	.298**	.321**	.231	1.000
		Sig. (2-tailed)	.019	.280	.015	.038	.010	.005	.054	.
		N	74	74	74	74	74	74	70	74

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 12: Nonparametric Correlations for concerns about lack of support from the MoE

Correlations

			Q5k	Q5l	Q8i
Spearman's rho	Q5k	Correlation Coefficient	1.000	.153	.041
		Sig. (2-tailed)	.	.192	.733
		N	75	74	71
	Q5l	Correlation Coefficient	.153	1.000	.047
		Sig. (2-tailed)	.192	.	.699
		N	74	74	70
	Q8i	Correlation Coefficient	.041	.047	1.000
		Sig. (2-tailed)	.733	.699	.
		N	71	70	72

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 14: Nonparametric Correlations for concerns about lack of properly trained PE teachers

Correlations

			Q8a	Q8b	Q8g
Spearman's rho	Q8a	Correlation Coefficient	1.000	.562**	.274*
		Sig. (2-tailed)	.	.000	.019
		N	76	75	73
	Q8b	Correlation Coefficient	.562**	1.000	.079
		Sig. (2-tailed)	.000	.	.507
		N	75	75	72
	Q8g	Correlation Coefficient	.274*	.079	1.000
		Sig. (2-tailed)	.019	.507	.
		N	73	72	73

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 16: Nonparametric Correlations for concerns about negligence of PE in the Khomas education regional council

Correlations

			Q2b	Q2e	Q2f	Q5d	Q5g	Q5i	Q5j
Spearman's rho	Q2b	Correlation Coefficient	1.000	.258*	.153	.367**	.181	.339**	.274*
		Sig. (2-tailed)	.	.025	.191	.001	.124	.003	.021
		N	76	76	75	74	74	75	71
	Q2e	Correlation Coefficient	.258*	1.000	.652**	.311**	.095	.209	.320**
		Sig. (2-tailed)	.025	.	.000	.007	.422	.072	.007
		N	76	76	75	74	74	75	71
	Q2f	Correlation Coefficient	.153	.652**	1.000	.208	.121	.274*	.410**
		Sig. (2-tailed)	.191	.000	.	.077	.308	.018	.000
		N	75	75	75	73	73	74	70
	Q5d	Correlation Coefficient	.367**	.311**	.208	1.000	.516**	.701**	.543**
		Sig. (2-tailed)	.001	.007	.077	.	.000	.000	.000
		N	74	74	73	74	73	74	70
	Q5g	Correlation Coefficient	.181	.095	.121	.516**	1.000	.697**	.532**
		Sig. (2-tailed)	.124	.422	.308	.000	.	.000	.000
		N	74	74	73	73	74	74	70
	Q5i	Correlation Coefficient	.339**	.209	.274*	.701**	.697**	1.000	.682**
		Sig. (2-tailed)	.003	.072	.018	.000	.000	.	.000
		N	75	75	74	74	74	75	71
	Q5j	Correlation Coefficient	.274*	.320**	.410**	.543**	.532**	.682**	1.000
		Sig. (2-tailed)	.021	.007	.000	.000	.000	.000	.
		N	71	71	70	70	70	71	71

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 18: Nonparametric Correlations for concerns about awareness about PA, positive attitude and eagerness to learn more about PA

Correlations

			Q4d	Q4h	Q4i	Q4j	Q4k	Q4l	Q4m	Q4n
Spearman's rho	Q4d	Correlation Coefficient	1.000	.361**	.314*	.173	.503**	.359**	.364**	-.085
		Sig. (2-tailed)	.	.003	.011	.166	.000	.003	.003	.504
		N	66	65	65	66	66	66	65	64
	Q4h	Correlation Coefficient	.361**	1.000	.401**	.199	.245*	.291*	.477**	-.118
		Sig. (2-tailed)	.003	.	.001	.101	.043	.015	.000	.347
		N	65	69	69	69	69	69	65	66
	Q4i	Correlation Coefficient	.314*	.401**	1.000	.287*	.403**	.552**	.439**	-.105
		Sig. (2-tailed)	.011	.001	.	.016	.001	.000	.000	.398
		N	65	69	70	70	70	70	66	67
	Q4j	Correlation Coefficient	.173	.199	.287*	1.000	.412**	.268*	.117	-.150
		Sig. (2-tailed)	.166	.101	.016	.	.000	.024	.345	.221
		N	66	69	70	71	71	71	67	68
	Q4k	Correlation Coefficient	.503**	.245*	.403**	.412**	1.000	.689**	.391**	-.349**
		Sig. (2-tailed)	.000	.043	.001	.000	.	.000	.001	.004
		N	66	69	70	71	76	71	67	68
	Q4l	Correlation Coefficient	.359**	.291*	.552**	.268*	.689**	1.000	.382**	-.321**
		Sig. (2-tailed)	.003	.015	.000	.024	.000	.	.001	.008
		N	66	69	70	71	71	71	67	68
	Q4m	Correlation Coefficient	.364**	.477**	.439**	.117	.391**	.382**	1.000	-.355**
		Sig. (2-tailed)	.003	.000	.000	.345	.001	.001	.	.004
		N	65	65	66	67	67	67	67	65
	Q4n	Correlation Coefficient	-.085	-.118	-.105	-.150	-.349**	-.321**	-.355**	1.000
		Sig. (2-tailed)	.504	.347	.398	.221	.004	.008	.004	.
		N	64	66	67	68	68	68	65	68

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 20: Nonparametric Correlations for concerns about the revision of the PE curriculum and syllabi, as well as the status of PE in comparison with other subjects

Correlations

			Q6a	Q6b	Q6c	Q6f	Q6g	Q6j
Spearman's rho	Q6a	Correlation Coefficient	1.000	.765**	.472**	.651**	.706**	.172
		Sig. (2-tailed)	.	.000	.000	.000	.000	.143
		N	75	75	75	71	74	74
	Q6b	Correlation Coefficient	.765**	1.000	.353**	.632**	.636**	.168
		Sig. (2-tailed)	.000	.	.002	.000	.000	.150
		N	75	76	76	72	75	75
	Q6c	Correlation Coefficient	.472**	.353**	1.000	.367**	.485**	.551**
		Sig. (2-tailed)	.000	.002	.	.002	.000	.000
		N	75	76	76	72	75	75
	Q6f	Correlation Coefficient	.651**	.632**	.367**	1.000	.719**	.032
		Sig. (2-tailed)	.000	.000	.002	.	.000	.788
		N	71	72	72	72	72	72
	Q6g	Correlation Coefficient	.706**	.636**	.485**	.719**	1.000	.280*
		Sig. (2-tailed)	.000	.000	.000	.000	.	.015
		N	74	75	75	72	75	75
	Q6j	Correlation Coefficient	.172	.168	.551**	.032	.280*	1.000
		Sig. (2-tailed)	.143	.150	.000	.788	.015	.
		N	74	75	75	72	75	75

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 22: Nonparametric Correlations for concerns about the value of PE and PA, and that PE is beneficial to academic development

Correlations

			Q3a	Q3b	Q3e	Q3f	Q3g	Q3h	Q3i	Q3j	Q3k
Spearman's rho	Q3a	Correlation Coefficient	1.000	.605**	.506**	.527**	.361**	.285*	.549**	-.239*	-.411**
		Sig. (2-tailed)	.	.000	.000	.000	.001	.013	.000	.039	.000
		N	76	75	76	76	76	75	76	75	75
	Q3b	Correlation Coefficient	.605**	1.000	.501**	.533**	.357**	.386**	.646**	-.007	-.310**
		Sig. (2-tailed)	.000	.	.000	.000	.002	.001	.000	.955	.007
		N	75	75	75	75	75	74	75	74	74
	Q3e	Correlation Coefficient	.506**	.501**	1.000	.657**	.492**	.538**	.577**	-.018	-.339**
		Sig. (2-tailed)	.000	.000	.	.000	.000	.000	.000	.877	.003
		N	76	75	76	76	76	75	76	75	75
	Q3f	Correlation Coefficient	.527**	.533**	.657**	1.000	.626**	.577**	.594**	-.123	-.333**
		Sig. (2-tailed)	.000	.000	.000	.	.000	.000	.000	.294	.004
		N	76	75	76	76	76	75	76	75	75
	Q3g	Correlation Coefficient	.361**	.357**	.492**	.626**	1.000	.635**	.501**	-.014	-.250*
		Sig. (2-tailed)	.001	.002	.000	.000	.	.000	.000	.904	.031
		N	76	75	76	76	76	75	76	75	75
	Q3h	Correlation Coefficient	.285*	.386**	.538**	.577**	.635**	1.000	.527**	-.104	-.364**
		Sig. (2-tailed)	.013	.001	.000	.000	.000	.	.000	.379	.001
		N	75	74	75	75	75	75	75	74	74
	Q3i	Correlation Coefficient	.549**	.646**	.577**	.594**	.501**	.527**	1.000	-.026	-.369**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.	.828	.001
		N	76	75	76	76	76	75	76	75	75
	Q3j	Correlation Coefficient	-.239*	-.007	-.018	-.123	-.014	-.104	-.026	1.000	.253*
		Sig. (2-tailed)	.039	.955	.877	.294	.904	.379	.828	.	.029
		N	75	74	75	75	75	74	75	75	74
	Q3k	Correlation Coefficient	-.411**	-.310**	-.339**	-.333**	-.250*	-.364**	-.369**	.253*	1.000
		Sig. (2-tailed)	.000	.007	.003	.004	.031	.001	.001	.029	.
		N	75	74	75	75	75	74	75	74	75

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).