

**UNIVERSITY OF EDUCATION, WINNEBA**

**FACTORS INFLUENCING THE PARTICIPATION OF CHILDREN WITH  
DISABILITIES IN PHYSICAL ACTIVITIES AND SPORTS**



**MASTER OF PHILOSOPHY**

**2022**

**UNIVERSITY OF EDUCATION, WINNEBA**

**FACTORS INFLUENCING THE PARTICIPATION OF CHILDREN WITH  
DISABILITIES IN PHYSICAL ACTIVITIES AND SPORTS**



**A thesis in the Department of Health, Physical Education, Recreation and  
Sports, Faculty of Educational Studies,  
submitted to the School of Graduate Studies in partial fulfilment  
of the requirements for the award of the degree of  
Master of Philosophy  
(Physical Education)  
in the University of Education, Winneba**

**AUGUST, 2022**

# DECLARATION

## Student's Declaration

I hereby declare that this thesis, with the exception of quotations and references contained in published works which have all been duly identified and acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Candidate's Signature: .....  
Name: Joyce Mawena

Date: .....

## Supervisors' Declaration

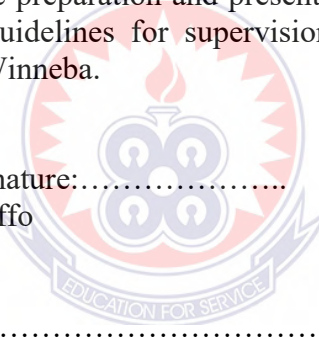
We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.

Principal Supervisor's Signature: .....  
Name: Dr. Patrick B. Akuffo

Date:.....

Co-supervisor's Signature:.....  
Name: Dr. Richmond Stephen Sorkpor

Date:.....



## **DEDICATION**

This piece of work is dedicated to my family especially my husband Mr. Benjamin Anim-Eduful, my children Nhyira Kofi, Akua Adeebi, Kwesi Yeboah and Akua Animah and my extended family members who helped me in one way or the other.



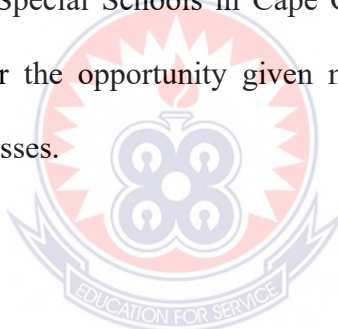
## ACKNOWLEDGEMENTS

My profound gratitude and appreciation is extended to my supervisor, Dr. Patrick Akuffo for his guidance throughout this process. This thesis would not have been complete without his kind support, insightful viewpoints and constructive comments. I am forever grateful.

I am also grateful to Dr. Richmond Stephen Sorkpor for his guidance, advice and invaluable support as my second supervisor.

I am also grateful to Mr. Licarion K. Miine and Mr. Isaac Tettey Adjokatse for the role they played during the study.

I finally, express my sincere gratitude to the headteachers, teachers and students of all the three Special Schools in Cape Coast Metropolis, Central Region involved in the study for the opportunity given me to conduct the study in their respective schools and classes.



## TABLE OF CONTENT

<b>Content</b>	<b>Page</b>
DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENT	ii
LIST OF TABLES	vi
LIST OF FIGURE	vii
ABSTRACT	viii
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
1.1 Background to the Study	1
1.2 Statement of the Problem	14
1.3 Purpose of the Study	15
1.4 Objectives of the study	15
1.5 Research Questions	16
1.6. Hypothesis	16
1.7 Significance of the Study	16
1.8 Delimitation of the Study	17
1.9 Limitations of the Study	17
1.10 Operational Definition of Terms	18
<b>CHAPTER TWO: LITERATURE REVIEW</b>	<b>19</b>
2.1. Theoretical Underpinning	19
2.1.1. The Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)	20
2.1.2. Self-Determination Theory (SDT)	22

2.1.3. Cognitive Evaluation Theory (CET)	27
2.2. Conceptual Framework of the Study	29
2.3. Meaning of Disability	31
2.4. Meaning of Adaptive Sports	32
2.5. Benefits of Physical Activity and Sports Participation	35
2.5.1. Health Benefits	36
2.5.2. Academic Benefits	38
2.5.3. Social Integration Benefits	40
2.5.4. Psychological Benefits	41
2.6. Perceived Barriers that Hinder Students' Participation in Physical Activities and Sport	43
2.6.1. Inaccessibility of Facilities	44
2.6.2. Lack of Opportunities for Participation	44
2.6.3. Lack of Trained Sports Teachers.	44
2.6.4. Fear of Rejection.	45
2.6.5. Lack of Financial Support.	45
2.6.6. Lack of Special Adaptive Aids.	45
2.6.7. Lack of Adult Supervision.	46
2.7 Summary of Reviewed Literature	47
<b>CHAPTER THREE; METHODOLOGY</b>	<b>50</b>
3.1. Research Design	50
3.2. Population	51
3.3. Sample and Sampling Procedures	51
3.4. Data Collection Instruments	53
3.4.1. Questionnaire	53

3.4.2. Reliability and Validity of Research Instruments	54
3.4.3. Interview Guides	55
3.5. Data Collection Procedures	56
3.6. Data Processing and Analysis	59
<b>CHAPTER FOUR: RESULTS, FINDINGS, ANALYSIS OF DATA AND DISCUSSIONS</b>	<b>60</b>
4.1. Types of Physical and Sporting Activities in which Students with Disability Participate.	60
4.2. Benefits of Regular Physical Activities and Sports	63
4.3. Inadequate Equipment and Facilities	91
4.3.1. Problems with Transportation	95
4.3.2. Financial Constraints	97
4.3.3. Government Policy	98
4.3.4. Attitude towards People with Disability (Discrimination)	100
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</b>	<b>108</b>
5.0. Summary of the Study	108
5.1. Key Findings	109
5.1.2. The findings from the exploration of level of participation of students with disabilities in physical activities and sports are:	109
5.1.3. The findings from the exploration of benefits of physical activities and sports participation to students with disabilities are:	110
5.1.4. The findings from the examination of factors influencing students with disabilities' involvement in physical activities and sports are:	111
5.2. Conclusion	112



5.3. Recommendations	114
5.4. Suggestion for Future Research	115
<b>REFERENCES</b>	<b>116</b>
<b>APPENDICES</b>	<b>128</b>
<b>APPENDIX A: QUESTIONNAIRE FOR STUDENTS WITH DISABILITY PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORTS</b>	<b>128</b>
<b>APPENDIX B: STUDENTS INTERVIEW GUIDE ON STUDENTS WITH DISABILITIES PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORTS</b>	<b>133</b>
<b>APPENDIX C: TEACHERS' INTERVIEW GUIDE ON STUDENTS WITH DISABILITIES PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORTS</b>	<b>134</b>



## LIST OF TABLES

<b>Table</b>		<b>Page</b>
1:	Type(s) of Physical Activities Participated by Students (N=194)	61
2:	Benefits of Regular Physical Activities and Sports to Students (N=194)	66
3:	Students' Frequency of Participation in Physical Activities and Sports (N=194)	73
4:	Time Students' Spend during Physical Activities and Sports (N=194)	75
5:	Places Students' Participate during Physical Activities and Sports (N=194)	78
6:	Levene's Test for Equality of Variance	80
7:	Independent-Samples t-test Results on Male and Female Students' with Disabilities on their Level of Participation in Physical Activities and Sports	81
8:	Factors Hindering Students Participation in Physical Activities and Sports (N=194)	86

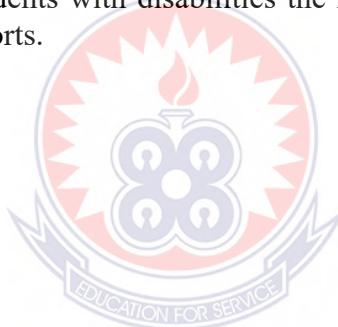
## LIST OF FIGURE

Figure	Page
1: Conceptual framework on students' with disabilities involvements in physical activities and sports	30



## ABSTRACT

One major goal of Physical Education is to provide opportunity for the youth to acquire the knowledge, skills and attitudes necessary for lifelong engagement in healthful physical activities. Everyone must have the opportunity to participate in physical education and special reference must be given to pupils with disabilities in special schools who deserve the right to a sound physical education experience as part of their fundamental human rights. This study, therefore, examined factors influencing the participation of children with disabilities in physical activities and sports. A convergent mixed methods research design was used to collect both quantitative and qualitative data from 194 students from three public special schools in Cape Coast Metropolitan in Central Region. The students were selected through purposive sampling technique. Questionnaires and interviews were used to collect data from the participants. Data were analysed using frequencies, percentages, and themes. The findings of the study revealed among others that, inadequate of disability user-friendly sporting facilities and equipment, and financial constraints were the major challenges. It is, therefore, recommended among others that, the Cape Coast Metropolitan Education Directorate in-charge of special education should prioritize physical education at special schools by providing disability user-friendly sporting facilities and equipment; means of transportation to assist students' athletes and also educate and sensitize students with disabilities the relevance of their participation in physical activities and sports.



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

Sports are institutionalized competitive activities that involve vigorous physical exertion, or the use of relatively complex physical skills by the participants, mostly motivated by personal enjoyment and external reward (Woods, & Butler, 2020). One major goal of Physical Education is to provide opportunity for the youth to acquire the knowledge, skills and attitudes necessary for lifelong engagement in healthful physical activities (MOE, 2010). Physical Education and School Sport have historically been considered an integral and essential part of childhood, promoting a wide range of benefits including childhood health, cognitive development, motor skills, and pro social behaviour and the positive influence of sport and exercise on health been well recognized (Pate, O'Neill & McIver, 2011). Physical Education and School Sport participation is also viewed as beneficial to educational actualization and attainment (Laurent, Burkart, Andre & Spence, 2021). Children's physical health, particularly their physical fitness, is associated with improved confidence and social engagement, increased attention, reduction in health related problems such as obesity, and a host of potentially protective factors for students at risk of poor school academic outcomes (Sivrikaya, 2018).

In a world that is rapidly changing, children in both primary and secondary schools benefit from developing a wide range of personal and social skills such as peer relationship skills, social behaviours (e.g. respect), leadership skills, problem-solving skills, personal and social responsibility skills (Weiss, 2011). When children develop these personal and social responsibility skills, they will not only be more successful learners, they will also be more likely to make a more successful transition

to adult life (Wright & Craig, 2011). Weiss (2011) revealed that young children develop these personal and social responsibility skills through their participation in physical education and sporting activities.

Wright and Craig (2011) indicated that physical education is considered to play an important role for the physical and psychosocial development of children and youth. It is the only subject taught at school that offers pupils the experience of dealing with the limits and opportunities of their own physical abilities since schools are considered as an ideal setting that help promote population health by providing more opportunities to be physically fit and active (Sevil, García-González, Abós, Generelo & Aibar, 2019). Physical Education, again, provides students the opportunity to gain knowledge, skills and attitudes in sports and physical activities (Pangrazi & Beighle, 2019).

World Health Organization (WHO, 2010) defined participation as the nature and extent of a person's involvement in life situations and includes activities of self-care, mobility, socialization, education, recreation, and community life. Participation in activities is the context in which people form friendships, develop skills and competencies, express creativity, achieve mental and physical health, and determine meaning and purpose in life. Children with disabilities tend to be more restricted in their participation than their peers, a gap that widens as children become adults (Shields & Synnot, 2016).

According to Smith and Wightman (2021), sports is an activity involving physical exertion with or without a game or competition elements. During rehabilitation, sports are often made part of the treatment to familiarize people with physical disabilities with sports. However, only few people with disabilities decide to stay physically active after they have completed their rehabilitation (Smith &

Wightman, 2021). Liu and Lachman (2021) asserted that physical education and sports are fundamental human right, and sport is a tool which can be used for effective socialization thereby placing everyone on an equal social footing. While social exclusion is unavoidable menace in every society, sport can be used as a tool to change and eliminate this phenomenon by modifying societal mindset, feeling and attitude towards people living with disabilities (Abbasi, Farhan & Hussain, 2020). On the other hand, sport can also change how people living with disabilities perceive and value themselves. Sport participation presents to people living with disabilities with positive social inclusion opportunities. This was affirmed by Nhamo and Sibanda (2019), that sports for people living with disabilities have played a significant role in modifying the attitudes towards disability and speeding up the social inclusion agenda. Basch (2011) revealed in his study that, almost all children living with disabilities hardly participate in sporting activities as compared to their non-disabled counterparts.

Carty, van der Ploeg, Biddle, Bull, Willumsen, Lee and Milton (2021) espoused that, physical education and sports play a typical role in the lives of the whole community and for people with disabilities, the same as it can for people without disabilities. These activities include play, exercise, recreation, organized, and non-organized competitive games that contribute to physical fitness, mental well-being and social interactions. Commitment to quality physical education entails a belief that each student can learn and succeed, that diversity enriches everybody, that students can learn better through involvement in a thoughtful and caring of colleague learners, that each student has strengths and weaknesses, and that collaborative efforts of everyone yields effective learning (Pangrazi & Beighle, 2019).

Sports participation is further influenced directly by time, home environment, and the child's perceived self-competence and indirectly by social support from schools and communities, family demographics, and family and child preferences (Carty, et al., 2021). Families who engage in physical activities themselves tend to promote similar participation for their children with disabilities (Piff et al., 2018).

According to American Academy of Pediatrics (2001), sports participation enhances the psychological wellbeing of children with disabilities through the provision of opportunities to form friendships, express creativity, develop a self-identity, and foster meaning and purpose in life. Kartini and Aprilia (2021) indicated that, Special Olympics participants show heightened self-esteem, perceived physical competence, and peer acceptance. Nhamo and Sibanda (2019) again indicated that physical activity has beneficial effects for both physical and mental health of children. Sports participation by student athletes have significant impact and effects on their character building and socialization with their peers (Rotolo, Kirkpatrick Johnson & McCall, 2020). There is a wealth of evidence to support participation in sport and physical activity for people with disabilities concerning trends, and benefits of participation.

In addition to health benefits, sports participation also promotes personal autonomy, community integration and life satisfaction of children with physical disability (Diaz, Miller, Kraus & Fredericson, 2019). Regular participation in physical activity develops body composition, skeletal health, and contributes to the prevention or delay of chronic disease. It improves several aspects of psychological health including self-esteem and promotes social contacts and friendships. It is also an important determinant of health that is associated with a range of physiological benefits in children, including reduced cardiometabolic risk and more preferable body size (Boddy, Downs, Knowles, & Fairclough, 2015). Physical activity in childhood is



also positively associated with mental health and academic achievement (Diaz et al., 2019) and it is therefore important that children and young people accrue sufficient physical activity. Furthermore, physical activity may be a pivotal factor not only in preventing obesity and health risks associated with weight gain but also in promoting healthy cognitive, psychosocial, and physical development in children with special needs.

Rotolo et al. (2020) indicated that movement is essential in the exploration of the child's physical capabilities and surrounding environment. Much enjoyment is experienced by children while participating in progressively more vigorous and physically challenging activities. It is very relevant for building children's competence, self-determination and identity, as well as their social and personal development and participation in meaningful physical activities correlates to their wellbeing. It was also opined by Cairney, Dudley, Kwan, Bulten and Kriellaars (2019), that learning ability and general health of a child may be improved with continuous engagement in physical activity. Each and every physical activity brings positive outcomes such as enhanced feelings of social inclusion, modeling appropriate behaviours for others with similar disabilities, displaying of shared interests and rewarding experiences (Hallawell, Stephens & Charnock, 2012). Currently, a wide variety of sporting activities are accessible to children with disabilities, and guidelines are available to assist children in recommending activities appropriate for children with specific conditions (American Academy of Pediatrics, 2001). Properly designed and implemented programs of sports and physical activities for children with disabilities should target cardiovascular endurance, flexibility, balance, agility, and muscular strength and accessibility, safety, and enjoyment (Dasso, 2019). Strategies to minimize the risks of illness or injury to children with disabilities during sporting

activities should be implemented before participation. Exercise that is of longer duration, greater frequency, and lower intensity compared with programs for typically developing children is recommended.

WHO (2016) also indicated that for some of the sustainable development goals to be met, it is crucial and essential that physical activity levels increase among all age groups most especially among children and adolescents. Higher levels of physical activity are not only fully compatible with schools' mandate to promote the health of their students, but, they are also unlikely to have adverse effects on learning (Barbosa, Whiting, Simmonds, Scotini, Moreno, Mendes & Breda, 2020). Mildly strenuous exercise has been shown to reduce stereotypic movements, maladaptive behaviours, and fatigue in children with autism and other developmental disabilities (Olin, McFadden, Golem, Pellegrino, Walker, Sanders & Arent, 2017). Physical activity is crucial for the development of cognitive, motor, and social skills, as well as good musculoskeletal health (WHO, 2016). According to Carty et al. (2021), regular physical activity is essential for the maintenance of normal muscle strength, flexibility, joint structure and function and may slow the functional decline often associated with disabling conditions.

According to Rasberry, Lee, Robin, Laris, Russell, Coyle, and Nihiser (2011), physical education has not yet been prioritized in many countries due to the prominence of other subjects, such as mathematics, languages, and sciences in which achievement is assessed by standardized testing methods. The time dedicated to physical education and active physical activity is rapidly and increasingly eroded in favour of sedentary lifestyles, a practice that may not, in fact, be associated with higher test scores (Rasberry et al., 2011). Aside academic achievement, physical

activity has a potential range of health benefits, including reduced risk of cardiovascular and metabolic disease and improved bone health (WHO, 2010).

Physical inactivity is growing significantly among young people, partly due to the rise in school-related sedentary behaviours (Clemes, Barber, Bingham, Ridgers, Fletcher, Pearson, Salmon & Dunstan, 2015). However, the school environment can promote a sedentary lifestyle by compelling students to sit still for long periods in the classroom (for couple of hours corresponding to approximately 70% of class time being sedentary) during lessons and other study activities (Clemes et al., 2015). The current epidemic of obesity associated with inactivity is a global healthcare concern for all children, including those with disabilities (American Academy of Pediatrics, 2006). Children with disabilities are more likely than other children to be sedentary, placing them at higher risk of obesity and its associated health conditions. In fact, children with certain developmental disorders have higher prevalence of being at risk of overweight and being overweight than children without developmental disorders (Bertapelli, Pitetti, Agiovlasitis & Guerra-Junior, 2016). Another study by Segal, Eliasziw, Phillips, BandiniCurtin,Kral, and Must (2016), revealed that obesity is found to be much higher among people with disabilities compared to the general population. One of the main reasons attributed include the lack of physical activity. Therefore, regular and effective physical activities are found to be good intervention strategies to help disabled groups of people to reduce their Body Mass Index (Segal et al., 2016).

Although regular physical activity participation among children with disabilities greatly foster independence, coping abilities, competitiveness, and teamwork (Harlow, Wolman & Fraser-Thomas, 2020) vast majority of people living with physical disability do not participate in sufficient physical activity to achieve

these health benefits (Martin Ginis, Ma, Latimer-Cheung & Rimmer, 2016). In general, daily physical activity levels of children with disabilities have been assumed to be lower than in children without disabilities (Martin Ginis et al., 2016). Many children and youth who have intellectual and developmental disabilities do not exercise sufficiently, play sports, or have access to recreational activities (Martin Ginis et al., 2016). Piff et al. (2018) also asserted that many individuals with disabilities are still, to a very large extent, socially segregated and they continuously experience negative societal stereotypes and low performance expectations, rendering them with limited opportunities for their participation in group physical activities. These unacceptable attitudinal barriers in their societies contribute to a lack of awareness regarding benefits and opportunities for their participation in physical activities (Piff et al., 2018).

Although active physical activities are beneficial, children with disabilities participating with other children in community activities can reduce societal barriers. It is a common misconception that children with disabilities are susceptible to trauma, therefore, should avoid rigorous sporting activities that are typically associated with injury (American Academy of Pediatrics, 2006). Although athletes with disabilities have rates of injury similar to those without disabilities, fear of injury frequently remains a barrier to participation. Overall, misconceptions and attitudinal barriers at the level of the individual, the family, and the community need to be addressed to integrate children of all abilities into recreational and sports activities (Piff et al., 2018).

According to WHO (2011), disability is a term that covers all sort of impairments, activity limitations, and participation restrictions. An impairment is a problem in body functioning or structure; activity limitation is a difficulty usually

encountered by an individual in executing or performing a task or action while a participation restriction is a problem experienced by an individual in involvement in life situations. Disability is both social and individual problem. Primarily it is a social problem, because what stops the individual who is disabled from contributing in the attitude of non-disabled persons towards him or her. Disability thus, is not only just a health problem but it is a complex phenomenon which reflects the interaction between features of an individual's body and that of the society in which he or she lives. Children with different kinds of disabilities mostly find it very difficult to integrate into society, not alone to participate in different activities or to take part in physical activities that their able peers participate in.

Inclusive education policies have been accepted and adopted by governments internationally over the past two decades (WHO, 2011). The right to education is a fundamental human right of each child (Willems & Vernimmen, 2018). Inclusive education is also part of an advocate for increased participation of all learners in mainstream schools that will meet the needs of all learners as well as respect their differences (Brandon & Ncube, 2006). Rather than exclusion from sports participation, the goal is inclusion for all children with disabilities in appropriate activities. It is therefore, important that children are empowered with an "I can do" attitude rather than discouraged by the message "you can't do that." (Dasso, 2019).

Participating regularly in physical activity enhances body composition (Razmjou, Abdulnour, Bastard, Fellahi, Doucet, Brochu & Prud'homme, 2018), bone health and psychological health (McHill, Phillips, Czeisler, Keating, Yee, Barger & Klerman, 2017) as well as promotes social engagement (Liu & Lachman, 2021). Children with disabilities often have delayed gross motor development, less proficiency in balance and coordination and poor cardiovascular fitness compared to

their peers with typical development, all of which could potentially be improved by participating in physical activity (Razmjou et al., 2018). The benefits of sports generally include an increase in health and physical fitness and a decrease in secondary conditions. Participation in physical activities by children with disability provides the opportunities that become fundamental experience that fosters the psychosocial development, interpersonal skills, self-confidence, and self-efficacy (US Department of Health and Human Services, 2008).

Conclusively, participation in sports has become an important doorway to higher education for students throughout the world and Ghana is not an exception. School sport in Ghana is very competitive hence only the best students (athletes) get to be selected to be included in the school team. This means that average performing students rarely get a chance to participate in inter-school competitions because winning is the ultimate goal for these participating schools. Also, winning schools gain a lot of prestige therefore, schools always strive to present their best teams comprising good performing athletes for competitions. At the special needs schools, students who are disabled (both boys and girls) in Ghana annually engage in competitive sporting events ranging from soccer, netball, basketball, volleyball, table tennis, hockey and handball games and athletics including both field and track events. To qualify as an athlete to represent your school and region, a player must compete at the inter-school competitions within the various special schools. Good performing athletes are then selected among the many to represent their respective regions within which the schools are located. Good performing students during inter-region Special Olympics are then selected to represent the country, Ghana at the Special Olympics at the continental level. It is therefore important to explore students with disabilities level of involvement in physical activities and sports, and possible factors that

influence their participation in physical activities and sports. Insights into these factors would help in providing opportunities to increase sports participation among students with physical disabilities. Positive effects of participation in youth sports can be as powerful for children with disabilities as it is for children without disabilities.

WHO (2010) defined impairment as any loss or abnormality of psychological, physiological, or anatomical, or other genetic or environmental agents. Disability also refers to any restriction or lack of ability to perform an activity in the manner or within the range considered normal for human being depending on age, sex, and social and cultural factors for that individual. Everyone in the society may experience disability at some point in their existence. Disability is a normal part of the human experience, and people with disabilities are part of all sectors of the community: men, women, and children; indigenous and non-indigenous; employers and employees; students and teachers; consumers and citizens.

In Australia, a qualitative study was conducted by Shields and Synnot (2016) on perceived barriers and facilitators involvement to children with multiple disabilities' (such as cerebral palsy, autism spectrum disorder, intellectual disability and vision impairments) participation in physical activity. The findings of the study revealed that, Children with disability engage in less physical activity compared to their typically developing peers. Another study in the Netherlands by Bloemen et al., (2015), explored the factors that influenced youth aged between 8-18 years with disabilities' (spina bifida) participation in physical activities. Participants of the study included the whole range of elementary and secondary school up to young adulthood; children and adolescents with SB (4–18 years) of age. Bloemen et al. reported that youth with SB encountered both personal and environmental factors as barriers associated with participation resulting in their less active lifestyle. Environmental

factors that were associated with physical activity included but not limited to accessibility of playgrounds and availability of sports facilities which influenced participation of youth with SB. Bloemen et al. (2015) therefore, concluded among others that, accessible playgrounds and sports facilities should be made available to help improve participants' participation in physical activities.

In Ghana, Hodge, Ammah, Casebolt, Lamaster, Hersman, Samalot-Rivera and Sato (2009), explored teachers who teach physical education students with disabilities' beliefs about inclusion education from various countries and cultures. The study involved 29 physical education teachers from Ghana (Africa), Japan, the US and Puerto Rico. Hodge et al. (2009) revealed among others that, teachers held varying beliefs about inclusive education and teaching students with disabilities physical education accompanied with greater opportunities which requires relevant professional development, and also physical educators believed that, they faced difficulties in teaching students with disabilities which were mostly related to the nature and severity of students' disabilities (that is, those with severe disabilities were more difficult to teach) and large class-size.

Another study in Ghana by Ackah-Jnr and Danso (2019), examined the physical environment of Ghanaian inclusive schools with regards to their accessibility, suitability and appropriateness. Findings of the study revealed that, poor physical environment for sports participation, thus influenced their involvements in sports participation. Ackah-Jnr and Danso suggested possible changes that can be made to better physical environment of inclusive schools in Ghana so as to encourage and assist students with disabilities' involvement, participation, and access in physical activities and sports in order to increase and maximise the education and social opportunities provided for these students with disabilities through physical activities.



According to Ghana's Persons with Disability Act, 2006, Act 715, the state should provide free education for persons with disability, and establish special schools for persons with disability who by reason of their disability cannot be enrolled in formal schools. It is also stipulated in the same Act mentioned that, persons with disability shall not be deprived of the right to participate in social, political, economic, creative or recreational activities and necessary facilities and equipment that will enable persons with disability to fully benefit from the school or institution should also be provided to enhance their involvement or participation in those activities.

Currently organizational structure of grassroots and elite disability sports is under the doctrine of the International Paralympic Committee, which develops policy and supervises the conduct of disabled sporting activities. There are four disability groups under the direction of International Sports Organization for the disabled:

1. Cerebral Palsy International Sports and Recreation Association
2. International Blind Sports Federation
3. International Federation for Sport for Persons with an Intellectual Disability;  
and
4. International wheelchair and Amputee Federation.

Unfortunately, many children with disabilities, particularly children with more significant disabilities such as physical, visual or intellectual disabilities or autism are either excluded from participation in sports or engage in less physical activity as compared to their able peers (Carlon, Shields, Dodd & Taylor, 2013), physical activities and sports have greater potential to decrease the risk of secondary health conditions, such as heart disease, diabetes, and obesity especially for individual participants (US Department of Health and Human Services, 2010). According to O'Brien, Belton and Issartel (2016), primary school physical education primarily aims

at contributing to the development of students' fundamental motor skills and physical competencies to support the development of social, cognitive and effective skills and behaviours to develop lifetime physical activity patterns.

It is well established that healthier children learn better, as educators and scientists alike have come to recognize the vital role of physical activity on children cognitive, and brain health development in education (Basch, 2011). In light of all these benefits that students participating in sports and physical activities obtain including those living with disability, it is reasonable and essential that maximum sports participation be encouraged at the basic schools, especially among children with disability.

## **1.2 Statement of the Problem**

People or children with disabilities' participation in physical activities have been a topical issue and several laws including Ghana's Persons with Disability Act, 2006, Act 715 encourage their involvement. There are a number of studies on people or students with disabilities' participation in physical activities but there are different views to it based on the participants' kind of disabilities, their ages and location (where the study was conducted). For instance, a study conducted in South Africa by Bantjes, Swartz, Conchar, and Derman (2015), which investigated a group of adolescents living with cerebral palsy's perceptions about important components of programmes developed to increase their participation in sport, revealed that well developed sporting programmes provide people with cerebral palsy the opportunities to socialise and also experience the positive benefits of physical activities. Bantjes et al. (2015) revealed, however, that participants requested for a variety and a wider range of disability user-friendly physical and sporting activities which are inclusive oriented.

Another cross-sectional survey conducted in Ghana by Cudjoe (2015), investigated the impact of regular physical activity on the general well-being of persons (adult) with physical disability. The study involved 520 adults' with disability in Kumasi Metropolis. The study revealed among others that, barriers such as lack of disability user-friendly facilities for training; influenced their sedentary lifestyle as persons with physical disability which decreased their regular physical exercise making them to be less active. These inactive lifestyles made them live a stressful and unhealthy life. Most previous studies focused only on adolescents and adults with disabilities participation in physical activities, however, none of these studies, has considered students with disabilities participation in physical activities and sports at the Basic School level.

Again, literature revealed indicated that, few studies have been done on students with different significant disabilities (those with visual and hearing impairments, and intellectual and developmental disabilities) participation in physical activities. However, among these studies none was found on students with visual, hearing and intellectual disabilities' participation in physical activities especially at the Basic School level in the Central Region of Ghana.

### **1.3 Purpose of the Study**

The intent of this study was to examine the factors influencing students with disabilities' participation in physical activities and sports.

### **1.4 Objectives of the study**

The objectives of the research were to:

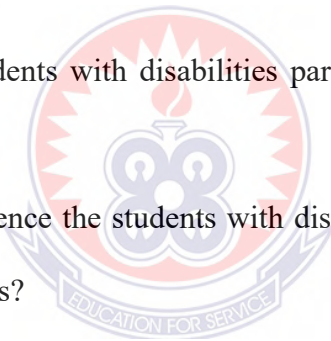
1. identify the type(s) of physical activities that students with disability are mostly engaged in.

2. identify the benefits of participating in physical activities to students with disabilities.
3. identify how often students with disabilities participate in physical activities.
4. identify factors influencing students with disabilities' participation in physical activities and sports.

### **1.5 Research Questions**

The study was guided by the following questions:

1. What type(s) of physical and sporting activities are students with disability mostly engaged in?
2. What are the benefits of physical activities and sports participation to students with disabilities?
3. How often do students with disabilities participate in physical activities and sports?
4. What factors influence the students with disabilities' participation in physical activities and sports?



### **1.6. Hypothesis**

To determine whether there was a statistical significant difference between the mean scores of male and female students' with disabilities' level of participation in physical activities. A null hypothesis was formulated as:

**H<sub>0</sub>:** There is no significant difference between male and female students' with disabilities' level of participation in physical activities.

### **1.7 Significance of the Study**

The study is significant because it will expose the factors that affect school children with disabilities participation in physical activities at the basic schools in order to establish the extent to which these factors influence children with disabilities'

lessons in physical education. This will inform stakeholders on what should be done to help curtail those factors, in order to help students with disabilities to actively participate in physical activities. This study will also provide information to Cape Coast Metropolitan Education Directorate as to how certain negative practices do influence physical education and hence students with disabilities' participation in physical activities. Findings of this study would be served as a model for other special schools in the rest of the country to help improve and sustain students with disabilities participation in physical activities.

### **1.8 Delimitation of the Study**

The study was delimited to Cape Coast Metropolis which has its own unique features. Cape Coast Metropolis happens to be unique because it is the only District Assembly in Central Region that has two segregated special schools and an inclusive school. Again, the study was delimited to physical activities and sports including activities students perform at school and home like playing soccer, volleyball, table tennis, goal ball, showdown, running, brisk walking, jogging, dancing and moving from place to place. Further, the study was delimited to the two segregated special schools and the only inclusive school within Cape Coast Metropolis, therefore recommendations made as a result of data collected pertains to the Metropolis only.

### **1.9 Limitations of the Study**

The study confined only to two public segregated special schools and an inclusive school in Cape Coast Metropolitan within Central Region and therefore its finding cannot be generalized to all the special and inclusive schools in Ghana but only to special and inclusive schools within other regions with characteristics similar to Central Region in terms of culture and socio-economic factors. Duration for the data collection for the study was affected due to the researcher's inability to

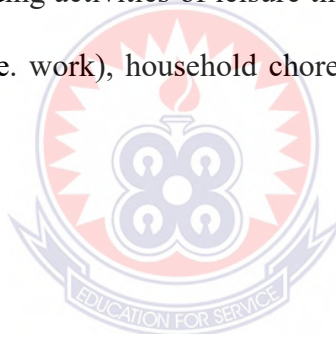
communicate directly to the students with hearing impairments using sign language and disruptive classroom was experienced as a result of COVID-19 pandemic. This made the researcher to interview few students and also prolonged the time spent during the data collection period.

### **1.10 Operational Definition of Terms**

**Participation:** Term used to refer to active engagement in sporting activities such as games and athletics.

**Sports:** Formal competitive physical activities engaged in by students during inter-schools competition.

**Physical activity:** is any bodily movements produced by skeletal muscles that require energy expenditure including activities of leisure time, transportation (e.g. walking or cycling), occupational (i.e. work), household chores, play, games, sports or planned exercise (WHO, 2016).



## CHAPTER TWO

### LITERATURE REVIEW

This study intended to examine factors influencing the involvement of children with disabilities in physical activities and sports. Based on this, some research works relating to adaptive sports, disability, benefits of physical activity and sports participation, perceived barriers that hinders students' participation in physical activities and sports were reviewed in this chapter. The following review and discussion of related literature were organized in areas such as:

1. Theoretical Underpinning,
2. Conceptual Framework,
3. Meaning of Adaptive Sports,
4. Meaning of Disability,
5. Benefits of physical activity and sports participation,
6. Perceived barriers that hinders students' participation in physical activities.

#### **2.1. Theoretical Underpinning**

The Theories of Reasoned Action and Planned Behaviour (Ajzen & Fishbien, 1980; Ajzen, 1988), and Self-determination theory (SDT) (Deci & Ryan, 1985) are the main theories that underpin this study. Cognitive Evaluation Theory (CET) (Deci & Ryan, 1985) which is a sub-theory of Self-determination theory was also discussed to compliment self-determination theory. These theories were used because of their relevance in explaining the importance of person's involvements in regular physical activities and sports, and their consequences on their health.

### **2.1.1. The Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)**

The theories of Reasoned Action and Planned Behaviour are concerned with the factors that influence a person's decisions about his or her behaviour (Ajzen & Fishbein, 1980; Ajzen, 1988). The theory of reasoned action states that an individual's intention to perform a target behaviour will predict whether that behaviour is actually performed (Ajzen & Fishbein, 1980). Intention to engage in a behaviour comprise two factors; the individual's attitude toward the behaviour and the social factors (subjective norms) toward engaging in the behaviour. Other people such as family, friends or teachers can influence subjective norms. For instance, if the individual believes physical activity improves health, energy and mood, if they perceive minimal barriers (costs) to be active, and if they have a very supportive system that encourages physical activities, then, they will intend to be active, which will course them to be active.

According to the theory of reasoned action, proper decisions about people behaviour are based on information and beliefs about their actions, the outcome they expect from their actions, and the value they place on these outcomes (Ajzen & Fishbein, 1980). The most important component of this theory, however, is that an individual's intentions form the best predictor of his or her actual behaviour. The intention to perform certain actions reflects the person's attitudes about the behaviour. The attitude toward exercise, for instance, reflects the individual's beliefs about the benefits and consequences of positive and negative evaluations of engaging or not engaging in regular exercise. It is now appreciated that individuals face considerable barriers when changing complex behaviours such as physical activities (Saligheh et al., 2016).



What has become apparent within the last decade is that changing behaviour is a complex and multifaceted phenomenon with multiple levels of influences (Saligheh et al., 2016). Theory of Reasoned Action proposes that performance of volitional behaviours (acting without constraints) such as physical activities are best predicted from an individual's stated intention to participate in physical activity (Ajzen & Fishbein, 1980).

Theory of planned behaviour has been used extensively to understand the influencing factors of adoption, motivation and adherence to physical activities (Resnick, Palmer, Jenkins & Spellbring, 2000). The development of theory of planned behaviour was built upon theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980). According to Ajzen (1985), this model extends the theory of reasoned action by adding the factor of perceived behavioural control to engage in the behaviour while theory of reasoned action assumes that the behaviour is under the individual's control. Theory of Planned behaviour postulates that most behaviours are on a continuum from total control to no control (Ajzen, 1985). Individual's perceived ability to engage in a behaviour will vary across situations and is influenced by resources, opportunities and skills.

A study by Rizzo and Columna (2020), revealed that both the TRA and the TPB perform well in the quest of explaining intentions of a wide range of populations specifically within physical activities. Kim, Dunn, Rellinger, Robertson-Wilson and Eys (2019) also emphasised that, TRA and TPB help predict the behaviour of people specifically within the physical activity domain; even though they found the theory of planned behaviour to be superior over theory of reasoned action. Ajzen and Fishbein (1974) revealed that attitude is the primary predictor of intentions, whereas most often than not, it is the social norm within which a person functions. Developing social

links with family or friends who regularly participate in physical exercises greatly influence one's attitude towards exercises and often results in better exercise adherence (Alesi & Pepi, 2017). In conclusion, intention to exercise does appear to be important in predicting exercise behaviour and perceived behavioural control appears to be an important component of intention to exercise.

### **2.1.2. Self-Determination Theory (SDT)**

Self-determination theory (SDT) is a broad theory of human personality and motivation concerned with how the individual interacts with and depends on the social environment (Deci & Ryan, 1985). Self-determination theory (SDT) is uniquely placed among theories of human motivation to examine the differential effects of qualitatively different types of motivation that can underlie behaviour (Redman, 2016). Originating from a humanistic perspective, hence fundamentally centered on the fulfillment of needs, self-actualization, and the realization of human potential, SDT is a comprehensive and evolving macro-theory of human personality and motivated behaviour (Ryan & Deci, 2017). Self-determination theory also proposes that people have dispositional tendencies, named causality orientations (Deci & Ryan, 1985) which describes the way people preferentially orient towards their environments, resulting in characteristic motivational and behavioural patterns. Although some people may be more inclined to seek out and follow their internal indicators of preference in choosing their course of action, others may more naturally tend to align with external directives and norms. Ryan and Deci (2017) indicated that, Self-determination theory describes the critical impact of the social and cultural context in either facilitating or thwarting people's basic psychological needs, perceived sense of self-direction, performance, and well-being. Consequently, Ryan and Deci (2017) highlighted the role of social environments in supporting or

thwarting one or more of the three psychological needs, and in turn influencing the degree to which motivation is autonomous.

Self-Determination Theory suggests that everyone (individual) has three basic and inherent psychological needs that must be met in order for their psychological well-being to be maximized (Van den Broeck, Howard, Van Vaerenbergh, Leroy & Gagné, 2021). These three psychological needs are autonomy, relatedness and competence, and their necessary role in self-determined motivation, well-being, and growth (Imms, Granlund, Wilson, Steenbergen, Rosenbaum, & Gordon, 2017). The first need is to feel autonomous in performing any activity. Autonomy involves being volitional and acting in such a way to represent one's integrated sense of self and feeling in-charge of one's action (Van den Broeck et al., 2021). Autonomy refers to behaviours being self-determined or freely initiated by the individual (Cooke, Fielding & Louis, 2016). The second need is to perceive relatedness with others in the community of involvement and appreciating the need to be included as part of the group (Imms et al., 2017). The third fundamental need is to perceive competence in relation to the activity. Competence is widely regarded as fundamental to the expression of motivation in the sport context (Reinboth & Duda, 2006). Competence also indicates what the individual believes and feels that they have the ability to perform any task/activity adequately and control the outcome. A study by Van den Broeck et al., (2021), revealed that individuals who experience higher levels of satisfaction of the three fundamental needs express more self-determined forms of regulation.

Self-determination theory is a highly appropriate conceptual framework from which to study students' involvement in physical activities (Ryan & Deci, 2017). Self-determination theory distinguishes among three types of behavioural regulation that

are associated with varying degrees of self-determined motivation. One form of motivation is intrinsic motivation that refers to those circumstances in which individuals freely engage in activities that they find to be interesting and enjoyable and which provide the opportunity for learning (Deci & Ryan, 1985). According to Ryan and Deci (2017), human behaviours are influenced to a greater extent by personal and contextual motivational factors.

According to Deci and Ryan (2002), self-determination theory proposes that humans have three fundamental needs that must be satisfied in the social context. The self-determination continuum comprises both intrinsic and extrinsic components. SDT defines intrinsic and several types of extrinsic motivation and outlines how these motivations influence situational responses in different domains, as well as social and cognitive development and personality. Consequently, (Redman, 2016) viewed SDT to distinguish between intrinsic and extrinsic types of motivation regulating a person's behaviour. Rheinberg and Engeser (2018) defined intrinsic motivation as person's participation in an activity because of its inherent satisfactions. Intrinsically motivated person experiences great feelings of enjoyment, personal accomplishment, and excitement (Rheinberg & Engeser, 2018). To some larger extent, recreational sports and exercises can certainly be performed by the intrinsically motivated person for their associated enjoyments or for the challenge of participating in an activity. People who are intrinsically motivated are engaged in specific activities for their own sake and for the pleasure, fun, and satisfaction inherent in their participation (Deci & Ryan, 1985; Rheinberg & Engeser, 2018). In this regard, involvement is characterised by an internal locus of causality and individuals consider their actions to be self-determined and volitional. Locke and Schattke (2019), revealed that there are three types of

intrinsic motivation in relation to sport involvement that correspond to the motivation for stimulating experiences, gaining of knowledge, and accomplishing things.

A second type of motivation which is in sharp contrast to intrinsic motivation is extrinsic motivation. For this type of motivation, individuals engage in activities because they value the associated outcomes. Chirkov, Kim, Ryan, and Kaplan (2003) indicated that extrinsic motivation refers to doing an activity for instrumental reasons, or to obtain some outcome separable from the activity. For instance, an extrinsically motivated person usually engages in an activity to gain a tangible or social reward or to avoid disapproval. SDT, however, conceptualizes qualitatively different types of extrinsic motivation, which they differ in terms of their relative autonomy. Such outcomes could include extrinsic rewards, and public recognition and praise. Extrinsic motivation itself lies on a continuum that is a reflection of the internalization process that varies from the more self-determined to the less self-determined (Chirkov et al, 2003). These expressions all involve external forms of regulation.

In each circumstance, people act in such a way so as to attain a desired outcome, such as a tangible reward or to avoid a potential punishment. On the continuum of extrinsic motivation, external regulation is the least self-determined form of motivation because externally regulated behavior is motivated by rewards and punishments and driven by feelings of the need to comply. Introjected regulation is somewhat more self-determined in that this expression of extrinsic motivation depends upon self-control and the individual's goal is to avoid negative feelings such as guilt and anxiety, as well as to experience positive ego-related feelings such as pride (Redman, 2016). Howard, Gagné, Morin and Van den Broeck (2016) reiterated that, with introjected regulation, external source of motivation is internalized and is reinforced through internal pressures such as anxiety or emotions and the person feels

that they engage in a behaviour because they must or have to. Identified regulation occupies the next place on the continuum and motivation centers of feelings of personal importance and the value of engaging in the activity. Identified regulation refers to motivation stemming from personal values and endorsement of a behaviour or its outcomes (Deci & Ryan, 2002).

The most complete form of internalization in extrinsically motivated behaviour is known as integrated regulation (Deci & Ryan, 2002). Integrated regulation represents reasons for behavioural enactment that align with one's identity and core values. Individuals who have integrated regulation are motivated to engage in activities because their involvement in such tasks provides harmony or coherence with other aspects of their values and their identity (Deci & Ryan, 2002). In addition, Deci and Ryan (2002) also indicated that, this type of motivation does not only identify with the relevance of the participating activity, but also the desire to integrate this sense of identification with other aspects of the self. Grootens-Wiegers, Hein, van den Broek and de Vries (2017) indicated that integrated regulation does not typically appear until people are sufficiently matured. Specifically, integrated and identified regulations, although extrinsic motivations, are highly self-determined regulatory styles.

The third category of motivation is amotivation. Ryan and Deci (2017) identified amotivation as a state in which individuals lack any type of intention or motivation to engage in a given behaviour. Amotivation constitutes a psychological state in which people lack either a sense of efficacy or a sense of control with respect to attaining a desired outcome (Ryan & Deci, 2017). In other words, amotivated people are not able to regulate themselves with respect to their behaviour (Howard et al., 2016). In this circumstance, the individual does not feel in control and the locus

of control is external (Redman, 2016). Lack of motivation can broadly be explained by two factors. First, people may not be sufficiently interested in exercise or value its outcomes enough to make it a priority in their lives (Ryan, Williams, Patrick & Deci, 2009). Many individuals experience competing demands on their time from educational, career, and family obligations, possibly at the expense of time and resources that could be invested in exercising regularly. Second, some people may not feel sufficiently competent at physical activities, feeling either not physically fit enough or skilled enough to exercise, or they may have health limitations that present a barrier to their participation in physical activity (Korkiakangas, Alahuhta & Laitinen, 2009). Large numbers of individuals are either amotivated or not sufficiently motivated enough to be physically active, or are motivated by other types of externally-driven motivation that may not lead to sustained physical activity (Howard et al., 2016).

In conclusion, SDT promotes exercise behaviour which plays beneficial role of developing autonomous self-regulation, be it predominantly via autonomous forms of extrinsic regulation (identified and integrated regulation) or enhanced intrinsic motivation (Korkiakangas et al, 2009). This however, enhances and improves the exerciser's health conditions and reduces subsequently minimizes their risk of being ill.

### **2.1.3. Cognitive Evaluation Theory (CET)**

According to Hagger and Hamilton (2021), cognitive evaluation theory is a sub-theory of the self-determination theory which further explains the relationship and the distinction between intrinsic and extrinsic motivation. Individuals experience intrinsic motivation when, they engage in behaviours they perceive as inherently interesting, satisfying, gratifying, enjoyable and fulfilling. But individuals experience

extrinsic motivation, when, they are engaged in behaviours merely because of the objective consequences they might attract, such as tangible rewards or praise Hagger and Hamilton (2021), Matarazzo, Durik and Delaney (2010) posit that individuals are intrinsically motivated when they are engaged in tasks that seem interesting and challenging to them. Again, in contrast to extrinsic motivation, intrinsic motivation tends to enhance persistence, wellbeing, and creativity (Matarazzo et al., 2010).

Locke and Schattke (2019), revealed that, CET seeks to describe how both internal and external events affect people's intrinsic motivation. Locke and Schattke (2019) viewed intrinsic motivation as a person's engagement in activities out of enjoyment and interest rather than for the consequence or incentive attached to the behavior. Intrinsic motivation occupies the most self-determined end of the continuum and involves motivation derived from the sheer pleasure and satisfaction of engaging in the behaviour itself (Cooke et al., 2016). Redman (2016) reiterated that, intrinsic motivation is non-instrumental in nature; when people are intrinsically motivated, they are not concerned with the outcome that will be received or avoided by engaging in those actions. Rather, they perform the behaviour because it inherently satisfies and interests their inner being. In contrast, extrinsic motivation is fundamentally instrumental. People are extrinsically motivated when they are concerned with performing an action because of the consequence associated with it; behaviour is contingent upon receiving or avoiding an outcome that is separable from the behavior in question (Redman, 2016).

In addition, Locke and Schattke (2019) posited that, intrinsic motivation can be enhanced or undermined, depending on the degree to which external events (such as rewards, punishers), interpersonal contexts (such as criticism or praise from a relationship partner), and internal proclivities (such as one's own trait-level tendency



to feel task-engaged) affect the individual's self-perceptions of autonomy and competence. Autonomy is the innate need to feel self-direction and self-endorsement in action, as opposed to feeling controlled, coerced, or constrained, whereas competence is the need to feel effective and masterful as though one's actions are useful in achieving desired outcomes. Competence underlies the seeking out of optimal challenge and the development of capacities. When external, social/interpersonal, and internal conditions facilitate satisfaction of the individual's needs for autonomy and competence, then intrinsic motivation is increased and enhanced.

## **2.2. Conceptual Framework of the Study**

The framework in Figure 1 was designed as a guide to the study. It was used to indicate the factors influencing the participation of children with disabilities in physical activities and sports. Children with disabilities' participation in physical activities and sports are influenced by students' own factors, teachers' factors, economic factors, health factors, environmental factors, and factors' of facilities and equipment. Students' factors could be intrapersonal (within the student) such as interest and interpersonal (between the students and peers/family members) such as intimidation, neglect: teachers' factors' such as supervision, monitoring and motivation. Economic factors like lack of financial resources. Health factors like fear of injuring oneself again. Environmental factors' such as space and transport, and facilities and equipment factors' like lack of and unavailability of sporting facilities and equipment affect students with disabilities involvement in physical activities and sports.

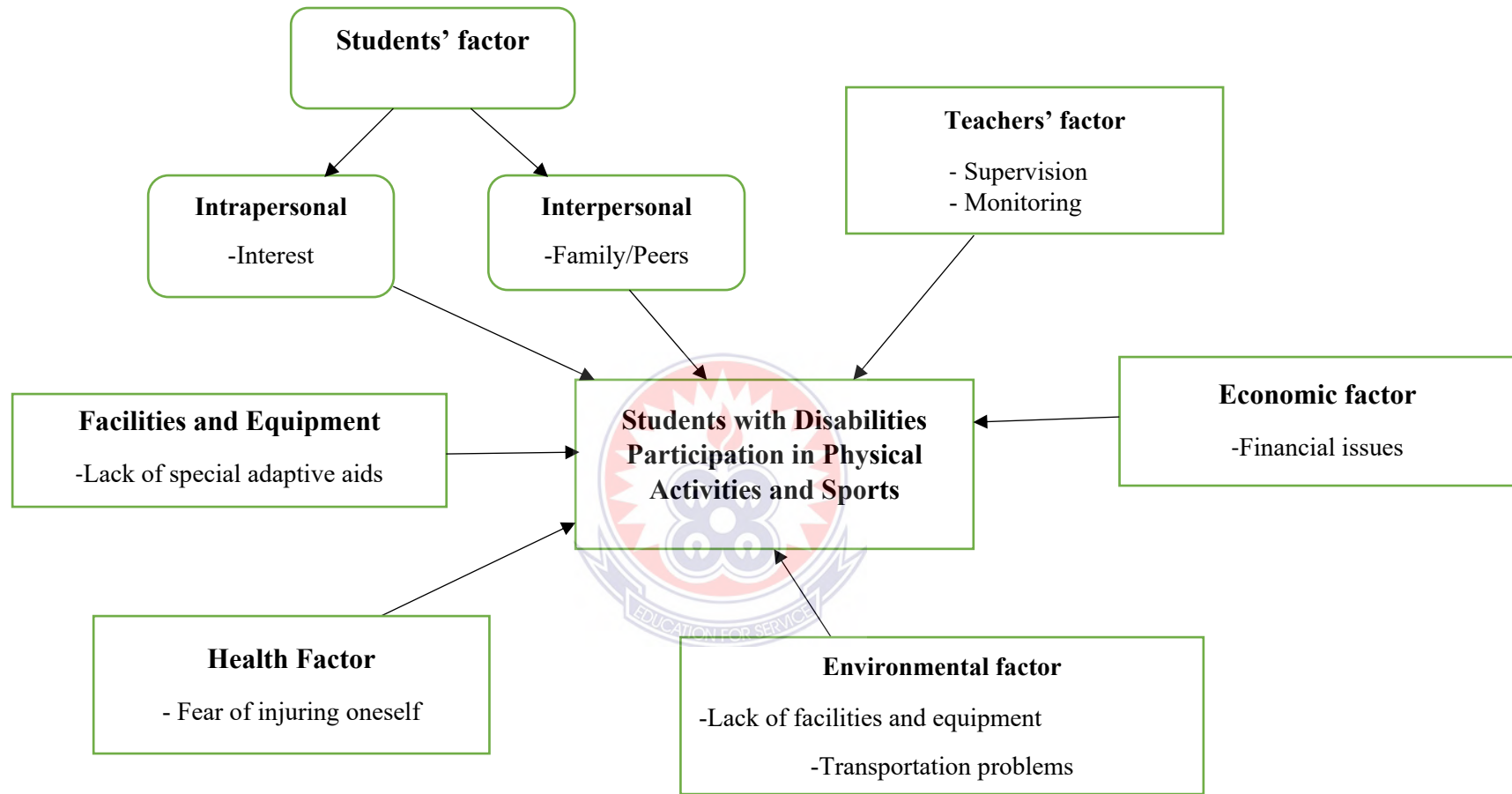


Figure 1: Conceptual framework on students' with disabilities involvements in physical activities and sports.

Source: Author's Construct (Mawena, 2022).

### 2.3. Meaning of Disability

According to World Health Organization (2016), disability is a term which covers impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; whereas a participation restriction is a problem experienced by an individual in involvement in life situations (Ritchie, 2018). It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she live. Children with different kind of disabilities do find it very difficult to integrate into society and also participate in different physical activities as compared to their peers without disability, basically due to the barriers they encounter while participating in physical activities (WHO, 2016).

Post and Van Leeuwen, (2012) defined physical disability as body impairment that limits activities and/or restricts participation. A physical disability can have a negative impact on an individual's self-esteem and can prevent participation in recreational and social activities that benefit physical and emotional wellness, thus creating the potential for isolation from peers (Post & Van Leeuwen, 2012). Another study by Buljevac, Majdak and Leutar (2011), revealed that individuals with a disability often feel as though society defines them by their disability or treats them as though they are ill or are responsible for their disability. Both men and women with sensory impairments have the lowest level of participation in physical activity, although males with disabilities are more likely to engage in physical activity than woman with disabilities (Disabled World, 2016). Studies conducted by (Groff, Lundberg & Zabriskie, 2009; Holland, 2015) indicated that inactivity has the potential to increase chances of having both physical and psychological conditions such as high

blood pressure and depression, and can also lead to social isolation and decreased quality of life for individuals with disabilities.

#### **2.4. Meaning of Adaptive Sports**

Various definitions of adapted physical education have been developed over the past years (Auxter, Pyfer, Zittel & Roth, 2010; Sherrill, 2004; Winnick, 2011). Lastuka and Cottingham (2016); and Sherrill (2004) defined an adaptive sport as the conventional sports that have been altered and modified to meet the fundamental needs of people with disabilities through a wide range of activities. Winnick (2011) viewed adapted sports as sports modified or created to meet the needs of individuals with disabilities. Adaptive sports are sports that allow participation of all populations with inclusion of assistive devices such as wheelchairs, crutches, specially created chairs, modified hand-held equipment (Moll, 2017). Adaptive sports allow individuals who may not be able to walk, run, hold a ball, or otherwise participate, and get involved in physical activity. Almost any sport can be adapted to be able to be performed by an individual with a disability (Groff et al., 2009). According to Winnick (2011), adaptive sports allow for modifications of the sport to allow individuals with a disability to be able to participate. Almost any sport can be modified to allow for inclusion of those with any level of disability: basketball, hockey, rugby, lacrosse, and so on. Adaptive sports offer many benefits to the individuals that participate in them, including improved levels of functioning and independence in activities of daily living, increased physical capability, improved physiological capacity, increased levels of employment, and improved social status and sense of belonging. All of these components influence an individual's quality of life.

Sherrill (2004) asserted that, adapted physical education is a subdiscipline of physical education which place more emphasis on physical education for students with disabilities. The term adapted physical education generally refers to school-based programs for students ages 3–21; the more global term adapted physical activity refers to programs across the lifespan, including post school programs (Sherrill, 2004).

Adapted physical education programs are those that have the same objectives as the regular physical education program, but adjustments are made in the regular offerings to meet the needs and abilities of exceptional students (Dunn & Leitschuh, 2010; Sherrill, 2004). According to Sherrill (2004), both general and adapted physical education share the same objectives. The major difference between general and adapted physical education is that, in adapted physical education, adjustments or adaptations are made to the regular offerings to ensure safe, successful, and beneficial participation. Simple adaptations such as asking a peer to provide assistance, modifying the equipment and rules of games, or providing alternative activities under the guidance of a trained adapted physical education specialist do little to disrupt the learning environment and create a productive and enjoyable physical education experience for all students (Sherrill, 2004; Winnick, 2011). Dunn and Leitschuh (2010) espoused that student with disabilities positively benefit from physical education and that physical education services, modified when necessary, and should be a part of all students' educational programs especially disabled students. According to Disabled Sports USA (2009), involvement in adaptive sports has a long-lasting positive effect for people living with disabilities. Individuals involved in adaptive sports programs have increased employment rates, more physically active lifestyles, and enjoy socializing more (Disabled Sports, 2016). Adaptive sports have shown to improve overall health, increase life satisfaction, decrease depressive symptoms, and develop a positive self and athletic identity in individuals with disabilities (Moll, 2017). By providing a significant outlet for expression, adaptive sports contribute to development of self-perception, create a sense of group identity, and promote the ability to alter perception of disability (Moll, 2017). Additionally, Gisladdottir, Matthiassdottir and Kristjansdottir (2013) asserted that, regular participation in sports

has shown to not only decrease depressive symptoms but also increase overall physical and mental well-being. Adaptive sports have been shown to combat secondary medical conditions and promote self-efficacy through engagement in occupations such as health management and maintenance, work, play, leisure, and social participation and therefore are an important intervention to consider.

A study by Rodriguez-Ayllon, Cadenas-Sánchez, Estévez-López, Muñoz, Mora-Gonzalez, Migueles and Esteban-Cornejo (2019), explored the concept of self in athletes with disabilities. The study revealed among others that, participating in recreational activities enhance participants' physical and social self as well as increasing their confidence. Thus, supporting adaptive sports has the ability to positively influence self-efficacy of athletes including people with disabilities. Playing an adapted sport can be a rewarding experience that creates personal satisfaction (Martin Ginis, Jetha, Mack & Hetz, 2010), and a feeling of proficiency (Ritchie, 2018). In addition to enabling them to enjoy the ensuing physical and psychological benefits, playing an adapted sports could make a positive contribution to the quality of life of people with mobility limitations (Martin Ginis et al, 2010). An adapted sport participation helps to develop a sense of belonging to a group (Ritchie, 2018). Adapted sports help to develop a more positive view of one's health and a feeling of well-being (Aho, Renmarker, Axelsson & Jakobsson, 2021).

Physical Education in primary and secondary schools offer a wide range of physical activities within, and beyond, the curriculum to engage children and young people in purposeful, worthwhile, enjoyable and enriching learning experiences. Physical Education aims to provide children and young people with learning experiences that enable them to develop: the knowledge, motivation and competence to live a physically active life (MOE, 2010). In light of this, any physical and sporting

activities such as adaptive sports should be made available to involve children with disabilities in special schools to encourage them to participate in physical activities and sports.

## **2.5. Benefits of Physical Activity and Sports Participation**

According to Shields and Synnot (2016), the term “participation” is defined by the World Health Organization as the nature and extent of a person’s involvement in life situations and includes activities of self-care, mobility, socialization, education, recreation, and community life. Participation in activities is the context in which people form friendships, develop skills and competencies, express creativity, achieve mental and physical health, and determine meaning and purpose in life (Holland, 2015). Children with disabilities tend to be more restricted in their participation than their peers: a gap that widens as children become adults (Shields & Synnot, 2016). This section, therefore, reviews the literature on the benefits of sports, including health benefits, academic benefits, social integration and psychological benefits. It is well recognised that sports and physical activities can make a significant contribution to individuals and to society, particularly if appropriate skills and positive attitudes to sports are developed at a young age (Augestad, 2017). Scarpa (2011) opined that there is no reason to suppose that there is any less for disabled individuals than for their non-disabled peers. In fact, participation in sport has the potential to promote the social inclusion of disabled young people and increase their self-esteem. Sport and physical activities offer the disabled individuals the possibility of overcoming the stigma often associated with their disability (Holland, 2015). Participation can provide the context within which young people exceed the expectations associated with their disability through demonstrations of physical skills or fitness (Shields & Synnot, 2016). Regular physical activity is vital for people, both children and adults, disabled

or non-disabled alike (Holland, 2015). The following are the positive consequences of sports and physical activities participation.

### **2.5.1. Health Benefits**

Research has shown that sport and regular physical activities have health benefits. Physical activity reduces blood pressure, the risk of getting diabetes, cancer, heart disease and strokes and an active lifestyle also helps to reduce stress and maintain a healthy body weight (Schutz, Busetto, Dicker, Farpour-Lambert, Pryke, Toplak & Schutz, 2019). Sport and physical activity are important components in a healthy lifestyle for children including those with disabilities (WHO, 2010). Physical activity contributes to developing healthy bones and efficient heart and lung function, and can positively impact on the functioning of the body's immune system. Sport and physical activity contribute to the prevention of chronic diseases such as cardiovascular disease, diabetes, hypertension, obesity and osteoporosis (Shapiro & Martin, 2010). Positive effects of physical activity on children and adolescents include reduced risk of diabetes, overweight and obesity, anxiety, and depression (WHO, 2010). The benefits are also great for young people with disabilities (Johnson, 2009; Moran & Block, 2010), especially where mainstream sports opportunities are lacking for people with disabilities (Bantjes et al., 2015). Learning ability and general health of a child may be improved with continuous and effective engagement in physical activity (WHO, 2019). Each and every effective physical activity brings positive outcomes such as enhanced feelings of social inclusion, modeling appropriate behaviours for others with similar disabilities, displaying of shared interests and rewarding experiences (WHO, 2019).

Pellegrini and Hesla (2018) revealed that, one of the most important tasks of public health is to find possible ways to increase physical activity among children and



youth with disabilities, thereby improving their health. Participation in organized physical activities can lead to greater participation in other everyday life contexts (Kissow, 2015). Severe obesity and sedentary leisure-time are more common among young people with disabilities than in the rest of the population (Pellegrini & Hesla, 2018). It is very worrisome to note that young people with disabilities participate in sports to a lesser extent than other adolescents (Moll, 2017). Incidence of obesity and elevated risk for disease can be prevented, as these are associated with low levels of physical activity and fitness among children (Ogden, Carroll, Curtin, Lamb & Flegal, 2010). Reports from U.S. Department of Health and Human Services (2002) and National Association for Sport and Physical Education (NASPE, 2004) have emphasized the importance of regular physical activity on health benefit across the life span, including reducing the risk of heart disease ameliorating and preventing numerous other disease states such as diabetes, cancer and osteoporosis. In addition, physical activity is related to positive mental health and enhanced quality of life (Ma, Le Mare & Gurd, 2014). Although adolescents are more active than adults, participation in physical activity declines with age throughout adolescence. (Centre for Disease Control, 2002; Hagger & Hamilton, 2021). Ma et al. (2014) reported that the incidence of obesity is found to be much prevalent and higher among people especially children with disabilities as compared to the general population. One of the major reasons attributed included lack of physical activities. Therefore, intervention studies using physical activity programs have being found to be effective in reducing Body Mass Index (BMI) of disabled children. Apart from physical activity, the amount of time spent in participating in sporting activities is also an important factor for better health among children with disabilities (Ma et al., 2014). Findings from a study by Kumari and Raj (2016), revealed among others that, physical inactivity

contributes to obesity, cardiovascular diseases and other life style problems to people with disabilities. The study also indicated that regular physical activity promotes overall well-being and promotes academic performance and learning in disabled children. Based on this outcome, Kumari and Raj recommended that, any lifestyle intervention that is meant for the enhancement of academic performance in children with disabilities should include, frequent physical and sporting activities. Such promotion of physical activity in disabled populations would result in noteworthy enhancements in their health and academic outcome. Furthermore, Bershwinger and Brusseau (2013) reiterated that engaging in moderate-to-vigorous physical activity during the school-age years is a critical time for children to develop the motor skills and knowledge that will enable them to develop healthy lifelong physical fitness habits. Regular participation in physical activity develops body composition, skeletal health, and contributes to the prevention or delay of chronic disease. It is therefore important that children and young people accrue sufficient physical activity. Looking at the significance and contribution of sports and physical activities in the development of the participant, it is quite essential that maximum sports participation be encouraged.

### **2.5.2. Academic Benefits**

It is well established that healthier children learn better, as educators and scientists alike have come to recognize the vital role of physical, cognitive, and brain health in education (Basch, 2011). Children who engage in daily physical activity, a behaviour requiring energy expenditure beyond rest, reap multiple health benefits. Relative to the rate of physical activity participation are the resulting benefits that include, but not limited to: increased physical fitness as a proxy measure of health, increased bone density, reductions in overweight/obesity, decreased risk for

cardiovascular disease, and lowered likelihood of depression (Janssen & LeBlanc, 2010). Children engaged in unhealthy behaviours like poor eating habits, obtaining an insufficient amount of sleep, or other sedentary behaviours, are less likely to experience developmentally appropriate learning. Sustained engagement in inappropriate behaviours has health consequences. For instance, children who enter school overweight or become overweight in their first few years of formalized schooling have lower academic performance on standardized tests than those children of a healthy body weight (Datar & Sturm, 2006). Additionally, aerobically fit children demonstrate enhanced academic performance over their inactive and unfit peers (Wittberg, Northrup & Cottrell, 2012). Efrat (2013) reiterated that physical activity improves students' performance in mathematics, reading, and general composite examination scores. Incorporating physical activity into the classroom setting has also shown to be beneficial to increasing the amount of time students spent focusing on the academic tasks assigned to them (Grieco, Jowers, Errisuriz & Bartholomew, 2016; Mahar, 2011). Ritchie (2018) found a relationship between sports participation and academic achievement of student-athletes. The results indicated a positive effect regarding students' sports participation and their academic outcome. It also showed in the study that, male student athletes received slightly higher grades than their female student athletes' counterparts. Studies by Pellegrini and Hesla (2018) reaffirmed findings of Ritchie (2018) that, students athletes earned higher grades, on average, than their non-student athletes' peers. Moreover, a study by Brecht and Burnett (2019) revealed that student-athlete sports participation facilitates and enhance positive racial/ethnic relations as well as positive inter-group attitudes.

In addition, Dale, Vanderloo, Moore and Faulkner (2019) asserted that, physical activities have positive influences on disabled children in terms of reducing

stress, anxiety and depression, and also strengthens their overall academic performances. Consequently, Dale et al. (2019) opined that it is beneficial to have children engage in exercise and regular physical activity, thereby making it a habitual daily life activity and a route to maintain good health.

### **2.5.3. Social Integration Benefits**

Sport has been identified as an important factor for the person with a disability becoming integrated into society (Kitchin & Crossin, 2018) and learners with physical disabilities enjoy physical activities (Chen, Hammond-Bennett, Hypnar & Mason, 2018). A study by Boddy et al. (2015), revealed among others that, not only do physical activities provide school-age children with opportunities for enjoyment, relaxation, recreation, self-enrichment and goal achievement but it's also very useful for building their competence, self-determination and identity, as well as for social and personal development. According to Fullagar, McCall, Impellizzeri, Favero and Coutts (2019), capacity of sports, both competitive and recreational, inculcate positive behavioural changes and develops various desired personality traits among its participants. Participation in sports activities strengthens and improves peer relations and helps in developing friendships and associations within the community.

Furthermore, Chism (2020) posits that, positive character traits can effectively be learned through ardent participation in sports and physical activity, whereas one of the significant outcomes of sports and physical activity participation is promotion of social cohesion within the society. Efrat (2013) emphasized that, sport is not a mere source of amusement or pass time, rather, considering its numerous benefits and upshots, it is believed to be a very useful and worthwhile activity. Mahar (2011) attested to the fact that people who participate in physical activity and sports benefit a lot. Mahar, here, indicated that people who participate are often happy, friendly,

competitive and kind, which means people who frequently participate in physical activities develop dynamic healthy life, and become creative personalities as well. In accordance with this view, physical activity and sports create a mentally, physically and physiologically healthy society. Participation in sport can therefore make a significant contribution to individuals as well as to society, including both children with physical disabilities and their able-bodied peers.

Besides health benefits, sports participation also promotes personal autonomy, community integration and life satisfaction of children with physical disability (Diaz et al., 2019). Furthermore, Diaz et al. (2019), reiterated that physical activity may be a pivotal factor not only in preventing obesity and health risks associated with weight gain but also in promoting healthy cognitive, psychosocial, and physical development in children with special needs. Sport and physical activities through physical education can teach children key values such as honesty, teamwork, fair play, respect for themselves and others, discipline, and adherence to rules. While these are valuable lessons for all children, children with disabilities in particular may lack the social education and opportunities to learn these lessons, due to overprotection at home and isolation (Mahar, 2011).

#### **2.5.4. Psychological Benefits**

Along with health, academic, social and physical benefits, physical activities and sport participation also have psychological benefits. Sport instils self-discipline, a competitive spirit, and comradeship (Kitchin & Crossin, 2018). Its value in promoting health, physical strength, endurance, social integration, and psychological wellbeing is of little doubt. It is not difficult to understand why sport is so important for the wellbeing of people with disabilities (Kitchin & Crossin, 2018). Regular physical

activities and sports enhance disabled children's psychological health and also promotes their social engagement (Alesi & Pepi, 2017).

Scarpa (2011) revealed that participation in physical activity and sports are recognized as a fundamental right, but its numerous benefits are particularly relevant to people with disability. People with disability taking part in physical activity and sports programs report a great sense of achievement and pride, improved self-concept and self-esteem, better social skills, as well as increasing mobility and independence (Augestad, 2017). Whilst these benefits are similar to those experienced by people without disability, the benefits are thought to be more significant to people with disability given their typical isolation and exclusion from other community activities, especially in resource-poor settings (Dudfield & Kaye, 2013). Children can suffer from low self-esteem and self-confidence because of unsupportive parents, or because of emotional crises during adolescence as their bodies change (Augestad, 2017). Children with disabilities may be particularly susceptible to low self-esteem and self-confidence. They may also suffer from inferiority complex viewing themselves as being inferior to other children (Dudfield & Kaye, 2013). This self-view may be the result of the attitudes and practices of their families and others around them such as their teachers and other children. Sport which enables people with and without disability to come together in a positive social environment is also thought to promote inclusion and empowerment by challenging negative beliefs about the abilities of people with disability (Ritchie, 2018) It also improves several aspects of psychological health including self-esteem and promotes social contacts and friendships (Boddy et al., 2015).

Additionally, Sivrikaya (2018) reiterated that student health predicts low educational level, social and economic inequalities, and behaviour problems

experienced into adulthood. Highly active individuals are more significantly optimistic and usually experience greater self-efficacy than non-active or low-active people (Sivrikaya, 2018). Sports participation enhances the psychological wellbeing of children with disabilities through the provision of opportunities to form friendships, express creativity, develop a self-identity, and foster meaning and purpose in life (Tint, Thomson, & Weiss, 2017). Special Olympics participants show heightened self-esteem, perceived physical competence, and peer acceptance when compared with nonparticipants (Tint et al., 2017).

## **2.6. Perceived Barriers that Hinder Students' Participation in Physical Activities and Sport**

According to Carlon et al. (2013), children with disability engage in less physical activity compared to their typically developing peers. Children with physical disabilities have special needs that must be met to be able to actively participate in sports to enhance and encourage their participation (Carlon et al., 2013). Some of these are available and well-functioning sporting facilities, trained teachers/coaches, available information on disabled sports, opportunities in sports participation and financial support for disabled sports (Augestad, 2017). Razmjou et al. (2018) reiterated that barriers to sports participation differ based on whose views are elicited. For instance, Razmjou et al. (2018) indicated that, children with disability tend to focus on personal and environmental factors, while parents focus on familial, social and policy, and programme factors. Gay, Eschalier, Levyckyj, Bonnin and Coudeyre (2018) also identified barriers to physical activities and sports participation by children and young people with disabilities in organized sports, to include personal, social, psychological and environmental barriers.

The following perceived barriers to physical activities and sports participation, including inaccessibility of facilities, lack of adequate training of teachers or coaches, lack of information on disabled sports, lack of opportunities to participate, fear of rejection, lack of special adaptive aids, lack of adult supervision and lack of financial support are discussed.

### **2.6.1. Inaccessibility of Facilities**

A study on barriers to physical activity and sports participation by Augestad (2017), revealed that, inaccessibility of sporting facilities within the environment was found to be one of the greatest barriers to sporting and physical activities. In addition, the UK Disability Survey (Augestad, 2017) also identified lack of local and inaccessible sporting facilities as a major factor preventing persons with disabilities from participating in sports and physical activities.

### **2.6.2. Lack of Opportunities for Participation**

According to Augestad (2017), children with disabilities are often regarded as ill or in need of constant care, and are not provided with equal opportunities to participate in sporting events in their societies. Decisions are usually made for children with disabilities and they are not given the opportunity to participate in sports. Therefore, taking all the possible barriers into account, children with disabilities are not provided with the same opportunities to participate in sport as their able-bodied peers (Chen et al., 2018).

### **2.6.3. Lack of Trained Sports Teachers.**

According to Liu and Lachman (2021), lack of and insufficient trained teachers/coaches to help children with disabilities during sporting events is a barrier to students' involvement in physical activities. Personnel from the sports and recreation sector are ideally placed to promote participation in physical activity among children



with disability given their role in the design, organisation and delivery of activity opportunities and infrastructure (Chen et al., 2018). Lack of specialised sports coaches for sports for persons with disabilities remains a significant barrier to participation in sports for learners with disabilities (Chen et al., 2018). Without sports coaches, learners with disabilities cannot participate in sports (Augestad, 2017).

#### **2.6.4. Fear of Rejection.**

Chen et al. (2018) indicated that, students with disabilities mostly do not participate in sports because of fear of rejection by their peers. In a more competitive world, learners with disabilities often feel less competent when competing with able-bodied learners (Chen et al., 2018).

#### **2.6.5. Lack of Financial Support.**

Lack of finance has been identified and happens to be one of the main barriers to participation in sports by children living with disabilities (Augestad, 2017). Children with disabilities often have delayed gross motor development, less proficiency in balance and coordination and poor cardiovascular fitness compared to their peers with typical development (Alesi & Pepi 2017) all of which could potentially be improved by participation in physical activity. The reasons for lower levels of participation in physical activity among children with disability are complex and multifactorial (Razmjou et al., 2018). Lack of and unavailability of enough financial resources greatly influence sporting activities since sporting equipment for special aids are costly and not all segregated schools can afford them to be used during sporting events (Augestad, 2017).

#### **2.6.6. Lack of Special Adaptive Aids.**

Chen et al. (2018) indicated that, lack of and high cost of special adaptive aids such as specialised wheelchairs, handcycles prevent children with disabilities from

participating in sports since these materials are needed by children with disabilities for their physical activities participation.

#### **2.6.7. Lack of Adult Supervision.**

Children with disabilities often need extra support to be able to participate in sports and cannot get to sport practices and back home without adult supervision. Lack of such supervision is a barrier to participation in sports (Augestad, 2017). Shields and Synnot (2016) explored the barriers and facilitators to participation in physical activity from the perspectives of children with disability, their parents, and sports and recreation industry personnel. The study revealed among others that, physical activity providers, schools, and disabled peers could better facilitate physical activity among children with disability; parents and families are also crucial to children with disability physical activeness. Consequently, the study revealed that, parents are a child's primary advocate that support their sports participation practically and financially. The value parents place on physical activity is indicative of the level of their child's participation, and there is strong correlation between parents and child beliefs about physical activity. The study also indicated that social barriers to sports participation such as attitudes of parents, teachers and peers of disabled children were more influential than other types of barriers. In addition, Shields and Synnot (2016) revealed that, negative attitudes, societal stereotypes of disability and a lack of acceptance by peers were also barriers to participation. Shields and Synnot then concluded that, for children with disability to be fit and active, their skills practice and their peer's involvement, family support, accessible and functioning facilities, opportunities sensitive to the needs of children with disability, skilled staff/teachers and information dissemination facilitates and influence their participation in physical activities and sport.

## 2.7 Summary of Reviewed Literature

The literature review has looked at both the theoretical and empirical aspects of the study under investigation as:

1. Disability is a term which covers impairments, activity limitations, and participation restrictions (WHO, 2016).
2. Children with different kind of disabilities do find it very difficult to integrate into society and also participate in different physical activities as compared to their peers without disability due to the barriers they encounter while participating in physical activities (WHO, 2016).
3. Physical disability can have a negative impact on an individual's self-esteem and can prevent participation in recreational and social activities that benefit physical and emotional wellness, thus creating the potential for isolation from peers (Post & Van Leeuwen, 2012).
4. Adaptive sports are the conventional sports that have been altered and modified to meet the fundamental needs of people with disabilities through a wide range of activities (Lastuka & Cottingham, 2016).
5. Adaptive sports are sports that allow participation of all populations with inclusion of assistive devices such as wheelchairs, crutches, specially created chairs, modified hand-held equipment (Augestad, 2017).
6. Individuals involved in adaptive sports programme have increased employment rates, more physically active lifestyles, and enjoy socializing more (Disabled Sports USA, 2009).
7. Regular participation in sports has shown to not only decrease depressive symptoms but also increase overall physical and mental well-being (Gisladottir et al., 2013).

8. Participation in sport has the potential to promote the social inclusion of disabled young people and increase their self-esteem (Scarpa, 2011).
9. Sport and physical activities offer the disabled individuals the possibility of overcoming the stigma often associated with their disability (Holland, 2015).
10. Regular physical activity is vital for people, both children and adults, disabled or non-disabled alike (Holland, 2015).
11. Engaging in moderate-to-vigorous physical activity during the school-age years is a critical time for children to develop the motor skills and knowledge that will enable them to develop healthy lifelong physical fitness habits (Bershwiner & Brusseau, 2013).
12. Student-athlete sports participation facilitate and enhance their positive racial/ethnic relations as well as positive inter-group attitudes (Brecht & Burnett, 2019).
13. Regular physical activities and sports enhance children with disabilities' psychological health and also promotes their social engagement (Alesi, & Pepi, 2017).
14. People with disability taking part in physical activity and sports programmes report a great sense of achievement and pride, improved self-concept and self-esteem, better social skills, as well as increasing mobility and independence (Augestad, 2017).
15. Children with disabilities may be particularly susceptible to low self-esteem and self-confidence, hence suffer from inferiority complex – viewing themselves as being inferior to other children (Dudfield & Kaye, 2013).
16. Sports participation enhances the psychological wellbeing of children with disabilities through the provision of opportunities to form friendships, express

creativity, develop a self-identity, and foster meaning and purpose in life (Dasso, 2000).

17. Children with physical disabilities have special needs that must be met to be able to actively participate in sports to enhance and encourage their participation (Carlton et al., 2013).

18. Barriers to physical activities and sports participation by children and young people with disabilities in organized sports include personal, social, financial, psychological and environmental barriers (Gay et al., 2018)



## CHAPTER THREE

### METHODOLOGY

This chapter outlines the methodology employed in this study. It covers the areas of research design, population, sampling and sampling procedures, instrumentation, reliability and validity, data collection procedure and data analysis procedure. The chapter also provides information on how the reliability and validity of the instruments were determined. Data collected with the research instruments were used to determine students with disabilities' level of participation in physical activities, and factors that influence students with disabilities participation in physical activities and sports.

#### 3.1. Research Design

This study employed a convergent mixed method research design. This research design allowed for collection of both quantitative and qualitative data at the same time (Creswell & Plano Clark, 2018). The quantitative and qualitative data were collected and analysed independently and merged together during the interpretation stage. This allowed the quantitative data collected to be compared with qualitative data, and vice versa. Subsequently, the qualitative data helped to give more insights into the quantitative data (Creswell & Plano Clark, 2018). Mixed method research is a systematic integration of quantitative and qualitative approaches in a single study for purposes of obtaining a better picture and an in-depth understanding (Creswell, 2012). According to Creswell (2014) mixed methods research acknowledges that all methods have inherent biases and a weakness; that using a mixed method approach increases the possibility of the data collected being richer, more meaningful, and more importantly being useful in answering the research questions. Again, the use of this

particular design helped to achieve the purpose of the study and also helped to draw meaningful conclusions from the study.

### **3.2. Population**

There were 193 basic schools in Cape Coast Metropolis in Central Region in 2021/2022 academic year. Of the 193, 80 were public schools and 113 private schools. Out of the 80 public basic schools, only three were special schools in the Metropolis, two of them segregated special schools and the other an inclusive school. The population for the study included basic school (primary and junior high) students with disabilities (such as deaf, visually-impaired, and intellectual and developmental difficulties) in special and inclusive schools within Cape Coast Metropolis. This was because these students and teachers were in a better position to contribute to the study, since the study intended to examine factors influencing the participation of students with disabilities in physical activities and sports. Special and inclusive schools within Cape Coast Metropolis were chosen for the study due to proximity and researcher's familiarity within the area. The two special segregated schools were Cape Coast School for the Deaf/blind (School A) and Aboom School for Special Needs (School B). Students at Cape Coast School for the Deaf/blind were those with hearing difficulties (deaf) and visual-impairment (blind) whereas students at the Aboom School for Special Needs are those children with Intellectual and Developmental Difficulties. The other inclusive school was Ghana National College Inclusive Basic School (School C). Students at the inclusive school are those with visual impairment.

### **3.3. Sample and Sampling Procedures**

The sample selection process in this study involved purposive sampling technique. The purposive sampling technique employed helped to select three out of the 80 public basic schools (the only schools with pupils with disabilities) within the

Metropolis. The three special schools made up of two special segregated schools and the other inclusive school was purposively selected due to their unique characteristics.

Purposive sampling technique was again used to collect both quantitative data and qualitative data from students in the two special segregated schools that is Cape Coast School for the Deaf/blind and Aboom School for Special Needs. Purposive sampling technique was employed because it enabled the researcher to select more matured students who were capable of understanding the items in the questionnaire in order to provide more reliable data for the study (Shields & Synnot, 2016). Shields and Synnot (2016) reported that older children (10–18 years) and adolescents are more matured to respond to research questionnaires better to provide more reliable data than younger children (6-9 years) who may have difficulty responding the questionnaires properly to better the study at the same level. For this reason, purposive sampling technique was used to select students from upper primary (class four) through to the junior high school level. There were a total of 160 students in all the selected classes in school A. Subsequently, census sampling technique was employed to collect data from all the 160 students in the aforementioned classes in school A.

Again, purposive sampling technique followed by census sampling procedure was used to select students with disabilities in the inclusive school. Since students with disabilities in the only inclusive school were all visually-impaired among their abled students, hence purposive sampling technique employed. Census sampling procedure was further employed to collect data from all the students with disabilities who were visually-impaired. Based on the sampling techniques employed in all the three special schools, 160 students were selected from School A, 10 students from School B and 24 students from School C. This implied that a total of 194 students



with disabilities from the three special schools participated in the study (Krejcie and Morgan as cited in Cohen, Manion & Morrison, 2000).

Through census sampling technique of 194 students (82.5% from School A, 5.2% from School B and 12.3% from School C) participated in the study. Of the 194 students, 74.7% were deaf, 20.1% visually-impaired and 5.2% were those with intellectual and developmental difficulties. Different numbers of participants from the three schools were selected based on the student's population. That is, school A was more populated than school C likewise, school C more than school B.

### **3.4. Data Collection Instruments**

Questionnaire and interview guides were the main research instruments for the study. These were:

1. Questionnaire for Students with Disabilities' Participation in Physical Activities and Sports (QSDPPAS)
2. Student Interview Guide on Students with Disabilities' Participation in Physical Activities and Sports (SIGSDPPAS)
3. Teacher Interview Guide on Students with Disabilities' Participation in Physical Activities and Sports (TIGSDPPAS)

#### **3.4.1. Questionnaire**

Questionnaire for Students with Disabilities Participation in Physical Activities and Sports (QSDPPAS) were in two sections (Appendix A). Section A sought for biodata of respondents: name of school, sex and age. Section B was made of four subsections. These subsections sought to inquire from students:

1. the types of physical and sporting activities they are frequently engaged in;
2. how often times they participate in physical activities;
3. benefits obtained from their participation in physical activities and sports;

4. factors that hinder their participation in physical activities and sports.

Subsection one contained a list of physical activities which were eight in number. Respondents were to tick the one they frequently engaged in. For subsection two, questionnaire items were presented in a three-point Likert scale, 1=Very Often (VO), Quite Often (QO), and Occasionally (O). The questionnaire items were all of closed-ended type. The respondents were to choose responses applicable to statements provided by ticking the most appropriate column. Respondents were subsequently provided with two items. One was for them to indicate how long they spend during their activity participation and two; where do they mostly engage the activity they had indicated. Both subsection three (made of 17 questionnaire items) and four (made of 16 questionnaire items), and, all the questionnaire items were presented in a five point Likert scale, 5=Strongly Agree (SA), 4=Agree (A), 3=Undecided (U), 2=Disagree (D) and 1= Strongly Disagree (SD). The questionnaire items were all of close-ended type.

### **3.4.2. Reliability and Validity of Research Instruments**

To establish validity, the research instruments (questionnaire, and semi-structured interview) were given to experts from the Department of Health, Physical Education, Recreation and Sports of the University of Education, Winneba for scrutiny. Again, content and face validity of the instrument were checked by the same experts from the Department of Health, Physical Education, Recreation and Sports of the University of Education, Winneba who were more knowledgeable about physical education and sports. This was to ensure that, the items were devoid of ambiguities, and this also helped improve the quality of QSDPPAS items before they were pilot-tested with 50 students and 10 teachers from Sekondi School for the Deaf in the Sekondi-Takoradi Metropolis of Western Region. Sekondi School for the Deaf was

considered for the pilot testing because it possesses similar characteristic with the schools selected for the study in Cape Coast Metropolis.

To determine the reliability coefficient and internal consistency of the questionnaire, Cronbach alpha reliability was used. The Cronbach alpha reliability for QSDPPAS was 0.827. The questionnaire was therefore considered acceptable and reliable, since instruments with reliability coefficient of 0.70 and above are preferably higher (Cronbach & Shavelson, 2004; Fraenkel & Wallen, 2000). This helped to sharpen and fine tune the instruments as it corrected the weaknesses, inadequacies and ambiguities that characterized the items, and the instrument measured its intended purposes. The Cronbach alpha reliability value of the questionnaire items were reliable.

### **3.4.3. Interview Guides**

To obtain an in-depth understanding about the factors that influence students with disabilities participation in physical activities and sports, students and teachers were interviewed through audio recordings using SIGSDPPAS (Appendix B) and TIGDPPAS (Appendix C) respectively. SIGSDPPAS was a semi-structured interview guide made of eight items that sought to determine from students their experiences in physical education lessons and what influences their participation in physical activities in school, and the measures that can be taken to overcome these factors to enhance their participation in physical activities and sports.

TIGSDIPAS (Appendix C) was also a semi-structured interview guide made of eleven items that sought to determine from only Physical Education teachers what factors influence their students' with disabilities participation in physical activities and sports to enhance their participation in physical activities and sports. The purpose was to help the researcher to obtain an in-depth understanding and delve deeper into

factors affecting students' participation in physical activities in the special schools and also to solicit from the teachers' perspective, the measures that can be taken to overcome these challenges. This also enabled the researcher to either confirm or otherwise from teachers about what their students had identified as factors that influenced them (students with disabilities) participation in physical activities and sports.

The validity and reliability of the interview guides were again given to physical education experts from the Department of Health, Physical Education, Recreation and Sports of the University of Education, Winneba, to judge the content, and also cross check the items for honesty and clarity. Through this process, the interview guides were validated, and experts' suggestions given improved the quality of the two instruments. During the interview, the researcher strictly moved from one teacher to another and same was done to the students. Again, during the interview section, the researcher made sure her personal views and experiences did not influence the views and opinions of the teachers and students by not making suggestions to them. The researcher further avoided asking too many questions at a go and made it more interactive as well.

### **3.5. Data Collection Procedures**

Before the data collection, an introductory letter was obtained from the Department of Health, Physical Education, Recreation and Sports (HPERS) of the University of Education. The researcher personally took the letters to the Heads of the selected schools, and then introduced herself to the students and teachers. Permission was then sought from the heads of the selected schools to undertake the study. The researcher then briefed all teachers of the schools on the purpose of the study to

establish a good rapport with the authorities and teachers for a smooth conduct of the study.

Quantitative data were collected using the questionnaires for students (QSDPPAS). The questionnaire for the students was administered by the researcher with the help of teachers from each of the three participating schools. With the researcher's inability to communicate to students with hearing impairment (deaf) through sign language, three teachers assisted in the process. These teachers helped the researcher to distribute the questionnaires to the students. With the use of sign language by the teachers, students responded to the questionnaire items as expected. The questionnaires were given to the students and they were given 50 minutes to respond to them. All the completed questionnaires were collected from the students. In all, 194 questionnaires were distributed to the students and all were retrieved which represents 100%. After the collection, the questionnaires were coded that is were numbered one after the other for easy identification.

The quantitative data collection was followed with collection of qualitative data using two interview guides, (SIGSDPPAS) for students and (TIGDPPAS) for teachers. With the use of sign language, three teachers assisted the researcher to interview four students with hearing impairment on one-on-one basis. Teachers were involved in the interview processes because of the means of communication (their ability to use sign language) for effective interaction. With regards to students with visual-impairments and intellectual and developmental difficulties, the researcher also interviewed them on one-on-one basis. This was due to the students' ability to hear and communicate with the researcher without any difficulty. Four students each (students with visual impairments and those with intellectual and developmental difficulties) were interviewed. This implies that eight students were interviewed. Out

of the eight, four of them had low vision (were partially blind) hence could play football with their sighted peer students. These students were involved in the interview because of their ability to play football with their abled-peers hence; they helped the researcher to know what difficulties they encounter during their participation in playing football with their sighted peers. In all, twelve students consisting of four each (visual-impaired, hearing-impaired and intellectual and developmental difficulties) students were interviewed. One-on-one interviews with the students' enabled the researcher to seek students' views on factors that influence their participation in physical activities and sports. For the students with intellectual and developmental difficulties interview session, the researcher asked them the questions (in their local language dialect) by repeating the questions several times till the point of their understanding.

In order for the researcher to have more insight into and deeper understanding of factors influencing students with disabilities participation in physical activities and sports, three physical education teachers from the three participating schools were all interviewed on one-on-one basis using audio recordings. This was important because the qualitative findings through the interviews helped the researcher obtain better explanation to the factors influencing students with disabilities participation in physical activities and sports in special schools from the teachers and students.

Field notes were written by the researcher while interacting with the teachers and students. The field notes helped the researcher to confirm or otherwise what teachers and students had stated/indicated earlier as factors that influenced students with disabilities participation in physical activities and sports in their respective schools. This also helped the researcher to acknowledge the state and conditions of

the available facilities and equipment used by students during their participation in physical activities and sports in their schools.

### **3.6. Data Processing and Analysis**

The analyses and discussion were done according to the research questions raised in the study. Descriptive statistics (frequencies and percentages) and themes were used to analyze the data collected. Research Question one, two and three were answered using frequencies and percentages.

Research Question Four was analysed using frequencies, percentages and themes the researcher obtained from the data of students and teachers through the interview on factors that influence students with disabilities participation in physical activities and sports. Sample statements from both teachers and students were used to support presentations under the themes. Responses provided by students and teachers on factors that influenced students with disabilities participation in physical activities and sports were open coded and constantly compared. The researcher then made meaning of their information and generated themes out of them. Sample statements from both teachers and students were used to support presentations under the themes. Again, the qualitative data gathered from the interview of teachers and students on students' participation in physical activities were transcribed by reducing them to patterns and themes.

The null hypothesis formulated was tested using independent sample t-test. The t-test was used to determine whether there was statistically significant difference between the mean scores of male and female students with disabilities' level of participation in physical activities.

## CHAPTER FOUR

### RESULTS, FINDINGS, ANALYSIS OF DATA AND DISCUSSIONS

The study aimed at examining factors influencing the participation of children with disabilities in physical activities and sports. The presentation in this chapter is based on the study objectives as well as the research questions. The results are from the analyses of the data collected using QSDPPAS from students and interview guides using SIGSDPPAS and TIGSDPPAS from both students and teachers structured on factors influencing students with disabilities participation in physical activities and sports. The results are presented using the research questions as a guide. Demographic Information on Students with Disabilities who Participated in the Study (N=194).

#### 4.1. Types of Physical and Sporting Activities in which Students with Disability Participate.

**Research Question One:** What type(s) of physical and sporting activities are students with disability mostly engaged in?

Research question one sought to identify the type(s) of physical and sporting activities that students with disabilities mostly engaged in. To achieve this, questionnaire items were given to 194 students with disabilities. The results on type(s) of physical and sporting activities that students with disabilities mostly engaged in are presented in Table 1. With the intention of determining the types of physical activities that students with disabilities frequently engage in, which positively impact on their general wellbeing, students were asked to indicate the type of physical activities they mostly participate in. Table 1 therefore presents the results of students who responded regarding the types of physical activities they engage in. The results show that, 89 (45.9%) of the respondents were more engaged in football. It is evident from the table that, while 34(17.5%) of the students engaged in running,



14(7.2%) each of the students were engaged in volleyball, brisk walking and showdown. Again, while 11(5.7%) and 10(5.2%) were frequently engaged in jogging around and table tennis respectively, only 8(4.1%) of the students at a mean of 2.75 engaged in goal ball as their physical activities.

**Table 1: Type(s) of Physical Activities Participated by Students (N=194)**

<b>Statement</b>		
Type(s) of physical and sporting activities I frequently engage in	<b>Frequency</b>	<b>Percentage (%)</b>
Jogging around	11	5.7
Running	34	17.5
Table Tennis	10	5.2
Football	89	45.9
Volley ball	14	7.2
Brisk walking	14	7.2
Showdown	14	7.2
Goalball	8	4.1

Source: Field survey (Mawena, 2022)

Results of the study indicate that, the type of physical activity frequently participated in by the students with disabilities was football. The results further show that aside football; other activities of running, volleyball, brisk walking, table tennis, jogging, showdown, and goalball were involved frequently, with goalball being the least involved in activity.

Result of this study has shown that, football is the physical activity students with disabilities participated most. This could be as a result of the number of participants needed to participate and perhaps, readily available and low cost of the ball used during the activity. This indicates that students with disabilities frequently participated in physical activities and sports. The findings of this study concerning students' participation did not agree with findings of Cooke, Fielding and Louis

(2016) who indicated in their study a significant marked drop in physical activity of children and adolescents with disabilities aged 9-14 years, particularly after the age of 12.

This study has also revealed that, the type of physical activity regularly involved in by students was based on the type of disabilities of the participants. For instance, majority of the students involved in the study were those (students) with deafness, hence, were not limited to participate in activities like football, running, volleyball, brisk walking, table tennis, and jogging, whereas the visually-impaired students were mostly engaged in either showdown or goalball due to their type of disability. Brisk walking was found among most frequent participated physical activity which is consistent with a study by Blair and Jackson (2001). They found brisk walking to be less stressful and more relaxed form of exercising hence, common among people, especially persons with disability. The current study provided evidence that, the type of disability may inform the form of exercise individuals will perform.

A study by Jeffery, Epstein, Wilson, Drewnowski, Stunkard, Hill, and Wing (2000), attested to the fact that the kind of disability may inform the type of exercise an individual performs. They went ahead to state that, another factor such as environmental factors such as the geographical location of a town (nature of the land surface) and the environment influence the choice of exercise space and a form of physical exercise to engage in. Jeffery et al. (2000) revealed in their study that a person who lost both legs mostly engaged in only spot exercises.

The findings of this study have revealed that, students with disabilities do participate in different kinds of physical activities provided materials needed for those activities to be successful are adequately provided. This was evident as many of the students participated in activities such as football playing and running. This implies

that, students with disabilities would participate in a particular physical activity provided, they are user-friendly. This result, therefore, disconfirm the study conducted by Basch (2011) who asserted that, almost all children living with disabilities hardly participate in physical activities.

Furthermore, this study has shown that, students with disabilities actively participate in physical activities as long as they are provided with the opportunities. This finding is consistent with a study by Jeffrey et al. (2000) that, availability of good sporting facilities enhances students' participation in physical activities including those with disabilities, on the contrary, according to Shield and Synnot (2016) students with disabilities are more restricted in their physical activities participation even in the presence of sporting facilities due to their disabilities.

In conclusion, this study has added to literature that, students with disabilities readily participate in physical activities, as this was evident as many of students participated in football, running and brisk walking. This finding corroborated the study of Van Dusen et al. (2011) that, students with disabilities mostly engage in physical activities.

#### **4.2. Benefits of Regular Physical Activities and Sports**

**Research Question Two:** what are the benefits of physical activities and sports involvement to students with disabilities?

Research question two sought to examine the benefits students with disabilities derive from their participation in physical activities and sports.

The results from Table 2 revealed students with disabilities' experiences regarding benefits of frequent participation in physical activities and sports. Many of the respondents 173 (89.2%) agreed that they experience improved and increased health/physical fitness through their participation in physical activities and sports,

whilst only 10 students (5.1%) disagreed to this statement. This implies that, 11 students (5.7%) were uncertain about this statement. It is also evident from Table 2 that, 155 respondents (79.9%) agreed that physical activity participation enables them to learn and acquire new skills whilst very few respondents 15 (7.7%) disagreed to that. This implies that 24 respondents (12.4%) were undecided that they learn and acquire new skills through physical activity participation. From Table 4 it is observed that, 117 of the students (60.3%) and 49 (25.3%) respectively agreed and disagreed to the statement that they solely engage in regular physical activities for fun or relaxation. This indicates that 28 of the students (14.4%) were undecided about that statement. This implies that majority of the students engage in regular physical activities purposefully for fun or relaxation. Results from Table 2 further show that, 141 (72.7%) of the students agreed that participation in regular physical activities help improve their heart and lung fitness and also increases their energy level whereas only 29 (14.9%) of the students disagreed to that assertion. Only 24 (12.4%) of the students were undecided about that statement. This indicates that most of the students engage in physical activities and sports for improvement in their heart beats and lung fitness and also increase in their energy level. Again, 133 (68.6%) of the students from Table 4, agree that regular physical activities help improve participants' self-esteem and also increase their confidence level. Few of the students 30 (15.5%) disagreed to the statement whilst 31 (15.9%) of the students were undecided that regular physical activities help improve participants self-esteem and also increase their confidence level. Improvement of students with disabilities self-esteem and confidence level could be the reasons for their participation in physical activities and sports. Table 2 reveal that 146 (75.3%) of the students agreed to the statement that they feel extremely better and confident about themselves or their body after their participation

in physical activities and sports. This indicates that only 30(15.4%) of the students disagree to this statement whereas 18 (9.3%) of the students could not decide on that statement. This implies that students mostly engage in physical activities and sports in order to feel better and confident about themselves.



**Table 2: Benefits of Regular Physical Activities and Sports to Students (N=194)**

Statement	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	No.	%	No.	%	No.	%	No.	%	No.	%
I engage in regular physical activities and sports for the following reasons:										
Improve and increase my health/physical fitness	121	62.4	52	26.8	11	5.7	7	3.6	3	1.5
Help me learn and acquire new skills	88	45.4	67	34.5	24	12.4	7	3.6	8	4.1
I engage in regular physical activities for fun or relaxation	60	30.9	57	29.4	28	14.4	31	16.0	18	9.3
Improve my heart and lung fitness and also increases my energy level	82	42.3	59	30.4	24	12.4	16	8.2	13	6.7
Improve my self-esteem and also increases my confidence level	76	39.2	57	29.4	31	16.0	17	8.8	13	6.7
I feel extremely better and confident about myself/body	100	51.5	46	23.7	18	9.3	15	7.7	15	7.7
Provide me the opportunities to socialize with friends	73	37.6	65	33.5	19	9.8	22	11.3	15	7.7
To spend better time with friends and enjoy their company as well	89	45.9	57	29.4	20	10.3	15	7.7	13	6.7
Help me have a sense of belonging to a group	65	33.5	62	32.0	32	16.4	17	8.8	17	9.3
Help me maintain and improve emotional wellbeing	88	45.4	58	29.9	20	10.3	15	7.7	13	6.7
Help me learn how to deal with my disability	78	40.2	43	22.2	23	11.8	26	13.4	24	12.4
I feel and become more independence	69	35.6	56	28.9	27	13.9	21	10.8	21	10.8
I get self-conscious about trying out new physical activity and sports	100	51.5	62	32.0	14	7.2	10	5.2	8	4.1

Source: Field survey (Mawena, 2022)

Additionally, 138 (71.1%) and 57 (19.1%) of the respondents respectively agree and disagree that participation in physical activities and sports provide them the opportunities to socialize with their friends. This implies that only 19 (9.8%) of the respondents were not certain about that statement. This indicates that majority of the students with disabilities socialize with their friends more often through physical activities and sports participation. The results from Table 2 shows that, majority of the students 146 (75.3%) agree to the statement that involvements in physical activities and sports make them spend better time with friends and enjoy their company. As 28 (14.4%) of the students disagree to that statement, 20 (10.3%) of the students' undecided that participation in physical activities and sports make them spend better time with friends and enjoy their company. In addition, the statement of participation in physical activities and sports help me have a sense of belonging to a group was agreed to by 127 (65.5%) of the students whereas 34 of the (18.1%) disagreed to it. This means that 32 of the students (16.4%) were uncertain about that statement. It could probably mean that most students with disabilities only participate in physical activities and sports because it helps them have a sense of belonging. Result from Table 2 is evident that, overwhelming majority of the students 146 (75.3%) agree that physical activities and sports participation help them maintain and improve their emotional wellbeing whereas 28 (14.4%) of the students were not in agreement. This indicates that, 20 (10.3%) of the students were undecided. This implies that majority of these students purposefully participate in physical activities and sports in order to help maintain and improve their emotional wellbeing.

Furthermore, Table 2 suggests that, 121 (62.4%) of the students with disabilities agreed that regular involvement in physical activities and sports help them learn how to deal with their disabilities whilst 50 (25.8%) of the students disagreed to

the statement. This implies that only 23 (11.8%) were uncertain about the statement that involvements in physical activities and sports help students with disabilities learn how to deal with their disabilities. This indicates that students with disabilities believe that one learns how to deal with his/her disabilities through physical activities and sports involvements. It is observed from Table 2 that, 125 (64.5%) of the students agreed to the statement that “I feel and become more independent through physical activities and sports involvement” whereas 42 (21.6%) of the students disagreed with that statement. This implies that 27 (13.9%) of the students were undecided about the statement that physical activities and sports participation make students with disabilities feel and become more independent. Further, a significant number of students 136 (70.1%) agreed that physical activities and sports involvement open doors for social contacts and lots of life opportunities. The result further shows that, while 35 (18.0%) of the students disagreed to the statement, only 23 (11.9%) were uncertain that there are open doors for social contacts and lots of life opportunities for students with disabilities through physical activities and sports involvement.

In addition, Table 2 reveals that, 123 (63.5%) of the students agreed that their parents influenced their interest in physical activities and sports hence they enjoy them as their hobbies, while 57 (29.3%) of the students disagreed, only 14 (7.2%) of the students remained undecided that students with disabilities enjoy physical activities and sports as their hobbies because their parents influenced their interest in them. This indicates that parents of students with disabilities could be influential towards their interest in physical activities and sports participation. Subsequently, results from Table 2 suggests that, an overwhelming majority of students 162 (83.5%) agreed that students with disabilities become self-conscious about trying out new physical activity and sports. While a very few of the students 18 (9.3%) disagreed,



only 14 (7.2%) students were uncertain that students with disabilities become self-conscious about trying out new physical activity and sports.

Generally, the benefits of regular participation in physical activities and sports to students with disabilities were enormous. The findings of this study suggest that, students with disabilities were of great conviction that, regular participation in physical activities and sports help improved and increased their students' health and physical fitness (Gisladdottir et al., 2013); also maintained and improved their emotional wellbeing (Moll, 2017); improved students' heart and lung fitness and also increased their energy level. These findings are similar to that of previous research by Northfield (2011) who indicated that physical exercise enhances internal muscle strength, body balance, and improve quality of life in children with learning disabilities. The findings of this study have shown that physical activities and sports involved in by students with disabilities have direct correlation with numerous physical health benefits such as students becoming more self-conscious about their disabilities; acquisition of new skills to feel more independent (Scarpa, 2011) and learning how to deal with their disabilities (Dale et al., 2019).

Results from this study have shown that, students with disabilities purposely participate in physical activities with the belief that frequent participation help them experience an improved and increased health or physical fitness. This finding is consistent with studies by Ma et al. (2014) and Pelligrini and Hesla (2018) that, frequent physical activities participation improves and increase participants' health or physical fitness.

Findings of this study regarding benefits of physical activities have corroborated with studies conducted by Boddy et al. (2015) and Chen et al. (2018) for enjoyment, fun and relaxation; increase in students energy level (Scarpa, 2011);

improved self-esteem and confidence level (Augestad, 2017; Dudfield & Kaye, 2001); feel better and confident about themselves (Gisladdottir et al., 2013); have the sense of belonging to a group and also maintain and improve their emotional well-being (Alesi & Pepi, 2017).

These findings are consistent with findings from Hallawell, Stephens, and Charnock (2012) who revealed that, any moderate physical activity is known to reduce the depression and anxiety levels and improve self-image, mental health and social skills of its participants. The current study has provided evidence that students engaged in regular physical activities purposely for fun or relaxation which help improve their self-esteem, confidence level increased and feel extremely better and confident about themselves. This result is compatible with a number of studies of Graham, Holt-Hale and Parker (2013); NASPE, (2004) and Sherrill (2004) that, physical activities and sports improve self-confidence and self-worth as they relate to physical education and recreation activities. Quality physical activities prepares students to be physically and mentally active, fit, and healthy for a lifetime. This finding of the study corroborated further findings of Centers for Disease Control and Prevention (2014) that, individuals derive benefits including building and maintaining healthy bones and muscles; reducing the risk of developing obesity and chronic diseases such as diabetes, cardiovascular disease, and colon cancer; and reducing feelings of depression and anxiety and promoting psychological and emotional well-being (Dale et al., 2019).

Again, this study has shown that, frequent participation by students with disabilities provide the opportunities to socialize with their friends and spend more time with them as they enjoy their company, and being integrated into their societies. These findings agree with studies by Gallahue et al. (2012); Kitchin and Crossin,

(2018) and Tint et al. (2017) who claimed that, through physical activities participation, students are able to socialize with their friends and spend more time with, and they are integrated into their societies.

The study has also shown that, in addition to providing physical benefits, physical activities have been consistently found to be associated with providing participants the opportunities to socialize with friends, spend better time with friends and enjoy their company, open doors for social contacts and lots of life opportunities and help participants have a sense of belonging to a group. These findings are in agreement with Ritchie (2018), who revealed that adapted sport participation helps students with disabilities develop a sense of belongings. Each and every physical activity brings positive outcomes such as enhanced feelings of social inclusion, modeling appropriate behaviours for others with similar disabilities, displaying of shared interests and rewarding experiences (Hallawell et al., 2012).

Furthermore, the study has shown that, students with disabilities enjoy physical activities and sports as hobbies. This is because their parents influence them to participate in these physical activities and sports. This result was also found in a study by Dale et al. (2019) revealed that, support from family members help in providing emotional, functional or economical support to their children. This could partly be that athletes experience support from family members act as a positive influence and motivate them to continue participation in physical activities and sports even at difficult times. Family could also help in perceiving the right balance between sport, relaxation and academics (Dale et al., 2019).

In conclusion, it has revealed that, students with disabilities in this study do not only chose to participate in a particular physical activities and sports because they consider those activities to be good for their health and their well-being, but also

believe and know that sports participation open doors for social contacts and open a lots of life opportunities for its participants. These factors can all be considered positive outcomes of sports. These positive factors lead to the intention of students participating in physical activities and sports and have also shown to be reasons to remain participating in sports, and their intentions could be influenced by social factors (subjective norm). These findings of this study were corroborated by theories of reasoned action and planned behaviour Ajzen and Fishbein (1980) and Ajzen, (1988) which are the theories that underpin this study. Therefore, this study has, added to literature that, students with disabilities' participation in physical activities to a large extent are influenced by their parents. Students' parents prefer their wards to concentrate more on their academic work to participating in physical activities.

### **Research Question Three: How often do Students with Disabilities participate in Physical Activities and Sports?**

Research question three sought to determine how often students with disabilities participate in physical activities and sports. The results on this research question were presented in three parts, first, on how often students are involved in physical activities per a week, second, duration for students' participation (how long in terms of time they are involved in) and lastly, location of participation (where they mostly participate in these physical activities and sports). The results on how often students are involved in physical activities and sports, duration for students' participation and location of participation are presented in Table 3, 4 and 5 respectively.

**Table 3: Students' Frequency of Participation in Physical Activities and Sports  
(N=194)**

Statement	Frequency of Participation		
	VO (%)	QO (%)	O (%)
How often do you participate in physical activities and sports			
Running	15 (44.1)	16 (47.1)	3 (8.8)
Volleyball	10 (71.4)	2 (14.3)	2 (14.3)
Brisk walking	4 (28.6)	3 (21.4)	7 (50.0)
Showdown	1 (7.1)	1 (7.1)	12 (85.7)
Jogging around	3 (27.3)	0 (0.0)	8 (72.7)
Table Tennis	6 (60.0)	1 (10.0)	3 (30.0)
Goalball	0 (0.0)	2 (25.0)	6 (75.0)

Very Often (VO), Quite Often (QO), and Occasionally (O)

Source: Field survey (Mawena, 2022)

Respondents were asked about how often they participate in physical activities and sports. Data presented in Table 3 revealed that, of the 89 students who frequently engaged in football as their mostly participated physical activity, 52(58.4%) participate very often, 25 students (28.1%) participate quite often and 12 students (13.5%) participate occasionally. The second most engaged physical activity involved in by students was running as indicated in Table 3. It is revealed that, of the 34 students, 15 (44.1%) participate very often, 16 students (47.1%) participate quite often and only 3 students (8.8%) participate occasionally. Volleyball, brisk walking and showdown were the third most participated physical activities engaged in by students with disabilities with a total number of 14. For volley ball, 10 students (71.4%) participate very often, and 2 students (14.3%) participate quite often and 2 students (14.3%) participate occasionally. From Table 3, jogging around happened to be the next most participated physical activity engaged by students with disabilities with a number of 11. Of the 11 students, 3 students (27.3%) and 8 students (72.7%)

participate very often and occasionally respectively. From Table 3, it is revealed that, only 10 students participate most frequently in table tennis. Of this number, 6 students (60%) participate very often, only 1 student (10%) participate quite often whereas 3 students (30%) participate occasionally. The least most frequently engaged physical activity as indicated in Table 3 is goal ball. This physical activity is always participated by students with visual impairment as only 2 students (25%) participate quite often and 6 students (75%) participate occasionally. Findings of the results regarding how often students with disabilities participate in physical activities and sports are that, students very often participated in physical activities especially those of football, running and volleyball. The rest of the physical activities saw majority of the students participating occasionally, especially showdown and goal ball. This could partly be due to the quantity and availability of the facilities. Through observation by the researcher, it was noticed that, only one of the facilities for both showdown and goal ball were available, and also in a poor state. This was due to pressure on the facilities as all the students with visual impairment could only play and engage in these two physical activities.

Result from Table 4 reveals respondents' amount of time they spend during their participation in physical activities. It is quite clear from the results that, out of the 89 students who participate in football, 37 students (41.6%) spend more than 2 hours participating, 31 students (34.8%) and 21 students (23.6%) spend 1-2 hours and less than an hour respectively during their participation in football. Out of the 34 students who participate in running as their mostly engaged physical activity, 14 students (41.2%) indicated that they spend 1-2 hours during the running activity whereas 10 students each (29.4%) spend less than 1 hour and more than 2 hours respectively during running activity.

**Table 4: Duration for Students Participation in Physical Activities and Sports (N=194)**

Approximately how many hours do you spend during physical activities and sports	<1hr (%)	1-2hrs (%)	> 2hrs (%)
Football	21 (23.6)	31 (34.8)	37 (41.6)
Running	10 (29.4)	14 (41.2)	10 (29.4)
Volley ball	2 (14.3)	3 (21.4)	9 (64.3)
Brisk walking	7 (50.0)	4 (28.6)	3 (21.4)
Showdown	5 (35.7)	5 (35.7)	4 (28.6)
Jogging around	6 (54.5)	3 (27.3)	2 (18.2)
Table Tennis	2 (20.0)	4 (40.0)	4 (40.0)
Goal ball	4 (50.0)	3 (37.5)	1 (12.5)

Source: Field survey (Mawena, 2022)

From Table 4, three activities volleyball, brisk walking and showdown had 14 students frequently involved in these activities. It is clear from Table 4 with regards to time spent by students during volleyball participation, 9 students (64.3%) spend more than 2 hours, while 3 (21.4%) and 2 (14.3%) spend 1-2hours and less than 1 hour on volleyball respectively. With regards to brisk walking participation by students, approximately 7 students (50%) spend less than 1 hour, whereas 4 (28.6%) and 3(21.4%) of the students spend 1-2hours and more than 2hours respectively. Further, the Table reveals that, 5 students each (35.7%) spend less than 1hour and 1-2hours respectively on showdown participation. It is also evident from Table 4 that, of the 11

students who participate in jogging, 6 of the students (54.5%) spend less than 1 hour, and 3 (27.3%) and 2(18.2%) respectively spend 1-2hours and more than 2 hours during their jogging activity. Again, it is clear from the Table 6 that, out of the 10 students who participated in table tennis, 4 (40%) students each spend 1-2 hours and more than 2 hours respectively on playing table tennis as their mostly involved physical activity. Regarding the amount of time spent by students during their participation in the physical activities, goalball was indicated to be among the physical activities. Out of the 8 students who participate, 4 students (50%) spend less than one hour whilst 3 students (37.5%) and 1 student (12.5%) spend 1-2hours and more than 2 hours respectively.

In conclusion, it is evident from Table 4 that, most of the students with disabilities spend averagely between 1-2hours during their participation in physical activities and sports whilst quite a few numbers of them spend more than 2hours. This could partly be due to lack of stamina and also their disabilities. The findings of the results with regards to amount of time spent by students during their involvements in physical activities and sports revealed that, majority of the students spent less than 1hour during their participation in the physical activities. Quite a few numbers of students spent 1-2hours whereas very few of them spent more than 2hours during their physical activities and sports participation.

In answering research question three which sought to determine students with disabilities level of participation in physical activities and sports, where (the location) students participate in their physical activities and sports were considered. This was to help determine exactly where they engage in those activities. Of the 89 students who often participate in football being the mostly engaged physical activity, majority of the students 61 (68.5%) participate in their physical activity at school field, 22



respondents representing (24.7%) perform the activities at home and only 6 students (6.7%) do so at the dormitory. From Table 6 the results indicate that, 20 students (58.8%) participate in running as their mostly engaged physical activity only in school of which 4 (11.8%) and 16 (47%) do so at the dormitory and the school field respectively, whilst 14 students (41.2%) perform the running activity only at home. It is evident from Table 5 that, 14 students mostly engage in volleyball, brisk walking and showdown as their physical activities. Many of these students participate in these physical activities only at the school field whilst very few of them participate in physical activities only at home. For instance, a physical activity such as showdown is only participated in by students with visual impairment. Of the 14 students, all the students play the showdown activity only in the school. This could be that, the equipment is only available in school but not home. Again, 9 students (64.2%) engaged in brisk walking in school whereas 5 students (35.7%) do brisk walking only at home during vacation. On students' participation in jogging as the physical activity they are engaged in, results from Table 5 reveal that, 7 students (63.7%) do the activity in the school. Out of the 7 students, 5 (45.5%) and 2 (18.2%) perform the jogging on the school field and in the dormitory respectively, and 4 students (36.3%) engaged in jogging only when they are on vacation at home.

**Table 5: Places Students Participate in Physical Activities and Sports (N=194)**

Statement	Location of Participation		
	Dormitory (%)	Field (%)	Home (%)
Where do you participate in physical and sporting activities			
Football	6 (6.7)	61 (68.5)	22 (24.7)
Running	4 (11.8)	16 (47.0)	14 (41.2)
Volley ball	0 (0.0)	6 (42.9)	8 (57.1)
Brisk walking	1 (7.1)	8 (57.1)	5 (35.7)
Showdown	0 (0.0)	14 (100)	0 (0.0)
Jogging around	2 (18.2)	5 (45.5)	4 (36.3)
Table Tennis	0 (0.0)	0 (0.0)	10 (100)
Goal ball	0 (0.0)	8 (100)	0 (0.0)

Source: Field survey (Mawena, 2022)

Result from Table 5 indicate that, 10 students engage in table tennis as their mostly participated physical activity. All the 10 students (100%) engage in playing the activity only at home when they are on vacation. This could be due to lack of the equipment within their schools. In addition, goalball that happens to be a physical activity participated only by students with visual impairments had 8 students (100%) engaged in it most frequently. All of these 8 students perform this activity only when they are in school because such sporting equipment cannot be found at home. Findings from the results regarding places students with disabilities mostly engage in physical activities and sports are that, majority of the student participate in the various physical activities in their schools specifically school field whiles quite a number also engage in physical activities only at their various homes during vacations.

**Hypothesis Ho:** There is no statistically significant difference between male and female students' with disabilities' participation in physical activities. To

determine whether there was statistically significant difference between the mean scores of male and female students with disabilities level of participation in physical activities and sports, independent-samples t-test was used. Before then the Levene's test for equality of variances was used to determine whether the variances were the same.



**Table 6: Levene's Test for Equality of Variance**

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence interval of the Difference	
									Lower	Upper
What physical activities do you frequently participate in	Equal variances assumed	.629	.429	.770	192	.442	.204	.265	-.318	.726
	Equal variances not assumed			.766	117.741	.445	.204	.266	-.323	.731

Levene's test gave  $p = 0.629$  which is not significant which means that the variances were not statistically different; therefore the independent samples t-test was run.

**Table 7: Independent-Samples t-test Results for Male and Female Students' with Disabilities Participation in Physical Activities and Sports**

Gender	N	Mean	SD	t	df	p
Male	132	4.09	1.710	.770	192	.429
Female	62	3.89	1.738			

Significant,  $p < 0.05$

Source: Field survey (Mawena, 2022)

The independent-samples t-test was run the result is shown in Table 7. This means that the variances for the male and female students are the same thus equal variances assumed. The results from the independent-samples t-test are presented in Table 7. The results from Table 7 shows that there was no statistically significant difference between the mean scores of male and female students with disabilities participation in physical activities and sports. This is because mean level of participation score of male students ( $M = 4.09$ ,  $SD = 1.710$ ) was similar to the mean level of participation score of female students ( $M = 3.89$ ,  $SD = 1.738$ ,  $t(192) = .770$ ,  $p = 0.429$ ) on students with disabilities level of participation in physical activities and sports. Finding of students with disabilities participation show that, male students are mostly engaged in physical activities and sports equally as compared to their female counterparts. The result has revealed that, students with disabilities often participation in physical activities are not gender biased: this implies male students with disabilities actively engage in physical activities equally as their female students.

This result is compatible with studies by Pangrazi (2007); Lacy (2010) and Gallahue, Ozmun, and Goodaway (2012), who indicated that regular participation of physical activities and sports such as brisk walking, jogging, running without stopping

for extended periods of time retain or increase cardiovascular efficiency. It is interesting to note that, how often students participate in a particular physical activity is based on the facilities available before such activity is performed. For instance, physical activities such as football, running, volley ball, brisk walking, and jogging do not need special equipment and facilities, thus these physical activities are frequently involved in by students. But, activities such as showdown and goal ball which were only involved in by students with visual impairments had majority of the students participating occasionally. This could partly be due to scarcity and few available facilities to serve these students, thus undue pressure on the facilities. This could also be due to the number of students with visual impairments outweighing the available facilities since these were only two activities available for visually-impaired students.

Findings of this study regarding how often students participate in physical activities have shown that, majority of students very often participated in physical activities especially activities such as football, brisk walking and running. This result is incompatible with studies by Shield and Synnot (2016) and Sivrikaya (2018) who indicated that, children with disabilities hardly participate in physical activities and sports. On the other hand, activities such as goalball and showdown had students participating occasionally. This finding could partly be due to the availability of sporting facilities and equipment.

A study by Everhart, Dimon, Stone, Desmond and Casilio (2012), investigated the need for children with disabilities to regularly participate in exercises. Everhart et al. (2012) revealed that, although children were involved, time spent was not enough, they then recommended that children get at least 60 full minutes of moderate to intense physical activity nearly every day of the week. Since students spend majority of their time at school, it is therefore, important for teachers and school authorities to

play a vital part in advocating for students to have active lifestyles by participating in physical activities and sports (Van Dusen, Kelder, Kohl, Ranjit & Perry, 2011).

Findings of this study have shown that, students with disabilities spend more time to participate in physical activities readily available to them. This result is inconsistent with findings of Everhart et al. (2012) who claimed that, students with significant disabilities mostly spend less time during their physical activities instead, the finding from this study revealed otherwise. Students not spending much time during physical activities could be partly be due to unfavourable conditions and unavailability of appropriate and user-friendly facilities and equipment. Consequently, this result is also not compatible with a study by Sivrikaya (2018) that, students disabilities' conditions limit their participation in physical activities, rather bad conditions and poor state of sporting facilities and equipment limit their (students with disabilities) participation.

Again, findings of this study with regards to availability of equipment and facilities were found to be consistent with the findings of study by Torkildson (2000), who espoused that availability and quality of facilities and equipment are of vital importance to physical activities and sports participation. Torkildson asserted that the presence and absence of facilities and equipment, their accessibility, quality, and structure have substantial influence on recreational participation. Further on equipment and facilities, Torkildson (2000) in the study revealed that, equipment and facilities have an important place in recreational centers, because they contribute to physical development, stimulate creative activity, and provide opportunities for other activities to take place.

Furthermore, result from this study has shown that, majority of the students spend less time (less than one hour) during their participation in physical activities.

This finding could be due to various reasons. It could be due to the kind of students' disability which render them tired easily or state of the facilities available or could even be due to non-disability friendly nature of the facilities and equipment. Again, this could also be due to students' fear of injuring themselves or fear of discrimination from their non-disabled peers. This result is consistent with a study by Jeffrey et al. (2000) that, students with disabilities mostly engage in physical activities based on how disability user-friendly the sporting facilities and equipment are.

The results further revealed that, majority of the students perform these physical activities and sports during their stay at school specifically at their school field. The nature of the land surface can influence the choice of exercise space and a form of physical exercise to be engaged in Jeffrey et al. (2000) as this could be the reason students perform these physical activities and sports at their school field. This finding also agrees with report by NSW Department of Sports and Recreation (2000) that, people are more likely to participate in sports if they believe the environment in which they participate is safe to meet their needs. The study revealed that, irrespective of the kind of disability students suffered from and lack of disability user-friendly facilities and equipment, students with disability actively engaged in one or the other physical activities and sports made available.

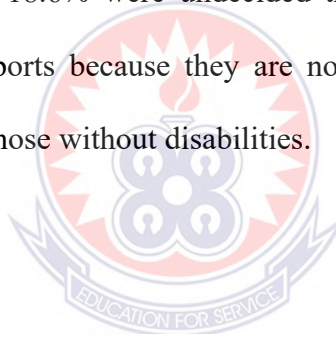
Conclusively, these findings of the study are in consonant with a study by Basch (2011) that, most children with disabilities participate in physical activities available and are user-friendly to them.

### **Factors influencing students with disabilities' participation in physical activities and sports**

**Research Question Four:** What factors influence the students with disabilities' participation in physical activities and sports? Research question four further sought



to determine the factors that hinder students with disabilities from participating in physical activities and sports. To be able to achieve this, 17 questionnaire items on QSDPPAS were used. The results from Table 7 show that, while 81 respondents representing 41.7%, agree that they are unable to engage in physical activities and sports because of their disabilities, 83 representing 42.7% disagree to the statement. This implies that 30 (15.5%) of the students were undecided that they are unable to engage in physical activities and sports because of their disabilities. Eighty respondents, representing 41.3% were in support that they are unable to engage in physical activities and sports because they are not comfortable in the presence of other athletes especially those without disabilities. While 78 (40.2%) disagree, 36 respondents representing 18.6% were undecided that they are unable to engage in physical activities and sports because they are not comfortable in the presence of other athletes especially those without disabilities.



**Table 8: Factors Hindering Students Participation in Physical Activities and Sports (N=194)**

Statement	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	No.	%	No.	%	No.	%	No.	%	No.	%
I am unable to engage in physical activities and sports for the following reasons:										
Because of my disability	53	27.3	28	14.4	30	15.5	22	11.3	61	31.4
Not being comfortable in the presence of other athletes without disabilities	43	22.2	37	19.1	36	18.6	32	16.5	46	23.7
Lack of disabled sporting facilities	88	45.4	41	21.1	24	12.4	24	12.4	17	8.8
Facilities are not suitable, user-friendly and pleasant	78	40.2	46	23.7	32	16.5	21	10.8	17	8.8
I have no interest in sport	61	31.4	26	13.4	11	5.7	34	17.5	62	32.0
I fear of having new injuries to my conditions	55	28.4	26	13.4	37	19.1	30	15.5	46	23.7
I am ashamed of my disability	54	27.8	29	14.9	35	18.0	26	13.4	50	25.8
My parents give academic success priority over physical exercise and sports	102	52.6	51	26.3	4	2.1	20	10.3	17	8.8
No/lack of qualified adult's supervision	40	20.6	86	44.3	12	6.2	30	15.5	26	13.4
Because disabled athletes are not fully accepted	66	34.0	57	29.4	13	6.7	21	10.8	37	19.1
Sports possibilities are unknown due to limited information on benefits of physical exercises	74	38.1	53	27.3	10	5.2	30	15.5	27	13.9
I am worried about injuring myself again if I engage in physical activities	85	43.9	33	17.0	19	9.8	28	14.4	29	14.9
My friends would find it strange if I suddenly get involve in physical activities	82	42.3	44	22.7	22	11.3	25	12.9	21	10.8
I become worried that my health would suffer again if I engage physical activities	58	29.9	38	19.6	24	12.4	34	17.5	40	20.6
There are other things like reading I prefer to do in my leisure time than participating in physical activities	69	35.6	47	24.2	24	12.4	22	11.3	32	16.5
Physical activities are only for certain groups of people especially people without disabilities	59	30.4	36	18.6	6	3.1	53	27.3	50	25.8
I'm not really interested in doing an activity if none of my friends do it	54	27.8	62	32.0	9	4.6	26	13.4	43	22.2

Source: Field survey (Mawena, 2022)

Results from Table 8 is evident that, majority of the respondents 129(66.5%) agree that lack of disabled sporting facilities hinder their participation in physical activities and sports. whilst 41 of the students (21.2%) disagreed, only 24 (12.4%) of the students with disabilities were uncertain that their involvements in physical activities and sports is hindered by lack of disabled sporting facilities. In addition, majority of the students 124 representing 63.9% were in support that available facilities are not suitable, user-friendly and pleasant which in the long run hinders their involvement in physical activities and sports. Whiles 38 of the students representing 19.6% disagreed with the statement, 32 of the students representing 16.5% were undecided that available facilities are not suitable, user-friendly and pleasant hence prevent them from fully engaging in physical activities and sports. Eighty-seven respondents representing 44.8% agreed that they have no interest in physical activities and sports while 49 students representing 49.5% disagreed that they have no interest in physical activities and sports participation. The results also indicate, only 21 of the students representing 5.7% were uncertain about the statement that they have no interest in physical activities and sports participation.

From the table, 81 (41.7%) of the respondents were in support of the statement that, “they fear of having new injuries to their conditions upon their involvement in physical activities and sports”. Whiles 76 of the respondents representing 39.2% were not in support of having any form of fear of sustaining new injuries to their conditions upon their involvement in physical activities and sports, 37 (19.1%) were uncertain about the statement. The results from the table indicate that 83 (42.7%) of the respondents agreed that they are ashamed of their disabilities hence it hinders their participation in physical activities and sports. Seventy-six of the students representing 39.3% disagreed of being ashamed of their disabilities, and 35(18.0%) of the

respondents were undecided about the statement that they are ashamed of their disability which becomes hindrance to their participation in physical activities and sports. Further evidence in Table 8 revealed that an overwhelming majority of the students 155(78.9%) agreed that their parents give academic success priority over physical exercise and sports. Whiles few students 37(19.1%) disagreed, only 4(2.1%) were uncertain that their parents give academic success priority over physical exercise and sports. This indicates that parents of children with disabilities influence their wards to focus on academic rather than engaging in physical exercise and sports.

In addition, Table 8 reveals that, 126 (64.9%) of the students were in support that there is no/lack of qualified adult's supervision during their involvements in physical activities and sports. Whiles 56 (28.9%) of the students disagreed that there is no/lack of qualified adult's supervision during their involvements in physical activities and sports, only 12(6.2%) were undecided. The results also indicate that 123 of the respondents representing 63.4% agreed that disabled athletes are not fully accepted by their able-peers. Fifty-eight respondents representing 29.9% disagreed whereas only 13 respondents representing 6.7% were uncertain that disabled athletes are not fully accepted by their able-peers during physical activities and sports participation. Interestingly, it is observed from Table 8 that, quite a large number of students 127(65.4%) were in support that sports possibilities are unknown due to limited information on benefits of physical exercises. Whiles 57 (29.4%) of the students disagreed, only 10 (5.2%) of the students were undecided that sports possibilities are unknown due to limited information on benefits of physical exercises thus this served as a hindrance to their involvements in physical activities and sports.

Results from Table 8 shows that, 118 (60.9%) of the students agreed that they become worried about injuring themselves again whenever they engage in physical

activities and sports. While 57(29.4%) of the students disagreed, 19 (9.8%) of the students were undecided about the statement that they become worried about injuring themselves again whenever they engage in physical activities and sports. Further evidence in Table 8 reveal that, 126(65.0%) of the students support that their friends find it strange whenever they suddenly get involve in physical activities and sports. Forty-six of the students (23.7%) were not in support of the statement, but 22 (11.3%) of the students were undecided that students with disabilities friends find it strange whenever they get involved in physical activities and sports. Results from Table 7 is evident that, 96(49.5%) of the respondents' support that they become worried that their health would suffer again if they engage in physical activities and sports. Whiles 74 of the students (38.1%) were not in support, only 24 (12.4%) of the students with disabilities were uncertain that they become worried that their health would suffer again if they engage in physical activities and sports and this hinder students with disabilities participation in physical activities and sports.

Furthermore, result from Table 8 reveals that, 116 (59.8%) of the students agreed that, there are other things like reading they prefer to physical activities and sports during their leisure time. Twenty-four representing 12.4% were uncertain whiles 54 (27.8%) of the students disagreed that, there are other things like reading they prefer to physical activities and sports during their leisure time than. The results also indicate that, 95 (49.0%) of the students agreed that, physical activities and sports are only for certain groups of people especially people without disabilities. Whiles only 6 (3.1%) of the students were undecided, as high as 103(53.1%) of the students disagreed that physical activities and sports are only for certain groups of people especially people without disabilities. Further evidence in Table 8 reveals that, students with disabilities participation in physical activities and sports is hindered

when none of their friends are involved. This was supported by an overwhelming majority 116(59.8%) of the students whereas only 69 (35.6%) of the students disagreed. This implies that only 9(4.6%) students were uncertain that they are not really interested and involved in physical activity if none of their friends is involved. This indicates students with disabilities are more motivated intrinsically and extrinsically when their colleagues are involved.

Qualitative data were obtained from students and teachers through one-on-one interviews. The data obtained from the interviews helped the researcher to delve deeper and obtain an in-depth understanding into barriers that hindered students from participating in physical activities and sports frequently. Five themes emerged from the interviews as:

1. inadequate equipment and facilities; which are sporting equipment and facilities needed to enhance students' participation in physical activities and teachers' teaching of physical education.
2. transportation; moving to and from sporting venues during preparation and participation was a barrier, as access to public transport can be stressful and very costly of other forms of transport can be a barrier lack of transport was a key barrier for people in special schools. Whilst they may have taken the decision to participate, transport often became an issue
3. financial constraints; financial barriers include that of acquisition or purchase of sports equipment and facilities needed for sporting activities to progress.
4. government policies; which refers to laid down programmes available to enhance students with disabilities involvement in special schools lack of qualified and trained Physical Education teachers; which are insufficient of trained physical education teachers at the segregated and inclusive schools.

5. attitude Towards People with Disability (Discrimination); which refers to the kind of attitudes exhibited by people without disability to those with disability.

#### 4.3. Inadequate Equipment and Facilities

Inadequate sporting equipment and facilities was one of the major factors that came up during the interviews that influence students with disabilities' participation in physical activities and sports. These sporting equipment and facilities from the view point of both teachers and students were facilities such as well-constructed football and athletic pitches; showdown and goalball, and equipment such as protective materials (shin guards, goalkeeper's gloves), well-furnished first aid boxes; balls for (soccer, volleyball, handballs) and missiles. When asked whether teachers teach Physical Education to students at their various schools, all the three Physical Education teachers interviewed responded affirmatively that PE is taught every week, but they were quick to state that they teach with some challenges which does not only affects their teaching but also influence their student's participation in physical activities. Teachers' responses were also affirmed by their students.

A teacher teaching at the inclusive basic school with 9 years' experience bitterly stated that;

*“as for P.E we teach every week but we are challenged with inadequate sporting equipment and facilities. Not only do we lack good facilities.....we also lack sporting equipment, the only game we usually play during physical education lesson is football, volleyball and handball and is so because we only have balls....and even that, my blind students do not participate because of their conditions”* (School B, Teacher)

Most students with visual-impairment who were interviewed also expounded that their lack of participation in physical activities and sports was as a result of inadequate sporting facilities and equipment. One of the students, from School B, expounded that;

*“the only sporting facilities available is showdown or goalball and even that, we only play that game or do that sports when we come to school (Capedeaf)” but when we come here to school, everyday our abled peers (those who can see) participate during PE lessons and only play the soccer during P.E lesson. We can only play or do some activities with showdown or goalball when we go to (dormitory) capedeaf and even that, they are only one at the school so there’s so much pressure on you when playing” (School B, Student 1).*

Another teacher with 11 years teaching experience at Capedeaf explained initially that, personally there are no challenges in teaching physical education, but later expounded that;

*“due to inadequate or shortage of equipment and facilities in the school and again considering my students (hearing impaired) population, it will less stressful for me if we are to have a lot of equipment like balls for soccer, volleyball, and handball and again for visually-impaired students presence of more balls at least two goalball and showdown each will ease the pressure and also allow a lots of them (visually-impaired) to participate” (School A, Teacher).*

*“we have a demarcated area where students play, which is for cluster of schools around us, but we compete over with them, and it is usually used by us when available. We lack a lot for instant, the table tennis is an improvised one, jerseys are in a very bad state....in fact, some of these things demotivate us as teachers when training and preparing these kids for special games” (School B, Teacher).*

From School A, one-on-one interview through sign language, a student with hearing impairments corroborated with their teachers’ assertion that inadequate equipment and facilities influence their participation in physical activities and sports. The student explained that;

*“sometimes myself and my friends wish to play for long time but you have to stop for your friends to also play some due to limited number of materials present and even that, some are not good they getting spoil” (School A, Students).*



My interactions with one of the Physical Education teachers are:

**Researcher:** Do you teach P.E?

**Teacher:** Yes madam..I will say yes.

**Researcher:** How often do you teach P.E per week?

**Teacher:** Once every week as stated on the timetable

**Researcher:** Please, how many hours is allocated for P.E on the timetable

**Teacher:** Madam is 1hour

**Researcher:** So what do you do during your P.E lessons?

**Teacher:** we mostly engage in some physical activities and sports

**Researcher:** Please can you name some of these physical activities and sports you organize?

**Teacher:** Playing of soccer, volley ball, handball, running, jogging etc

**Researcher:** So sir, do your students participate during these activities looking at their conditions?

**Teacher:** Yes, for the deaf they are very active as compared to the blind.

**Researcher:** Ok.

**Teacher:** but let me say that, left the deaf students alone, they will spend the whole day playing, but unavailable and limited number of these facilities prevent them if not they will play for more than the 1 hour allocated for us. Again, sometimes on weekends, they wish to play and have fun but lack and insufficient of necessary facilities sometimes hinders them.

**Researcher:** You said the deaf students, what about the blind?

**Teacher:** Hmmm Madam, as for the blind students' goalball and showdown are the only games available for them apart from doing brisk walking

or normal walking on their own. Same problem of insufficient facilities and equipment influence their participation even in the goalball and showdown. The whole school has each one of the goalball and showdown, and because of that, there is always pressure on them and either makes participants spends less time when playing or some of them wouldn't come there and play at all.

**Researcher:** Ok.

From School C, an extract of an interaction with Physical Education teacher on the concept of equipment and facilities is:

**Researcher:** How long have you been teaching P.E?

**Teacher C:** 6 years.

**Researcher:** Unlike your colleagues in other special schools, you do not have challenges with sporting equipment and facilities?

**Teacher C:** Oh madam! You made me smile

**Researcher:** Why?

**Teacher C:** It is a challenge everywhere but we try to manage it.

**Researcher:** How do you manage teaching students with intellectual and developmental difficulties without sporting equipment and facilities?

**Teacher C:** Our situation is even worse, because we do not have a football field.

**Researcher:** So where do your students play?

**Teacher C:** they.... sorry, we go to the nearby school field and share with that school near us. For us, our school compound is very small or more or less we do not have. We have no space for any physical activities and sports participation. We have very few ordinary common balls for soccer, volleyball and is really pity. Sometime needs to be done about

this because these kids have to do exercises for their health or conditions to improve.

#### 4.3.1. Problems with Transportation

Another challenge is problems with transportation which came up in all the three schools. Teachers and students interviewed complained that they are not able to have access to transportation during preparation for their annual Paralympic competitions. People with a disability are often required to travel longer distances due to the lack of appropriate facilities within their schools in order to have access to these available and user-friendly equipment and facilities (standard pitches). Whilst the schools have taken the decision to participate, often transporting students even to the venue for participation becomes an issue. Transportation is either not easily accessible, costly or simply not available for some, especially when it concerns cost.

From School B, a teacher stated that;

*“transporting students from school to venues (stadia) for games become very challenging especially as we do not have vehicle on our own...we have to go and rent and is very hell of a time and expensive”*

My interactions with one of the Physical Education teachers are:

**Researcher:** Do you organize sports?

**Teacher:** Yes madam,

**Researcher:** How is the trend?

**Teacher:** internal training first.

**Researcher:** How is the internal training selection done?

**Teacher:** various department in the school are joined to compete among themselves based on student’s capabilities, and we get our team from there.

**Researcher:** Ok, so when you get your team what happens?

- Teacher:** We train and prepare them for the various competitions.
- Researcher:** Please where do you have the competitions?
- Teacher:** Accra
- Researcher:** is it only in Accra?
- Teacher:** the venues have being rotating.
- Researcher:** How often are these competitions organized?
- Teacher:** It depends on what Special Olympics tells us. For instance, this year they said athletics, so we train our students accordingly.
- Researcher:** so what challenges do you encounter during the preparations?
- Teacher:** we spend a lot of money for transporting these students to the venue when time is due. Even though governments bring us money they do not arrive early and are also not enough.
- Researcher:** Really?
- Teacher:** Yes madam. We spend alots of money apart from the transportation since we don't have a bus, we also pay the driver, pay for fuel and also pay for the number of days that we spend there. And because the money doesn't come early enough, we sometimes borrow to foot these expenses.

The students had other views to that of their teachers. Some of the students interviewed *indicated that;*

*“Sometimes we wait and wait for a very long time and the bus will not come early..... and sometimes we do not go for training because the bus will not come at all” (School C, Student 1).*

*..... “those days we use to go to new Cape Coast stadium where the facilities are available to train but now we do not because we do not have school bus to send us there” (School A, Student 2).*

### 4.3.2. Financial Constraints

The theme, financial constraints is another challenge facing the students with disabilities involvement in physical activities and sports in all the schools sampled. The teachers from the three special schools primarily attributed the challenges facing their teaching of physical education and students' participation in sporting activities to financial constraints. For instance, an extract of an interaction with Teacher A is:

**Researcher:** Did you say another challenge is financial constraints?

**Teacher A:** Yes.

**Researcher:** Can you explain further?

**Teacher A:** Yeah. Most of the challenges we face as special school is lack of funds (finances) in the system. From lack of facilities and equipment that is our inability to purchase the necessary and user-friendly facilities and equipment, and money for transporting students for either training sessions or the main games are due to lack of money(funds).

**Researcher:** Okay.

**Teacher A:** Yes madam; because even with these financial difficulties, we sometimes manage to produce very good athletes among our kids who do represent Ghana at the Special Olympics.

**Researcher:** Really?

**Teacher A:** Yeah. Recent years we have had some of our students being successful at the national level to represent Ghana at Special Olympics at the World stage.

From School B, the teacher was keen about financial difficulties as a major challenge to the teaching at the special school which subsequently affect students' effective involvement in physical activities and sports. One of the teachers indicated that;

*“lack of funds affect us especially when preparing for national Special Olympic.....sometimes we solicit funds from elsewhere and when we are lucky we get some, other times too we do not. At times we go to the extent of borrowing” (School B, Teacher)*

All the teachers interviewed attested to the fact that almost every Special Olympic organised at the national level have one or two of their athletes performing extremely well hence they are selected to represent Ghana at World Special Olympics Competitions.

The students interviewed from all the three special schools corroborated assertions of their teachers that availability of funds will help facilitate and enhance their involvements in sports when enough disability friendly equipment and facilities are available for their perusal. The students had this to say;

*“we need certain small things like football boots, balls, protective clothes like shin guard for soccer but the school is unable to buy for us. This can protect us from injuring ourselves but we donot have them” (School A, Students).*

#### **4.3.3. Government Policy**

The teachers and students in their attempt to talk about the challenges influencing their teaching and students' involvements in sports identified government policy as one of the challenges. Government policy indicating certain decisions that the government can formulate and enforce to help influence and facilitate students with disabilities' participation in physical activities and sports to help improve their well-being and unearth talents in these students. Among these government policies indicated by both teachers and students were: prioritization of physical education at special schools, an increase in trained physical education teachers/personnel in special schools and also an increase in time allocation for physical education on the teaching timetable.

One of the trained physical education teachers explained that;

*“we are only two teachers who are trained in P.E from the University teaching the entire school P.E here, it is a very tiresome work especially where we have to communicate with the students through sign language. The think we need more hands that’s we need more trained P.E teachers here in Capedeaf”* (School A, teacher).

From School C, the teacher explained that;

*“In this inclusive school I am the only teacher who is trained in P.E thus there’s more pressure on me. I am even more lucky that all the students with disabilities (blind) do not actively participate during P.E lessons if not like I will suffer, even this I think we need more trained P.E teachers here to help these blind students during P.E lessons”* (School C, teacher).

A student added that;

*“we need more P.E teachers during games so that they can help us to also exercise because of our conditions. Sometimes I fear playing because I think I can hurt myself so if they are many here they can assist us”* (School C, student 1).

Another student added that;

*“I enjoy playing games and doing exercises so the time we spend playing is not enough. So I will that the time should be more like three hours even more so that we can enjoy P.E lessons. Again, our teachers should pay attention to P.E lessons for we the sick can also play”* (School C, student1).

From School B, the teacher explained that;

*“Government must prioritise P.E and for that matter sporting activities for disabled students no matter the kind of disabilities he/she is suffering in order to make them very active to improve their well-being. This can be done by increasing the number of trained P.E teachers in special schools to some us because I am suffering here so that the time allocated for P.E on the timetable can be increased ”* (School B, teacher).

An interaction with one student is:

**Researcher:** Do you have enough time for P.E lessons?

**Student 2:** Yes but ...

**Researcher:** Do you want to add something?

**Student 2:** Yeah, I think we have sports (P.E lessons) once every week for just 1hour.

**Researcher:** why is 1hour per week not enough?

**Student 2:** Yes, is not enough for me madam.

**Researcher:** How long do you want it?

**Student 2:** Madam like two or more hours... I think two hours and even more every day in the week will be enough for me.

**Researcher:** Won't that be too much for you?

**Student 2:** No madam. Because we need more time to play and have fun during P.E lessons, but the only problem will our P.E teachers.

**Researcher:** What about them?

**Student 2:** sometimes they become very tired, because when we finish for our class, just after the lesson, another class(students) will come so they get tired paaaa (they become very tired).

**Researcher:** So what do you think?

**Student 2:** More teachers should come to take care of us so that we can have enough time to play and have fun with my friends during P.E lessons.

**Researcher:** Ok.

#### **4.3.4. Attitude towards People with Disability (Discrimination)**

The theme, attitude towards students with disability is another challenge facing the students with disabilities specifically the blind. Two students with low vision visual-impairment (that's those students could see but not clearly) at the inclusive special school attributed their challenges hindering their involvement in



physical activities and sports to attitudes of their abled peers towards their disability.

An interaction with one of the students is:

**Researcher:** Did you say another challenge is attitudes of your colleagues towards you?

**Student:** Yes Madam, but but but .....

**Researcher:** want to say something?

**Student:** Yes Madam, but not my friends here with me here oooooo.....

**Researcher:** Not your friends here but who?

**Student:** madam those students who can see very well (sighted students).

**Researcher:** What attitudes do they exhibit towards you?

**Student:** madam me and my friend, pointing at his colleague with low vision..... Madam, the two of us we can see you oooooo but not that clear like that...

**Researcher:** Really?

**Student:** Yes but not that very clear

**Researcher:** Ok, there he started operating a mobile phone in his hand.

**Student:** Madam as you can see me pressing numbers on my phone, I can see small small just like my other friend sitting beside you.

**Researcher:** So can you explain further what attitudes they show towards two of you?

**Student:** Yes madam, Madam the two of us we use to play football with them during P.E lessons.

**Researcher:** You said you used to?

**Student:** Yes madam but we have stopped.

**Researcher:** Why?

**Student:** sometimes they don't want their body to even touch us and they insult us by calling us "blind boys" when we don't give them correct pass or do not pass them at all.....

**Researcher:** Ok.

**Student:** they behave like they will not be able to see like us if they touch us or if they have direct contact with us.....And also they don't give us pass when they get the ball...usually they only play among "themselves" which is very bad.

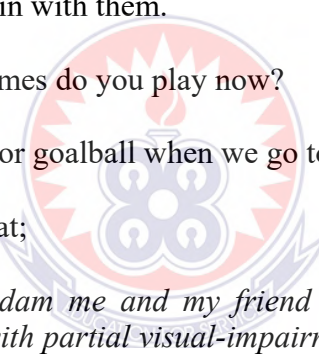
**Researcher:** So have you reported them to your teachers before?

**Student:** No madam, there's no need to report them. We only stopped playing football again with them.

**Researcher:** So, what games do you play now?

**Student:** Showdown or goalball when we go to Cape deaf.

The other student added that;



*"madam me and my friend here (referring to his colleague with partial visual-impairment), we have stopped playing football a long time because those boys (referring to their sighted peers) have being using some rough words (meaning unsavoury words) to us and have also being calling us some names which is very bad.... So we have stopped playing with them. We only play with our colleagues with same conditions (visual impairment)"*

Result of this study has shown that, students' participation in physical activities are to a large extent influenced by intrapersonal factors such as fear of injuring themselves; being ashamed with their disabilities and interpersonal factor of not being comfortable participating in activities in the presence of their peers without disabilities. These findings are consistent with studies by Latsuka and Cottingham (2016); Post and Van Leeuwen (2012) and Shield and Synnot (2016) that negative

attitudes, societal stereotypes of disabilities and lack of acceptance by peers are barriers to their physical activities participation.

In addition, this study has shown that, parents of students with disabilities prefer their children committed to academic work to physical activity participation. This finding corroborated the study of Gay et al. (2018) and Wittberg et al. (2012) that parents focused on academic work and lack of family support influence students with disabilities participation in physical activities.

Again, findings of these study has shown that, majority of students prefer participating in physical activities during their leisure time to academic activity like reading of books. This student is not consistent with the study of Carlon et al. (2013) that, students prefer being engaged in an academic activity like reading to participating in physical activities during their leisure time.

Finding of the study has shown that, most of the students were either worried or fear of injuring themselves during their participation in physical activities and sports which they indicated could worsen their conditions, thus was a major barrier to their participation in sports. Further on findings of this study, many students indicated their strong desire and interest for physical activities and sports participation but revealed lack of qualified adults' supervision; being ashamed of their disabilities; disabled students are not fully accepted by other abled peers; their parents' preference of academic success to physical exercise and sports as hindrance to their participation in physical activities and sports.

Furthermore, finding of this study has shown that, students with disabilities appreciate the significant impact and effects of physical activities participation on their health. This result is consistent with studies of Diaz et al. (2019) and Rotolo et al. (2020) that, physical activity participation promotes character building,

socialization, personal autonomy, community integration and life satisfaction among children with disabilities.

Furthermore, students in this study chose not to participate in physical activities and sports because they considered certain behaviours from family, and friends to be some of the most social barriers that influenced their personal interests for participating in physical activities and sports. This could indicate that, students appreciate social pressures from family and friends as negative influence on their participation in sports, however, they appreciate support from people around them to be of a great help in performing physical activities and sport. Supports from family and peers are equally important at starting and at continuing their participation in sporting activities.

Factors for perceived behavioural control such as fear of new injuring, being ashamed of disabilities, unable to participate in sporting activities due to disabilities were experienced by the students with disabilities. This indicates that the students do consider the control over their sports participation to be influenced by their personal factors. Even though students consider these barriers to influence their participation in physical activities and sports, however, these experienced personals do not change their intentions and interests to participate in physical activities and sports.

These results of this study indicate that barriers of sports that act as hindrance to students with disabilities involvements in physical activities and sports are mostly social factors (personal and inter-personal), environmental (lack of facilities and equipment, problems with transportation), and financial constraints. These findings provided insight into these barriers and this knowledge can help provide advice for policy makers in sports and rehabilitation to reduce barriers hindering students with disabilities involvements in physical activities in order to improve sports participation

among such students. This study is therefore consistent with findings of Gay et al. (2018) that, barriers hindering students with disabilities participation in sports include personal, social, psychological and environmental.

Findings from this interview is consistent with studies of Razmjou et al. (2018) and Augestad (2017) that, lack of and unavailability of enough financial resources greatly influence sporting activities since sporting equipment for special aids are costly and not all segregated schools can afford them to be used during sporting events. These views from students in actual sense mean that not only do lack of equipment and facilities affect teaching and learning of physical education at special schools but they also negatively influence students with disabilities participation in physical activities and sports since they are very vital to sports teaching and participation. The outcome from the interviews confirms studies of Augestad (2017), and Brecht and Burnet (2019) that lack of equipment and facilities affect student's participation in sporting activities including those with disabilities.

Result from the interview confirms assertion of Chen et al., (2018) and Augestad (2017) that, lack of trained teachers/coaches for persons with disabilities remains a significant barrier to their participation in sports. Without lack of trained teachers, learners with disabilities cannot participate actively in physical activities sports Augestad (2017). It is important to look at society's general attitude towards people with a disability. Such attitudes are felt to be primarily be due to ignorance and a lack of acceptance of those who act or look differently (people with any form of disability) the within society. These attitudes act as barriers in many aspects of these students, and can result in a lack of confidence and a reluctance of visually-impaired students to interact with their peers without disability.

The study has revealed that, attitudes or behaviour of some students especially those without disability can act as barriers and impact on individuals with disabilities likelihood of participating in physical activities and sport. This finding is consistent with Shields and Synnot (2016) who revealed that, negative attitudes, societal stereotypes of disability and a lack of acceptance by peers hinders and acts as barriers to students with disabilities' participation in sporting activities. Again, this finding is in agreement with a report by WHO (2016) who revealed that children with different kind of disabilities do find it very difficult to integrate into society and also participate in different physical activities as compared to their peers without disability, basically due to the barriers they encounter while participating in physical activities such as discrimination Buljevac, et al. (2011).

Again, the study has shown that, negative attitudes, societal stereotypes of disability and a lack of acceptance by peers of students with disabilities greatly hinder their (students with disabilities) participation of physical activities, which will promote inactive lifestyles among children with disabilities possible of having negative effects on their health.

Even though, this study disagrees with Carlon et al (2013), that children with disability engage in less physical activity compared to their typically developing peers; absence and unavailability of user-friendly facilities and equipment needed for successful participation by these students in special schools could contribute to their non-participation.

These factors elaborated by both teachers and students through the interview as being barriers to participation of physical activities, could partly be attributed to lack of interest in students with disabilities participation. This is because, children with physical disabilities have special needs that must be met in order to be able to

actively participate in physical activities to enhance and encourage their participation. In conclusion, most findings shown in this study are not consistent with those studies reported in literature that, students with disabilities are less active due to their inactiveness as a result of their lack of participation in physical activities, but rather, the kind of disabilities and other external factors influence how active the children could be.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter highlights the summary of the key findings, conclusions, and recommendations on students with disabilities participation in physical activities and sports. The conclusions and recommendations in this chapter are based on the key findings from the study. The recommendations from the key findings will inform policy and practice in relation to students with disabilities participation in sporting activities. The chapter ends with some suggestions made for future study.

#### 5.0. Summary of the Study

This study examined factors influencing students with disabilities' participation in physical activities and sports in three special schools in Cape Coast Metropolitan in Central Region of Ghana. To be able to achieve the purpose of the study, a convergent mixed methods research design was employed for collecting and analyzing both quantitative and qualitative data for the study. QSDPPAS instrument was used to collect the quantitative data, and SIGSDPPAS and TIGSDPPAS instruments were used to collect the qualitative data from students and teachers respectively. Multi-stage sampling techniques were employed to select 194 students from three Special Schools. Data from the questionnaires and interviews were analysed using frequencies, percentages, independence sample t-test and themes. Sample statements from students and teachers during the interviews were used to support the themes.



## **5.1. Key Findings**

5.1.1. The findings from the examination of the type(s) of physical activities and sports that students with disability mostly engaged in are:

1. The types of physical activities and sports regularly participated by students with disabilities were based on the kind of disabilities participants were suffering from. This is because students with hearing-impairment and intellectual and development difficulties were mostly engaged in activities such as football, running, brisk walking, volleyball, whereas students were less engaged in jogging and table tennis. But students with visual-impairment (blind) were frequently engaged in either showdown or goal ball or both. Students with hearing-impairment and intellectual and development difficulties were involvements in football, running, brisk walking, volleyball, table tennis could partly be due to less stressful and more relaxed form of these activities hence, found common among these students likewise showdown or goal ball to those with visual-impairment. Even though students with visual-impairment (blind) can engage in playing football, an adapted football for these students were not available for blind students in the special schools.

**5.1.2. The findings from the exploration of level of participation of students with disabilities in physical activities and sports are:**

1. the kind of disability predict how often particular physical activities and sports are participated in by students. This is because students with hearing-impairment (deaf) very often were engaged in activities they performed most while's students with visual-impairment (blind) were occasionally engaged in showdown or goal ball.

2. majority of the students with hearing impairments mostly engaged in physical activities such as football, running, brisk walking participated at their school field except that of volleyball which had most of them got played only at home. Volleyball was mostly played at home because of inadequate of the facility at the special schools. Most students spent an average of one-to-two hours participating in physical activities and sports such as running, brisk walking, volleyball, table tennis except football which students spent more than two hours.
3. students with visual-impairment only participated in playing showdown or goalball only at school. This was due to inadequate of such facilities at their communities (home). With regards to how long (duration) for participation in showdown or goal ball, students an average of less than an hour. This was also partly due to the number of facilities and equipment needed to play showdown or goal ball at the special school (herein one each).
4. There was no statistical significant difference in the levels of participation score of male students and female students with disabilities participation in physical activities and sports. This was because level of participation mean score of male students ( $M = 4.09$ ,  $SD = 1.710$ ) was similar to the level of participation mean score of female students ( $M = 3.89$ ,  $SD = 1.738$ ,  $t(192) = .770$ ,  $p = 0.429$ ).

**5.1.3. The findings from the exploration of benefits of physical activities and sports participation to students with disabilities are:**

1. regular participation in physical activities and sports helped students improved and increased their health and physical fitness; maintained and improved their

emotional wellbeing and also help improved students heart and lung fitness and increased their energy level as well.

2. regular participation in physical activities and sports helped students become more self-conscious about their disabilities; acquired new skills that made them felt more independence and learned how to deal with their disabilities.
3. students engaged in regular physical activities purposely for fun or relaxation which helps their self-esteem improvement, confidence level increased and felt extremely better and confident about themselves.
4. students involved in regular physical activities and sports provided them the opportunities to socialize with friends; have them spend better time with friends and enjoy their company, open doors for social contacts and lots of life opportunities and also helped participants to have a great sense of belonging to a group.
5. family members such as parents and friends act as positive influence to students and this motivate them to continue their participation in physical activities and sports.

**5.1.4. The findings from the examination of factors influencing students with disabilities' involvement in physical activities and sports are:**

1. students worry or fear of injuring themselves which could worsen their conditions and being ashamed of their disabilities influenced their participation in physical activities and sports.
2. inadequate of qualified adults' supervision; disabled students not fully accepted by other abled peers; their parents preference of academic success to physical exercise and sports were hindrance and influenced their participation in physical activities and sports.

3. students prefer reading to participating in any physical activity during their leisure time, and even if they participate, they do so when their colleagues with disabilities are involved.
4. parents of students with disabilities prefer academic success to physical exercise and sports for their wards. This greatly hinders and influence students' involvements in physical activities and sports.
5. students consider these barriers to negatively influence their participation; however, these barriers do not change their intentions and interests of participation in physical activities and sports.
6. students indicated through their interview that inadequate sporting facilities and equipment; transportation problems; financial constraints; government policies and attitude towards people with disability (discrimination) were factors that hindered their participation in physical activities and sports.
7. students do consider factors such as fear of injury, being ashamed of their disabilities do influence their participation in physical activities and sports, however, students do not change their intentions and interests in physical activities and sports participation.

## **5.2. Conclusion**

The study has shown that, students with hearing-impairment mostly engaged in activities such as football, running, brisk walking, volleyball, whereas less engaged in jogging and table tennis. But students with visual-impairment (blind) frequently engaged in showdown or goal ball which are less stressful and more relaxed form of exercises. The study has added to the literature that the types of physical activities and sports regularly engaged in by students with disabilities are based on the kind of disabilities participants suffer from.

The study has shown that, students with hearing-impairment (deaf) very often engaged in physical activities they performed most whereas students with visual-impairment (blind) occasionally engaged in physical activities and sports. The study has added to literature that, the kind of disability predicts or inform how often particular physical activities and sports can be participated in by students with difficulties.

The study has shown that, physical activities and sports such as football, running, brisk walking, volleyball which are mostly involved in by hearing impaired students both in school (at the field) and at home, whereas showdown and goal ball are engaged by students visual impairments only at school. This is due to facilities and equipment for playing showdown and goal ball being only presents at school but not home whereas those of football, running, brisk walking, and volleyball are readily available at school and home. The study has added to the literature that, certain facilities and equipment for adaptive sports are scarce hence such sporting activity hardly engaged by students with disabilities.

The current study has provided evidence that students engaged in regular physical activities purposely for fun or relaxation; self-esteem improvement; increased confidence level and feel extremely better; socialize and spend better time with friends to enjoy their company; open doors for social contacts and life opportunities, and also have a great sense of belongings. This study has added to literature that, students with disabilities involve in physical activities and sports purposely because of their positive outcomes they acquired which greatly helps improve their health and well-being.

The current study has provided evidence that, students with disabilities involvements in physical activities and sports are hindered and influenced by factors of personal,

social and environmental. Fear and worried of having new injuries, being ashamed of their disabilities, no interest, not fully accepted by abled peers, their preference of reading to participating sporting activities during leisure time, being only interested in doing an activity when their peers are also involved. Other factors of inadequate user-friendly facilities and equipment, financial constraints, problems with transportation and discrimination from their abled peers also hindered and influenced their involvements in physical activities and sports. The current study has added to literature that, students with disabilities become inactive based on factors of personal, social and environmental being mentioned above.

The study has also shown that, provision of adequate user-friendly sporting facilities and equipment, frequent and convenient transportation for students' athletes, availability of funds, good government policies such as prioritization of physical education in special schools, availability of well-trained physical education teachers (personnel) at special schools, and positive attitude towards people with disability would greatly enhance and motivate students with disabilities participation in physical activities and sports.

### **5.3. Recommendations**

The following recommendations are made based on the findings of the study: as students indicated lack of disability user-friendly facilities and equipment in special schools, it is, therefore recommended; that:

1. the schools should liaise with all stakeholders especially Cape Coast Metropolitan Education Directorate to provide these schools with user-friendly facilities and equipment to help encourage students with disabilities participation in physical activities and sports and also to enhance effective teaching of physical education at the special schools.

2. Heads of these special schools should appeal to Ghana Education Service headquarters through the Metro Education Directorate for Physical Education personnel to be posted to help in teaching of Physical Education in these special schools.

The researcher strongly believes that, if these suggestions are adhered to and implemented students' participation in physical activities would improve. This subsequently would serve as a model for other special schools in the country.

#### **5.4. Suggestion for Future Research**

The study explored students with disabilities involvements in physical activities and sports by involving students. The study, however, did not explore how parents of these students can help encourage and motivate their students to frequently participate in sporting activities both in school and at home.

Also, the study explored the level of participation and barriers that hinders students with disabilities involvements in physical activities and sports. However, the study did not consider students without disabilities level of involvements and the possible barriers that would affect their participation in physical activities and sports. It is therefore, recommended that further research be conducted on the impact of parents on their children with disabilities participation in physical activities and sports, and also students without disabilities level of participation in physical activities and sports.

## REFERENCES

- Abbasi, M. A. R., Farhan, C. M., & Hussain, F. (2020). Opening new frontiers in adaptive sports for special persons through inclusion. *THE SPARK A HEC Recognized Journal*, 5(1), 98-125.
- Ackah-Jnr, F. R., & Danso, J. B. (2019). Examining the physical environment of Ghanaian inclusive schools: How accessible, suitable and appropriate is such environment for inclusive education. *International Journal of Inclusive Education*, 23(2), 188-208.
- Aho, A. C., Renmarker, E., Axelsson, M., & Jakobsson, J. (2021). Experiences of playing volt hockey with Focus on well-being According to Positive Emotion, Engagement, Relationships, Meaning, Achievement: An Interview Study. *Adapted Physical Activity Quarterly*, 1, 1-19.
- Ajzen, I. (1985). From intention to actions: A theory of planned behaviour. In J. Kuhl and J. Beckman (Eds.), *Action Control: From Cognition to Behaviour*. Heidelberg: Springer, 11-39.
- Ajzen, I. (1988). *Attitudes, Personality and Behaviour*. Chicago: Dorsey Press.
- Ajzen, I., & Fishbein M. (1980). *Understanding Attitudes and Predicting Social Behavior*, Prentice Hall, Englewood Cliffs, NJ: USA.
- Ajzen, I., & Fishbein, M. (1974). Factors influencing intentions and the intention behavior relation. *Human Relations*, 27, 1-15.
- Alesi, M., & Pepi, A. (2017). Physical activity engagement in young people with Down syndrome: Investigating parental beliefs. *Journal of Applied Research in Intellectual Disabilities*, 30(1), 71-83.
- American Academy of Pediatrics. (2001). Medical conditions affecting sports participation. *Pediatrics*.107 (5), 1205–1209.
- American Academy of Pediatrics. (2006). Active healthy living: prevention of childhood obesity through increased physical activity. *Pediatrics*.117 (5), 1834–1842.
- Augestad, L. B. (2017). Self-concept and self-esteem among children and young adults with visual impairment: A systematic review. *Cogent Psychology*, 4(1), 1319-1352.
- Auxter, D., Pyfer, J., Zittel, L., & Roth, K. (2010). *Principles and methods of adapted physical education and recreation* (11<sup>th</sup> ed.). New York, NY: McGraw-Hill.



- Bantjes, J., Swartz, L., Conchar, L., & Derman, W. (2015). Developing programmes to promote participation in sport among adolescents with disabilities: Perceptions expressed by a group of South African adolescents with cerebral palsy. *International Journal of Disability, Development and Education*, 62(3), 288-302.
- Barbosa, A., Whiting, S., Simmonds, P., Scotini Moreno, R., Mendes, R., & Breda, J. (2020). Physical activity and academic achievement: an umbrella review. *International Journal of Environmental Research and Public Health*, 17(16), 59-72.
- Basch, C. E. (2011). Physical activity and the achievement gap among urban minority youth. *Journal of School Health*, 81(10), 626–634.
- Bershwinger, T., & Brusseau, T. A. (2013). The impact of classroom activity breaks on the school-day physical activity of rural children. *International Journal of Exercise Science*, 6, 134-143.
- Bertapelli, F., Pitetti, K., Agiovlasis, S., & Guerra-Junior, G. (2016). Overweight and obesity in children and adolescents with Down syndrome--prevalence, determinants, consequences, and interventions: a literature review. *Research in developmental disabilities*, 57, 181-192.
- Blair, S.N., & Jackson, A.S. (2001). Physical fitness and activity as separate heart disease risk factors: a meta-analysis. *Medicine and Science in Sports and Exercise*, 33,762–764.
- Bloemen, M.A.T., Verschuren, O., van Mechelen, C., Borst, H.E., de Leeuw, A.J., van der Hoef, M., & de Groot, J.F. (2015). Personal and environmental factors to consider when aiming to improve participation in physical activity in children with Spina Bifida: A qualitative study. *BMC Neurology* 15 (11), 1-11.
- Boddy, L. M., Downs, S. J., Knowles, Z. R., & Fairclough, S. J. (2015). Physical activity and play behaviours in children and young people with intellectual disabilities: A cross-sectional observational study. *School Psychology International*, 36(2), 154-171.
- Brandon, D. P., & Ncube, M. M. (2006). Botswana's agriculture teachers' attitudes towards inclusion of students with physical disabilities in mainstream classes. *The Negro Educational Review*, 57(4), 215 - 227.
- Brecht, A. A., & Burnett, D. D. (2019). Advising student-athletes for success: Predicting the academic success and persistence of collegiate student-athletes. *NACADA Journal*, 39(1), 49-59.
- Buljevac, M., Majdak, M., & Leutar, Z. (2011). The stigma of disability: Croatian experiences. *Disability and Rehabilitation* 34(9), 725-732.

- Cairney, J., Dudley, D., Kwan, M., Bulten, R., & Kriellaars, D. (2019). Physical literacy, physical activity and health: Toward an evidence-informed conceptual model. *Sports Medicine*, 49(3), 371-383.
- Carlton, S., Shields, N., Dodd, K., & Taylor, N. (2013). Differences in habitual physical activity levels of young people with cerebral palsy and their typically developing peers: A systematic review. *Disability Rehabilitation*, 35(6), 47–55.
- Carty, C., van der Ploeg, H. P., Biddle, S. J., Bull, F., Willumsen, J., Lee, L. & Milton, K. (2021). The first global physical activity and sedentary behavior guidelines for people living with disability. *Journal of Physical Activity and Health*, 18(1), 86-93.
- Center for Disease Control (2002). Health-risk behaviour among persons aged 12-21 years. *Journal of Morbidity and Mortality*, 43, 231-235.
- Centers for Disease Control and Prevention. (2014). Annual data early hearing detection and intervention (EHDI) program. Retrieved from <http://www.cdc.gov/ncbddd/hearingloss/ehdi-data.html>
- Chen, W., Hammond-Bennett, A., Hypnar, A., & Mason, S. (2018). Health-related physical fitness and physical activity in elementary school students. *BMC public health*, 18(1), 1-12.
- Chirkov, V., Kim, Y., Ryan, R. M., & Kaplan, U. (2003). Differentiating autonomy from individualism and independence: A self-determination theory perspective on internalization of cultural orientations and well-being. *Journal of Personality and Social Psychology*, 84(1), 97-110.
- Chism, S. (2020). Motivating high school students in a blended physical education learning environment: A self-determination theory analysis. Doctoral dissertation, Northern Illinois University.
- Clemes, S.A., Barber, S.E., Bingham, D.D., Ridgers, N.D., Fletcher, E., Pearson, N., Salmon, J., & Dunstan, D.W. (2015). Reducing children's classroom sitting time using sit-to-stand desks: Findings from pilot studies in UK and Australian primary schools. *Journal of Public Health*, 38, 526–533.
- Cohen, L., Manion, L., & Morrison, K. (2000). *Research methods in education*, London: Routledge-Falmer.
- Cooke, A. N., Fielding, K. S., & Louis, W. R. (2016). Environmentally active people: the role of autonomy, relatedness, competence and self-determined motivation. *Environmental Education Research*, 22(5), 631-657.
- Creswell, J. W. (2012). *Introduction to mixed methods research*. Keynote address for the CAQD conference, University of Marburg, Germany.

- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. (4th ed.). Thousand Oaks, California: Sage Publications, Inc.
- Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research*. SAGE.
- Cronbach, L. J., & Shavelson, R. J. (2004). My current thoughts on coefficient alpha and successor procedures. *Educational and Psychological Measurement*, *64*(3), 391-418.
- Cudjoe, M. (2015). *The impact of regular physical activity on the general well-being of physically disabled adults in the Kumasi metropolis*. Unpublished master's thesis. Kwame Nkrumah University of Science and Technology. Kwame Nkrumah University of Science and Technology, Ghana.
- Dale, L. P., Vanderloo, L., Moore, S., & Faulkner, G. (2019). Physical activity and depression, anxiety, and self-esteem in children and youth: An umbrella systematic review. *Mental Health and Physical Activity*, *16*, 66-79.
- Dasso, N. A. (2019). How is exercise different from physical activity? A concept analysis. *In Nursing Forum*. *54*(1), 45-52.
- Datar, A., & Sturm, R. (2006). Childhood overweight and elementary school outcomes. *International Journal of Obesity*, *30*, 1449–1460.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deci, E. L., & Ryan, R. M. (2002). *Self-determination research: Reflections and future directions*. In E. L. Deci, & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 431- 441). Rochester, NY: University of Rochester Press.
- Diaz, R., Miller, E. K., Kraus, E., & Fredericson, M. (2019). Impact of adaptive sports participation on quality of life. *Sports Medicine and Arthroscopy Review*, *27*(2), 73-82.
- Disabled Sports USA. (2009). Survey finds DS USA participants twice as likely to be employed as adults with disabilities. Retrieved from <http://www.disabledsportsusa.org/survey-findsdisabled-sports-usa-participants-twice-as-likely-to-be-employed-as-adults-withdisabilities/>
- Disabled World. (2016). Disability sports: Information on sport for the disabled. Disabled World Towards Tomorrow. Retrieved from <https://www.disabled-world.com/sports/>

- Dudfield, O., & Kaye, T. (2013). The Commonwealth guide to advancing development through sport. Commonwealth Secretariat: London. Retrieved from: [http://www.un.org/wcm/webdav/site/sport/users/melodie.arts/public/Commonwealth%20Secretariat\\_2013\\_the%20Commonwealth%20Guide%20to%20Advancing%20Development%20through%20Sport.pdf](http://www.un.org/wcm/webdav/site/sport/users/melodie.arts/public/Commonwealth%20Secretariat_2013_the%20Commonwealth%20Guide%20to%20Advancing%20Development%20through%20Sport.pdf)
- Dunn, J., & Leitschuh, C. (2010). Special physical education (9th ed.). Dubuque, IA: Kendall/Hunt.
- Efrat, M. W. (2013). Exploring effective strategies for increasing the amount of moderate-to-vigorous physical activity children accumulate during recess: A quasi-experimental intervention study. *Journal of School Health, 83*, 265-272.
- Everhart, B., Dimon, C., Stone, D., Desmond, D., & Casilio, M. (2012). The influence of daily structured physical activity on academic progress of elementary students with intellectual disabilities. *Education, 133*(2), 298-312.
- Fraenkel, J. R., & Wallen, N. E. (2000). How to design and evaluate research in education (4<sup>th</sup> ed.). Boston: McGraw-Hill.
- Fullagar, H. H., McCall, A., Impellizzeri, F. M., Favero, T., & Coutts, A. J. (2019). The translation of sport science research to the field: a current opinion and overview on the perceptions of practitioners, researchers and coaches. *Sports Medicine, 49*(12), 1817-1824.
- Gallahue, D.L., Ozmun, J.C., & Goodaway, J. (2012). *Understanding motor development: Infants, children, adolescents, adults* (7<sup>th</sup> ed.). New York, NY: McGraw-Hill.
- Gay, C., Eschalier, B., Levycky, C., Bonnin, A., & Coudeyre, E. (2018). Motivators for and barriers to physical activity in people with knee osteoarthritis: a qualitative study. *Joint Bone Spine, 85*(4), 481-486.
- Gísladóttir, T. L., Matthíasdóttir, Á, & Kristjánsdóttir, H. (2013). The effect of adolescents' sports clubs participation on self-reported mental and physical conditions and future expectations. *Journal of Sports Sciences, 31*(10), 1139-1145.
- Graham, G., Holt-Hale, S., & Parker, M. (2013). Children moving: A reflective approach to teaching physical education (9<sup>th</sup> ed.). Boston, MA: McGraw-Hill.
- Grieco, L. A., Jowers, E. M., Errisuriz, V. L., & Bartholomew, J. B. (2016). Physically active vs. sedentary academic lessons: A dose response study for elementary student time on task. *Preventive Medicine, 89*, 98-103.
- Groff, D. G., Lundberg, N. R., & Zabriskie Z. B. (2009). Influence of adapted sports on quality of life: Perceptions of athletes with cerebral palsy. *Disability and Rehabilitation 31*(4), 17-28

- Grootens-Wiegers, P., Hein, I. M., van den Broek, J. M., & de Vries, M. C. (2017). Medical decision-making in children and adolescents: developmental and neuroscientific aspects. *BMC pediatrics*, *17*(1), 1-10.
- Hagger, M. S., & Hamilton, K. (2021). General causality orientations in self-determination theory: Meta-analysis and test of a process model. *European Journal of Personality*, *35*(5), 710-735.
- Hallawell, B, Stephens, J., & Charnock, D. (2012). Physical activity and learning disability. *Brain Journal of Nursing*, *21*, 609-612.
- Hallawell, B., Stephens J., & Charnock, D. (2012). Physical activity and learning disability. *Social and Behavioral Sciences* *69*, 1572-1578.
- Harlow, M., Wolman, L., & Fraser-Thomas, J. (2020). Should toddlers and preschoolers participate in organized sport? A scoping review of developmental outcomes associated with young children's sport participation. *International Review of Sport and Exercise Psychology*, *13*(1), 40-64.
- Hodge, S., Ammah, J. O., Casebolt, K. M., Lamaster, K., Hersman, B., Samalot-Rivera, A., & Sato, T. (2009). A diversity of voices: Physical education teachers' beliefs about inclusion and teaching students with disabilities. *International Journal of Disability, Development and Education*, *56*(4), 401-419.
- Holland, R. B. (2015). Facts and statistics. President's Council on Fitness, Sports & Nutrition. Retrieved from <http://www.fitness.gov/resource-center/facts-and-statistics/>
- Howard, J., Gagné, M., Morin, A. J., & Van den Broeck, A. (2016). Motivation profiles at work: A self-determination theory approach. *Journal of Vocational Behavior*, *95*, 74-89.
- Imms, C., Granlund, M., Wilson, P. H., Steenbergen, B., Rosenbaum, P. L., & Gordon, A. M. (2017). Participation, both a means and an end: a conceptual analysis of processes and outcomes in childhood disability. *Developmental Medicine & Child Neurology*, *59*(1), 16-25.
- Janssen, I., & LeBlanc, A. G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, *7*, (40). 7-40.
- Jeffery, R. W., Epstein, L. H., Wilson, G. T., Drewnowski, A., Stunkard, A. J., Hill, D. R., & Wing, R. R. (2000). Long term maintenance of weight loss: Current status. *Health Psychology*, *19*, 5-16.
- Johnson, C.C. (2009). The benefits of physical activity for youth with developmental disabilities: A systematic review. *American Journal of Health Promotion* *23*, 157-167.

- Kartini, A., & Aprilia, I. D. (2021). Opportunities and challenges: youth activation program for youth athletes so in a in increasing self-esteem. In International Conference on Special Education In South East Asia Region 11th Series 2021 (pp. 1-4). Redwhite Press.
- Kim, J., Dunn, E., Rellinger, K., Robertson-Wilson, J., & Eys, M. (2019). Social norms and physical activity in American and Canadian contexts: a scoping review. *International Review of Sport and Exercise Psychology*, 12(1), 26-48.
- Kissow, A. M. (2015). Participation in physical activity and the everyday life of people with physical disabilities: A review of the literature. *Scandinavian Journal of Disability Research*, 17, 144-123.
- Kitchin, P. J., & Crossin, A. (2018). Understanding which dimensions of organisational capacity support the vertical integration of disability football clubs. *Managing Sport and Leisure*, 23(2), 28-47.
- Korkiakangas, E.E., Alahuhta, M.A., & Laitinen, J.H. (2009). Barriers to regular exercise among adults at high risk or diagnosed with type 2 diabetes: A systematic review. *Health Promotion International*, 24, 416–427.
- Kumari, P. P., & Raj, P. (2016). Role of physical activity in learning disability: A review. *Clinical and Experimental Psychology*, 2, 1-3.
- Lacy, A.C. (2010). Measurement and evaluation in physical education and exercise science (6th ed.). Upper Saddle River, NJ: Benjamin Cummings.
- Lastuka, A., & Cottingham, M. (2016). The effect of adaptive sports on employment among people with disabilities. *Disability and Rehabilitation*, 38(8), 742-748.
- Laurent, C. W. S., Burkart, S., Andre, C., & Spencer, R. M. (2021). Physical activity, fitness, school readiness, and cognition in early childhood: A systematic review. *Journal of Physical Activity and Health*, 18(8), 1004-1013.
- Liu, Y., & Lachman, M. E. (2021). A group-based walking study to enhance physical activity among older adults: The role of social engagement. *Research on Aging*, 43(9), 368-377.
- Locke, E. A., & Schattke, K. (2019). Intrinsic and extrinsic motivation: Time for expansion and clarification. *Motivation Science*, 5(4), 277-289.
- Ma, J. K., Le Mare, L., & Gurd, B. J. (2014). Classroom-based high intensity interval activity improves off-task behaviour in primary school students. *Applied Physiology Nutrition Metabolism*, 39, 1332-1337.
- Mahar, M. T. (2011). Impact of short bouts of physical activity on attention-to-task in elementary school children. *Preventive Medicine*, 52(1), 60-64.

- Martin Ginis, K. A., Ma, J. K., Latimer-Cheung, A. E., & Rimmer, J. H. (2016). A systematic review of review articles addressing factors related to physical activity participation among children and adults with physical disabilities. *Health psychology review, 10*(4), 478-494.
- Martin Ginis, K.A, Jetha, A., Mack, D.E., & Hetz, S. (2010). Physical activity and subjective well-being among people with spinal cord injury: A meta-analysis. *Spinal Cord, 48*(1), 65–72.
- Matarazzo, K. L., Durik, A. M., & Delaney, M. L. (2010). The effect of humorous instructional materials on interest in a math task. *Motivation and Emotion, 34*, 293-305.
- McHill, A. W., Phillips, A. J., Czeisler, C. A., Keating, L., Yee, K., Barger, L. K., & Klerman, E. B. (2017). Later circadian timing of food intake is associated with increased body fat. *The American Journal of Clinical Nutrition, 106*(5), 1213-1219.
- Ministry of Education. (2010). Teaching syllabus for Physical Education: Senior high school 1- 3. Accra: Author.
- Moll, A. M. (2017). The influence of adaptive sport involvement on the identity formation of mobility impaired adolescents. Unpublished master's dissertation University of South Africa: South Africa.
- Moran, T.E., & Block, M.E. (2010). Barriers to participation of children with disabilities in youth sports. *Teaching Exceptional Children Plus 6*, 1-13.
- National Association for Sport and Physical Education (NASPE). (2004). Physical activity for children: A statement of guidelines for children ages 5-12 (2<sup>nd</sup> ed.). Reston, VA: NASPE Publications.
- Nhamo, E., & Sibanda, P. (2019). Inclusion in Sport: An Exploration of the Participation of People Living with Disabilities in Sport. *International Journal of Sport, Exercise and Health Research, 3*(1), 5-9.
- Northfield, J. (2011). Evidence on benefits of physical activity for people with learning disabilities yet to be translated into practice. *Sports Medicine 19*, 55-72.
- NSW Department of Sport and Recreation. (2000). Sports facilities: Making physical activity safe and more accessible. Retrieved from [www.Shop.Nsw.Gov.An/Statsdownloadjsp](http://www.Shop.Nsw.Gov.An/Statsdownloadjsp)
- O'Brien, W., Belton, S., & Issartel, J. (2016). Fundamental movement skill proficiency amongst adolescent youth. *Physical Education and Sport Pedagogy, 21*(6), 557- 571.

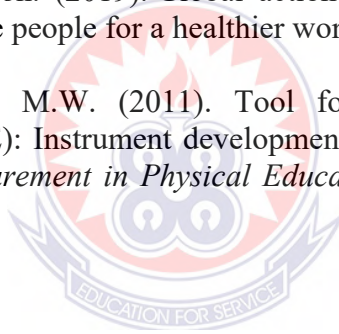
- Olin, S. S., McFadden, B. A., Golem, D. L., Pellegrino, J. K., Walker, A. J., Sanders, D. J., & Arent, S. M. (2017). The effects of exercise dose on stereotypical behavior in children with autism. *Medicine and Science in Sports and Exercise*, *49*(5), 983-990.
- Pangrazi, R. P., & Beighle, A. (2019). Dynamic physical education for elementary school children. Human Kinetics Publishers.
- Pangrazi, R.P. (2007). Dynamic physical education for elementary school children (15<sup>th</sup> ed.). San Francisco, CA: Benjamin Cummings.
- Pate, R. R., O'Neill, J. R., & McIver, K.L. (2011). Physical activity and health: Does physical education matter? *Quest*. *63*, 19-35.
- Pellegrini, J., & Hesla, R. (2018). Academic Performance and Time Allocation of Athletes at a NCAA Division III Women's University. *HAPS Educator*, *22*(3), 242-248.
- Piff, P. K., Kraus, M. W., & Keltner, D. (2018). Unpacking the inequality paradox: The psychological roots of inequality and social class. In *Advances in experimental social psychology* (Vol. 57, pp. 53-124). Academic Press.
- Post, M.W.M., & van Leeuwen, C.M.C. (2012). Psychosocial issues in spinal cord injury: A review. *International Spinal Cord Society*. *50*, 382–389.
- Rasberry, C.N., Lee, S.M., Robin, L., Laris, B.A., Russell, L.A., Coyle, K.K., & Nihiser, A.J. (2011). The association between school-based physical activity, including physical education, and academic performance: A systematic review of the literature. *Prevalence. Medicine*, *52*, 10–20.
- Razmjou, S., Abdalnour, J., Bastard, J. P., Fellahi, S., Doucet, É., Brochu, M., & Prud'homme, D. (2018). Body composition, cardiometabolic risk factors, physical activity, and inflammatory markers in premenopausal women after a 10-year follow-up: a MONET study. *Menopause*, *25*(1), 89-97.
- Redman, D. J. (2016). *Motivation of adult, auditioned community choirs: Implications toward lifelong learning*. University of South Florida: Florida.
- Reinboth, M., & Duda, J., L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective. *Psychology of Sport and Exercise*, *7*(3), 269-286
- Resnick, B., Palmer, M. H., Jenkins, L. S., & Spellbring, A. M. (2000). Path analysis of efficacy expectations and exercise behavior in older adults. *Journal of Advanced Nursing*, *31*(6), 1309–1315.
- Rheinberg, F., & Engeser, S. (2018). Intrinsic motivation and flow. In *Motivation and action* (pp. 579-622). Springer, Cham.



- Ritchie, G. M. (2018). The impact of academic co-curricular activity participation on academic achievement: A study of catholic high school seniors. Seton Hall University.
- Rizzo, T. L., & Columna, L. (2020). Theory of planned behaviour. In Routledge Handbook of Adapted Physical Education (pp. 326-346). Routledge.
- Rodriguez-Ayllon, M., Cadenas-Sánchez, C., Estévez-López, F., Muñoz, N. E., Mora-Gonzalez, J., Migueles, J. H., & Esteban-Cornejo, I. (2019). Role of physical activity and sedentary behavior in the mental health of preschoolers, children and adolescents: a systematic review and meta-analysis. *Sports medicine*, 49(9), 1383-1410.
- Rotolo, T., Kirkpatrick Johnson, M., & McCall, J. R. (2020). Examining the effect of adolescent sport participation on civic engagement and orientation in early adulthood. *Nonprofit and Voluntary Sector Quarterly*, 49(1), 180-202.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: Guilford Publishing.
- Ryan, R.M., Williams, G. C., Patrick, H., & Deci, E. L. (2009). Self-determination theory and physical activity: The dynamics of motivation in development and wellness. *Hellenic Journal of Psychology*, 6, 107–124.
- Saligheh, M., McNamara, B., & Rooney, R. (2016). Perceived barriers and enablers of physical activity in postpartum women: a qualitative approach. *BMC pregnancy and childbirth*, 16(1), 1-8.
- Scarpa, S. (2011). Physical self-concept and self-esteem in adolescents and young adults with physical disability: the role of sports participation. *European Journal of Adapted Physical Activity*, 4(1), 38-53.
- Schutz, D. D., Busetto, L., Dicker, D., Farpour-Lambert, N., Pryke, R., Toplak, H., & Schutz, Y. (2019). European practical and patient-centred guidelines for adult obesity management in primary care. *Obesity facts*, 12(1), 40-66.
- Segal, M., Eliasziw, M., Phillips, S., Bandini, L., Curtin, C., Kral, T. V., & Must, A. (2016). Intellectual disability is associated with increased risk for obesity in a nationally representative sample of US children. *Disability and health journal*, 9(3), 392-398.
- Sevil, J., García-González, L., Abós, A., Generelo, E., & Aibar, A. (2019). Can high schools be an effective setting to promote healthy lifestyles? Effects of a multiple behavior change intervention in adolescents. *Journal of Adolescence Health*, 64, 478–486.
- Shapiro, D.R., & Martin, J.J. (2010). Athletic identity, affect, and peer relations in youth athletes with physical disabilities. *Disability and Health Journal*, 3, 79-85.

- Sherrill, C. (2004). *Adapted physical activity, recreation, and sport: Crossdisciplinary and lifespan* (6<sup>th</sup> ed). New York, NY: McGraw-Hill.
- Shields, N., & Synnot, A. (2016). Perceived barriers and facilitators to participation in physical activity for children with disability: A qualitative study. *BMC pediatrics*, *16*(1), 1-10.
- Sivrikaya, M. H. (2018). The Role of Self-Efficacy on Performance of Sports Skills of Football Players. *Journal of Education and Training Studies*, *6*(12), 75-79.
- Smith, B., & Wightman, L. (2021). Promoting physical activity to disabled people: messengers, messages, guidelines and communication formats. *Disability and rehabilitation*, *43*(24), 3427-3431
- Tint, A., Thomson, K., & Weiss, J. A. (2017). A systematic literature review of the physical and psychosocial correlates of Special Olympics participation among individuals with intellectual disability. *Journal of Intellectual Disability Research*, *61*(4), 301-324.
- Tokildson, G. (2000). *Leisure and recreation management*. London: Chapman and Hall.
- U.S. Department of Health and Human Services (2008). *Physical Activity Guidelines for Americans*. Retrieved from <http://www.health.gov/PAGuidelines/guidelines/chapter2.aspx>
- US Department of Health and Human Services. (2002). *Physical activity and health: A report of the surgeon general*. Atlanta, US: Centers for Disease Control.
- US Department of Health and Human Services. (2010). *Healthy people 2010: Understanding and improving health*. Washington, DC.
- Van den Broeck, A., Howard, J. L., Van Vaerenbergh, Y., Leroy, H., & Gagné, M. (2021). Beyond intrinsic and extrinsic motivation: A meta-analysis on self-determination theory's multidimensional conceptualization of work motivation. *Organizational Psychology Review*, *11*(3), 240-273.
- Van Dusen, D. P., Kelder, S. H., Kohl, H. W. III, Ranjit, N., & Perry, C. L. (2011). Associations of physical fitness and academic performance among schoolchildren. *Journal of School Health*, *81*(12), 733-740. doi: 10.1111/j.1746-1561.2011.00652x
- Weiss, M.R. (2011). Teach the children well: A holistic approach to developing psychosocial and behavioral competencies through physical education. *Quest* *63*(1), 55-65.
- Willems, K., & Vernimmen, J. (2018). The fundamental human right to education for refugees: Some legal remarks. *European Educational Research Journal*, *17*(2), 219-232.

- Winnick, J.P. (2011). *Adapted physical education and sport* (5<sup>th</sup> ed.). Champaign, IL: Human Kinetics.
- Wittberg, R. A., Northrup, K. L., & Cottrell, L. A. (2012). Children's aerobic fitness and academic achievement: A longitudinal examination of students during their fifth and seventh grade years. *American Journal of Public Health, 102*, 2303–2307.
- Woods, R., & Butler, B. N. (2020). *Social issues in sport*. Human Kinetics Publishers.
- World Health Organization (2010). *Global recommendations on physical activity for health*; World Health Organization: Geneva, Switzerland.
- World Health Organization, & World Bank. (2011). *World Report on Disability*, from [http://www.who.int/disabilities/world\\_report/2011/report/en/index.html](http://www.who.int/disabilities/world_report/2011/report/en/index.html)
- World Health Organization. (2016). *Physical Activity Strategy for the WHO European Region 2016-2025*; WHO Regional Office for Europe: Copenhagen, Denmark.
- World Health Organization. (2019). *Global action plan on physical activity 2018-2030: more active people for a healthier world*. World Health Organization.
- Wright, P.M. & Craig, M.W. (2011). Tool for assessing responsibility-based education (TARE): Instrument development, content validity, and inter-rater reliability. *Measurement in Physical Education and Exercise Science 15*(3), 204–219.



## APPENDICES

### APPENDIX A

#### QUESTIONNAIRE FOR STUDENTS WITH DISABILITY

#### PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORTS

This is a survey questionnaire that seeks to sample views of students on “factors influencing students with disabilities involvement in physical activities and sports”. The outcome of this study will be used strictly for educational purposes. Please kindly read carefully and provide responses in the spaces provide and tick (√) the following options. Your responses will be treated as confidential. Thus your identity is not required.

##### SECTION A

Bio data:

School name: .....

Sex: Male [ ] Female [ ]

Age: .....years

What type(s) of physical and sporting activities are students with disability mostly engaged in?

##### SECTION B

What physical activities do you frequently participate in? (You may tick more than one)

Jogging around [ ]

Running [ ]

Swimming [ ]

Table tennis [ ]

Cycling [ ]

- Football [ ]
- Volleyball [ ]
- Dancing [ ]
- Brisk walking [ ]
- Endurance training [ ]
- Climbing of stairs [ ]

Specify if any.....

How often do students with disabilities participate in physical activities and sports?

5. How often do you participate in the physical activities you have indicated above?

How often do you perform the physical activities you have indicated above?	VO	QO	O
(a) Jogging around			
(b) Running			
(c) Swimming			
(d) Table tennis			
(e) Cycling			
(f) Football			
(g) Volleyball			
(h) Dancing			
(i) Brisk walking			
(j) Endurance training			
(k) Climbing of stairs			
(l) None of the above			
(m) Specify if any			

Tick the most appropriate from Very Often (VO), Quite Often (QO), and Occasionally (O)

6. How long do you spend during each physical activity?

- (a) I exercise less than one hour every time [ ]
- (b) I exercise at least 1-2 hours every time [ ]
- (c) I exercise at least more than 2 hours every time [ ]

7. Where do you mostly have your physical activities?

- (a) I mostly exercise at the dormitory [ ]
- (b) I exercise at the school field [ ]
- (c) I only exercise when I go for vacation at home [ ]

Reasons for Engaging in these Physical Activities

I engage in physical activities for the following reasons:	SA	A	U	D	S D
(a) Physical activities help me improve and increase my health/physical fitness					
(b) Physical exercises help me learn and acquire new skills					
(c) I engage in physical activities just for fun/relaxation					
(d) It helps improve my heart and lung fitness and also increases my energy level					
(e) It helps me maintain and control my weight					
(f) It helps improve my self-esteem and also increases my confidence level					
(g) I feel extremely better and confident about myself/body through physical exercises					
(h) Regular exercise provide me the opportunities to socialize with friends					
(i) Through exercise I am able to spend better time					

with friends and enjoy their company as well					
(j) It also help me have a sense of belonging to a group					
(k) Exercises help me maintain and improve emotional wellbeing					
(l) it helps me accept my state of disability					
(m) Physical activities also help me to learn how to deal with my disability					
(n) I feel and become more independence					
(o) Involvement in physical activities do open doors for social contacts and lots of life opportunities					
(p) My parents influenced my interest in physical activities and sports so I enjoy them as my hobby					
(q) I get self-conscious about trying out new physical activity and sports					
(r) I'm not really interested in doing an activity if none of my friends do it					
(s) I'm more likely to take up a new activity if my friends are involved in it					

Tick the most appropriate from Strongly Agree (S.A), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (S.D)

What factors hinders your participation in physical activities

I am unable to engage in physical activities for the following reasons:	SA	A	U	D	S D
(a) Not being able to exercise because of my disability					
(b) Not having enough energy/feeling too tired/fatigued to be able to exercise					
(c) Not being comfortable in the presence of					

other athletes without disabilities					
(d) Lack of disabled sporting facilities					
(e) Local facilities are not suitable, user-friendly and pleasant					
(f) I have no interest in sport					
(g) I fear of having new injuries to my conditions					
(h) I am ashamed of my disability					
(i) My parents give academic success priority over physical exercise and sports					
(j) No/ lack of qualified adult's supervision					
(k) Athletes with a disability are not (fully) accepted					
(l) Sports possibilities are unknown due to limited information on benefits of physical exercises					
(m) Not enough fellow disabled athletes participate in physical activities					
(n) Lack of support from friends and colleagues with disabilities					
(o) I am worried about injuring myself if I engage in physical activities					
(p) My friends would find it strange if I suddenly get involve in physical activities					
(q) I become worried that my health would suffer again if I engage physical activities					
(r) There were other things like reading I preferred to do in my leisure time than participating in physical activities					
(s) physical activities are only for certain groups of people especially people without disabilities					

Tick the most appropriate from Strongly Agree (S.A), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (S.D)



## **APPENDIX B**

### **STUDENTS INTERVIEW GUIDE ON STUDENTS WITH DISABILITIES**

#### **PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORTS**

This seeks to find out from students what influences their involvement in physical activities in school, and the possible measures that can be taken to overcome these factors to enhance their participation in physical activities.

1. Do you learn physical education?
2. How often do you have physical education lesson per week?
3. What do you normally do during physical education lesson?
4. Apart from what you do during physical education lesson, do you participate in any physical activity/sporting events? If yes
5. What physical activity/sporting events do you participate in?
6. How often do you participate in this physical activity/sporting events in a term?
7. What challenges do you face during your participation in the physical activity/sporting events?

## APPENDIX C

### TEACHERS' INTERVIEW GUIDE ON STUDENTS WITH DISABILITIES

#### PARTICIPATION IN PHYSICAL ACTIVITIES AND SPORTS

The purpose of this instrument is to find out from teachers their views on factors that influence their students' involvement in physical activities and sports in school. The instrument also seeks to find out what possible measures can be taken to forestall the challenges faced by students in their involvement in physical activities.

1. Do you teach physical education?
2. How often do you teach physical education per week?
3. How many hour(s) is/are allocated for teaching of physical education per week?
4. Apart from physical education you teach your students, do you organize any physical activity/sporting events for your students? If yes
5. How often do you organize this physical activity/sporting events in a term?
6. What equipment do you use during this sporting events in your school?
7. What are the conditions of these equipment?
8. What facilities do you use during this physical activity/sporting events?
9. What are the general conditions of these facilities?
10. Identify some challenges you face towards the organization of the sporting events?
11. What do you think could be done to overcome the challenges you face towards the organization of the sporting events?