

Physiotherapy Services as Adjustments that Enhance Academic Performance of Learners with Physical Impairments in Public Primary Special Schools in Nyanza Region, Kenya

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ABSTRACT

Without appropriate adjustments in schools for learners with Physical Impairment (PI), their academic performance may be negatively affected. Pupils with PI in most public primary special schools in Nyanza Region have been performing dismally academically. The purpose of the study was to explore the relationship between access to physiotherapy (PT) services and academic performance of learners with PI in public primary special schools in Nyanza Region Kenya. The research was guided by Social Model of Disability theory; it used mixed-methods approaches and concurrent triangulation design. The target population was 1421 participants, that is; 6 head teachers, 92 teachers, 6 PT and 1317 pupils. Simple random sampling technique, saturation sampling, and purposive sampling technique were used to select; 396 pupils; 6 head teachers, 6 PTs and 48 teachers respectively, a total of 456 respondents. Data was collected using questionnaire, interview schedules, Focus Group Discussions, and an observation checklist. Content validity and Cronbach's alpha were used for validity and reliability respectively. Quantitative data was analyzed using descriptive and inferential statistics, and thematic analysis for qualitative data; from which conclusions were made. The research findings indicated that: there was inadequate access to PT services for learners with PI in public primary special schools; and there was a statistically significant positive relationship ($r = .448$) between access to PT services and academic performance. It was concluded that PT services are inadequate, and their inadequacy contributes to poor academic performance of pupils in public primary special schools in Nyanza Region. The research findings recommended that there is need for the Ministry of Education and other stakeholders to facilitate; access to PT services in public primary special schools for learners with physical impairments.

Keywords: *Physiotherapy Services, Physical Impairments, Academic Performance*

1.0 Introduction

1.1 Background of the Study

Academic achievement is vital for transition into adulthood and to achieve occupational and economic success (Regier, 2015). Article 18 (2) of the Persons with Disabilities Act 2003 (6) states that learning institutions shall take into account the special needs of persons with disabilities with respect to auxiliary services and other similar considerations. Motor skills limitations influence participation of learners with PI in activities associated with the general education curriculum such as academic performance if there are no appropriate adjustments put in place for them (Berg, 2020).

A research conducted in US by Effgen (2016) on the relationship between fine motor skills and academic achievement of learners in elementary schools to 8th grade, established that a robust predictor of academic achievement is fine motor skills; children who access PT services have greater motor abilities and also tend to have better academic achievement. An investigation by Alebiosu and Adeyemi (2018) on the impact of physical education on academic performance of public primary school pupils in South West Nigeria revealed that effective physical education had significant relationship on academic performance of primary school pupils.

An investigation carried out by Kwach (2014) to establish the relationship between physical exercises on academic performance of pupils in Kadibo Division Kisumu County, Kenya determined that the levels of physical exercise and play and academic performance was high at a general mean of 2.9. There was improved performance of pupils in the area of study reflected by a mean of 3.4. Nyanza Region is among the regions in Kenya with the highest (9.2%) prevalence of people with PI (Kenya Population Housing Census, 2019). which implies that, majority of learners with PI in the region may be more disadvantaged academically if there are poor adjustments. Most pupils in public primary special schools for learners with PI in Nyanza region Kenya have been performing dismally for 5 consecutive years as shown on table 1.

Table 1: KCPE Performance of Public Primary Special Schools for Learners with PI

COUNTY	SCHOOL	YEAR (MSS)				
		2016	2017	2018	2019	2020
I	A	212.65	230.75	194.05	198.00	202.05
	B	235.45	237.65	249.04	246.74	240.56
II	C	171.35	179.98	201.70	190.27	188.73
	D	182.04	185.62	188.06	217.90	227.21
III	E	187.65	198.76	197.09	199.43	196.42
	F	239.86	238.98	240.78	241.66	244.79
IV	G	237.68	236.89	245.81	247.66	247.92
V	H	186.02	201.87	187.43	211.93	201.44
VI	I	183.56	199.39	192.08	218.76	202.06

Source: Kisumu, Siaya, Homa-Bay, Migori, Nyamira, & Kisii County Offices (2021).

The poor scores in national examinations by pupils with PI could be accounted for by various adjustments which are crucial in enabling them to attain their valued functioning, hence be able to operate near normal as 'normal' learners as well as enhancing their academic performance, and which is a possibility that this research sought to investigate.

1.2 Statement of the Problem

Learners with PI are expected to access appropriate adjustments in order to operate in learning institutions with ease hence perform well academically. Efforts have been made by the government and stakeholders to promote academic performance in schools, however, academic performance of pupils with PI in most public primary special schools for learners with PI in Nyanza Region has been declining over time despite having qualified teachers. This may have a negative reflection on the various programs put in place to enhance their academic performance in schools. The study sought to find out what contributes to dismal academic performance of pupils with PI by exploring the access to PT services and their relationship with academic performance of pupils with PI in public primary special schools for learners with PI in Nyanza Region, Kenya.

1.3 Purpose of the Study

The purpose of the study was to explore access to PT services and its relationship with academic performance of learners with PI in public primary special schools in Nyanza Region, Kenya.

1.4 Theoretical Framework

The study was guided by Social Model of Disability (SMD) theory by Oliver (1983) which is based on a distinction between the terms Impairment and Disability. The word impairment is used to refer to the actual attributes (or lack of attributes) that affect a person such as inability to walk or breath independently. The word disability is used to refer to restrictions caused by the society when it does not give equivalent attention and accommodations to the needs of individuals with impairments. The SMD identifies systemic barriers, derogatory attitudes and social exclusion which make it difficult or impossible for individuals with impairments to attain their valued functioning (Oliver, 1983). The SMD has been criticized for underplaying the role of impairments by portraying illness and impairments as being distinctly separate entities, hence neglects the social relational nature of impairment and illness (Charmaz, 2010: 16), also, it doesn't promote the normal differences between disabled people, and instead presenting them as monolithic, insufficiently individuated block of people (Owens, 2014).

This theory had the justification that it addresses the attributes that affect pupils with PI and identifies barriers and social exclusion such as lack of access to PT services which makes it difficult for them to attain their valued functioning, and which when addressed, they may be able to attain their valued functioning, and be able to operate well in the learning environment just as "normal" learners, hence achieve their full potential such as academic performance. This theory informed the current research in a school setting of pupils with PI on the importance of the schools to make appropriate adjustments such as access to PT services to meet the diversified needs of pupils and not the vice versa. Therefore, Schools of pupils with PI should incorporate the services of PT to help support learners' participation and progress in their education (Prat and Peterson, 2015).

2.0 Literature Review

In U.S.A, Westcott (2018) carried out an investigation to explore the relationship between school-based physical therapy and standardized outcomes of pupils receiving physical therapy. It used a practice-based evidence research design, School Function Assessment (SFA) outcomes of 296 pupils with disabilities served by 109 PT. The findings revealed that engaging pupils in therapy activities and interventions improved their outcomes, and active mobility practice improved SFA participation, mobility recreation, and activities of daily living. The reviewed research was conducted in a developed country while the current one was conducted in a middle-income country Kenya which would enable comparison of cross-cultural similarities and differences if any.

An investigation was conducted by Macdonald, Milne and Pope (2018) in Australia on the relationship between motor proficiency and academic performance in math and reading in school-aged children and adolescents. Systematic search of electronic database was done to identify relevant studies. 55 eligible articles were critically appraised and key data was extracted and synthesized. The findings revealed that there is association between several components of motor proficiency in primary settings and academic performance in math and reading. The reviewed research was conducted in a developed country, that is, Australia while the current one was conducted in a middle-income economy country Kenya which would enable comparison of cross-cultural similarities and differences if any.

An investigation by Alebiosu and Adeyemi (2018) on the impact of physical education (PE) on academic performance of public primary school pupils in South West Nigeria used questionnaire on

a sample of 1006 pupils from 6 states. The results revealed that effective PE had significant relationship on academic performance of primary school pupils, however, less emphasis is paid on PE in school. The previous investigation did not capture the role of PTs on advising learners on movement in classroom and within the school environment that the current research captured.

In Ethiopia, Teferi (2020) did an inquiry on the effect of physical activity on academic performance and mental health. Observational studies were used to examine the state of existing research pertaining to the relationship between physical activity and state of mental health. The findings revealed that healthy levels of physical activity generally correlate with mental health and academic achievement. The previous inquiry was conducted in Ethiopia which is outside Kenya while the current one was conducted in Kenya which would enable comparison of cross-cultural similarities and differences if any.

In Kenya, an investigation was carried by Kwach (2014) to establish the relationship between physical exercises on academic performance of pupils in Kadibo Division Kisumu County, Kenya. Descriptive approach with co-relational design in cross-sectional research was used. The findings determined that the levels of physical exercise and play and academic performance was high at a general mean of 2.9. There was improved performance of pupils in the area of study reflected by a mean of 3.4. The previous research was carried out in one Division while the current one covered a wider location hence would be beneficial to majority of learners in Nyanza Region. Also, the previous inquiry did not capture the role of PT in advising learners on the use of right equipment that was captured by the current one.

3.0 Methodology

The research used mixed method approaches which involve conducting research involving collecting, analyzing, merging qualitative and quantitative research, as well as integrating quantitative and qualitative data (Creswell, 2012). Concurrent triangulation design was used which involves using multiple datasets, methods, theories and/or investigators to address a research question (Creswell, 2014). The inquiry was carried out in Nyanza Region of Kenya which is located on the South Western part of Kenya, bordering Uganda with Kisumu city the third largest city in Kenya. It lies between longitude $34^{\circ} 30' 0$ East and latitude $-0^{\circ} 30' 0$ South. The region has 6 Counties in total, namely; Siaya, Kisumu, Homa-Bay, Migori, Kisii and Nyamira. Its total population is 6269579 and Nyanza Region is among the regions in Kenya with the highest number of people with Physical Impairment (9.2%) (Kenya Population and Housing Census, 2019).

The target population was made up of 1421 respondents, who comprised of 6 head teachers in the 6 schools, 92 teachers, 1317 learners with PI and 6 PTs (Nyanza Regional Office, 2021). Purposive sampling technique was used to select 6 public primary special schools for learners with PI whose performance had been more dismal in national examinations for 5 consecutive years (Guest, Namey & McKenna, 2017). Simple random sampling method was used to select 396 learners (Thomas, 2020). Saturation sampling technique was used to select 6 head teachers and 6 PTs (Walker, 2012). Purposive sampling technique was also used to select 48 teachers. The total sample size for the inquiry was 456 (Nyanza Region County offices, 2021). The research used questionnaire for learners with PI; interview guide for head teachers and PTs, Focus Group Discussions (FGDs) for teachers; and an observation checklist for the researcher as data collection tools.

Content validity was used, and piloting was conducted in 1 public primary special school for PI on 40 (10%) learners with PI (Junyong, 2017). Cronbach's alpha with a reliability value ranging between 0.6 and above was used to ascertain reliability (Oso & Onen, 2013). Statistical Package for Social Science (SPSS) version 22 was used. Trustworthiness of a research was employed (Devault, 2018). Quantitative analysis was facilitated by coding for the closed-ended questions from the questionnaire. The data was converted into numerical codes which represent attributes or measurements of the variables, only one code was assigned to each response category by making a code book that would enable the data to be entered into the computer. Data was organized into percentages according to the categories on the Likert rating scale type responses.

The independent, dependent and intervening variables were identified and defined. Data was formatted and analyzed using Likert scale (strongly agree (SA) to strongly disagree (SD) in a scale of 1 to 5). The data was then tabulated depending on how many SA (4.21-5.00), A (3.41-4.20), Neither A nor D (2.61-3.40), D (1.81-2.60) and SD (1.00-1.80) and were presented as percentages of the total number of responses. These were then condensed into broader groups of A for SA and A; and D for SD and D. The scores were summated to measure the respondents' attitude and the total scores represented the respondents' response. This was done by the aid of SPSS version 22 (Lister, 2020).

Quantitative data was analyzed using both descriptive and inferential statistics. The statistical tests; Pearson Product-Moment of Correlation, regression analysis, and analysis of variance (ANOVA) were used to investigate the relationship between the variables. All tests of significance were computed at $\alpha = 0.05$. The significant level (P-value) was set at 0.05 whereby if the p-value is less than 0.05, the null hypothesis would be rejected and conclusion reached that a significant difference exists and vice versa (Creswell, 2014). The findings were presented in form of frequency tables from which conclusions were drawn. The qualitative data was analyzed using phases of thematic analysis (Caulfield, 2019).

4.0 Findings, Interpretations and Discussions

4.1 Relationship between Access to Physiotherapy Services and Academic Performance of Learners with PI in Public Primary Special Schools

Table 2: Views of Learners with PI on Access to Physiotherapy Services

Statement of Opinion	SD	D	N	A	SA	Mean	SD
I always access physiotherapists help when I am in need.	84 (28.8%)	84 (28.8%)	12 (4.1%)	58 (19.9%)	54 (18.5%)	2.71	1.51
I contact Physiotherapist on my needs freely.	80 (27.4%)	90 (30.8%)	8 (2.7%)	60 (20.5%)	54 (18.5%)	2.72	1.51
The physiotherapist always helps me get the right equipment for my needs.	70 (24.0%)	102 (34.9%)	4 (1.4%)	64 (21.9%)	52 (17.8%)	2.75	1.47
Physiotherapist helps me to improve my physical well-being.	78 (26.7%)	94 (32.2%)	12 (4.1%)	56 (19.2%)	52 (17.8%)	2.69	1.48
Physiotherapist helps checks my equipment to ensure that it continues to meet my changing needs as I develop and grow.	84 (28.8%)	92 (31.5%)	10 (3.4%)	60 (20.5%)	46 (15.8%)	2.63	1.47
The physiotherapist always assists me to change my equipment when necessary.	76 (26.0%)	96 (32.9%)	10 (3.4%)	64 (21.9%)	46 (15.8%)	2.68	1.46
I am satisfied with physiotherapist's help that I receive.	41 (28.1%)	45 (30.8%)	6 (4.1%)	35 (24.0%)	19 (13.0%)	2.63	1.43

Physiotherapist's services help me improve my academic performance.	41 (28.1%)	40 (27.4%)	7 (4.8%)	32 (21.9%)	26 (17.8%)	2.74	1.50
I receive adequate physiotherapy services.	35 (24.0%)	51 (34.9%)	5 (3.4%)	31 (21.2%)	24 (16.4%)	2.71	1.45
Physiotherapist helps me to achieve maximum function.	75 (27.6%)	96 (35.3%)	6 (2.2%)	62 (22.8%)	53 (19.5%)	2.73	1.49
PT helps modify architectural barriers.	77 (28.3%)	97 (35.7%)	7 (2.6%)	62 (22.8%)	49 (18.0%)	2.68	1.48
PT helps me manage balance.	80 (29.4%)	92 (33.8%)	12 (4.4%)	63 (23.2%)	45 (16.5%)	2.66	1.46
PT advises me on mobility within classroom and school grounds	77 (28.3%)	97 (35.7%)	10 (3.7%)	61 (22.4%)	47 (17.3%)	2.67	1.46
Mean average response rate on access to physiotherapy services						2.70	0.48

Key: Strongly Disagree (1.00-1.80); Disagree (1.81-2.60); Somehow Agree (2.61-3.40); Agree (3.41-4.20); Strongly Agree (4.21-5.00) and SD-Standard Deviation. Source: Survey data (2021).

The results of the survey established that there is generally moderate access to PT services in public primary special schools in Nyanza Region. This was reflected by overall mean rating of 2.70 with a standard deviation of 0.48 in the rating scale of 1 to 5, suggesting that on average the respondents generally somehow agreed that there is access to PT services. For instance, the survey data show that there is moderate access to PT services as indicated by a mean of 2.71 (SD=1.51), with 168 (57.6%) of the learners who took part in the survey confirming this point. Only 54 (18.5%) of the respondents were in strong agreement that they always access physiotherapist's help when they are in need, reflecting a low access to PT services by most of the pupils who need the services.

This implies that PT services that learners with PI receive are inadequate hence not accessible, which also seems to suggest that the PT services that should help them to attain their valued functioning are not adequate. There is therefore need to ensure that there is proper accessibility of PT services in schools for pupils with PI. This finding is in line with an investigation by Wachianga (2010) which revealed that there was heavy workload by professionals in public special schools for learners with PI. The qualitative data from headteachers, counselors and teachers also support the findings that there is poor access to PT services by pupils with PI. For instance, when headteachers were asked whether learners with PI access PTs' help whenever they are in need, one of the headteachers said:

The school hires one physiotherapist from a nearby hospital who visits learners to give services once a week, hence may not serve all pupils effectively due to high physiotherapist learner ratio (HT2).

The interview excerpt from the headteacher indicates that due to the fact that the PT comes only once a week and given the high PT learner ratio, not all learners with PI access the PT services. It can be argued that fewer pupils benefit from PT services while the majority do not. The following interview excerpt from a PT bears a testimony to that. It shows the PTs' response when they were asked to say whether pupils with PI access PT services whenever they are in need:

My time for providing PT services to pupils here is programmed. I only come here once a week and that is the only time that I meet the pupils (P2).

The interview excerpt indicates that only one PT serves the whole school population just once a week which may not make it easy for all pupils with PI to access PT services due to the limited time the PT spends with them. PT services are vital in helping pupils in activities to help improve access to curriculum as well as motor skills. It can be argued that if pupils do not access PTs' help due to limited time that the PT has with them in the school, they may miss PT's important services such as activities to help improve access to curriculum and motor skills which are important in learning such as in math and reading. The schools should reschedule the time that the PT spends with pupils such that the PTs spend more time providing PT services to learners. This is in agreement with an inquiry by Macdonald, Milne and Pope (2018) which revealed that there is association between several components of motor proficiency in primary settings, and academic performance in math and reading.

The qualitative data from FGDs with teachers also revealed that pupils do not always access PT services whenever they are in need. For instance, the following response came from teachers in FG3:

Pupils do not access PT services whenever they need...they only see the PT once a week (FG5).

The qualitative data from teachers indicates that the time spent by PT with learners with PI is limited. This implies that learners are not able to access PT services whenever they need it, hence the PT services should be improved. From the data from observation checklist, the PT rooms were available. However, from other findings that PT services are not accessible, it can be argued that, even though the PT rooms were available, the time allotted for PT services was not adequate. This conforms to a research by Adams, Jones and Shepperd (2015) which revealed that there is imbalance between increasing service demands and limited PT capacity. On the same note, the survey results revealed that most of the learners are not able to freely access their physiotherapists themselves. For example, whereas only 60 (20.5%) of the learners agreed and 54 (18.5%) strongly agreed that they always freely contact their physiotherapists on their needs, majority [strongly disagreed: 80 (27.4%) and disagreed: 90 (30.8%)] said they hardly get in contact with their physiotherapists on their needs freely.

This seems to suggest that the available PTs are not able to serve the whole school effectively due to low PT learner ratio, which also implies that pupils do not receive adequate PT services as they may need which may help them in mobility skills, joint range of movements, muscular strength and motor skills among others, and which are essential as far as their learning or academic performance is concerned. It is therefore important that PTs spends more time in schools so that pupils can be able to access their services when in need. This concurs with a research by Chidobe (2012) who found out that there is unavailability of physiotherapy services. The following interview excerpt bears the same testimony showing headteachers' response when asked to say whether learners with PI contact the OT freely whenever they are in need:

There is one physiotherapist who serves all pupils with physical impairments in school. He doesn't reside here but hired to serve them once a week. He therefore, has limited time with learners (HT2).

The interview excerpt shows that the PT is not always available whenever pupils with PI may need his services. This implies that pupils with PI who would wish to see PTs for their services have to

wait until the day that the PT comes for PT services, and this may cause a lot of discomfort to learners when learning which may affect pupils' concentration, there is therefore need for more PT services in schools. This concurs with a study by Adams, Jones and Sheppard (2015) who found out that there was imbalance between increasing service demands and limited PT capacity and decreased access to PT services. The following interview excerpt bears the same testimony showing PTs' response when asked to say whether learners with PI contact the PTs freely whenever they are in need:

Yes, they contact me when I am available...I provide PT services once a week here and I am alone (P3).

The interview excerpt from PT shows that the PT is only available once a week for PT services, which seems to suggest that pupils with PI are only able to contact the PT once a week. This implies that pupils are not able to access PT services adequately. Equally, the qualitative data from teachers' FGDs also support the same statements that learners with PI do not contact PTs for services freely for their needs as shown:

There is only one PT who serves all pupils with PI and he comes only once a week for the same...which means they cannot access him whenever they need to (FG6).

The response from FGDs indicates that only one PT is available for all pupils in the school and only provides PT services once a week, which implies that the pupils are not able to contact him/her for their needs freely. It can therefore be argued that there is lack of adequate PT services, there is need for PTs to have more time with learners with PI. This is in line with an investigation by Govindaswami (2010) which revealed that many PTs are experiencing difficulties in making the shift from direct to indirect support due to not having been provided with the necessary support.

In addition, the results of the survey show that learners with PI are generally not adequately (mean=2.75; SD=1.48) exposed to appropriate PT services. This came to light when the respondents were asked whether their PTs always help them get the right equipment for their needs. A majority of 172 translating to 58.9% of the sampled pupils with PI indicated that their PTs rarely help them get the right equipment for their needs, only 116 (39.7%) of the respondents alluded that their PTs help them to get the right equipment for their needs. This implies that pupils with PI are not being assisted to get the right equipment for their needs. The right equipment is necessary for their comfort especially when moving from one place to another or when performing different tasks or participating in learning activities. There is need for schools to ensure that PTs are always available to learners with PI.

This conforms to findings by Govindaswami (2010) which determined that many PTs are experiencing difficulties in providing PT services due to not having been provided with the necessary support. When headteachers were asked to say whether the PTs always help pupils to get the right equipment for their needs, the following shows a response from one of the head teachers:

We have one PT who is programmed to attend to pupils with PIs' needs once a week during which he can help pupils get the right equipment for their needs, however, the time may not be enough to attend to all the learners' needs (HT3).

The qualitative findings from headteachers also supports the same claim that PTs rarely help pupils to get the right equipment for their needs. For instance, the interview excerpt from the head teacher indicates that in as much as there is a PT, he only attends to pupils once a week which is not adequate for every learner to benefit from, which implies that the PT services does not benefit all the pupils with PI and this calls for more additional time with them. This is in line with a research by Wachanga (2010) which found out that there was a problem with provision of mobility services in public schools for learners with PI. The following qualitative findings from PTs also supports the same claim that PTs rarely help pupils to get the right equipment for their needs. For instance, when PTs were asked to say whether the PTs always help learners with PI to get the right equipment for their needs, the following shows a response from one of the PTs:

I help pupils to get the right equipment, however, I am overwhelmed given that I only have four days in a month to do it...this is not enough for me to attend to the needs of all pupils with PI appropriately (P5).

The interview excerpt from PT indicates that the PT offers services only four times a month which may not be able to serve all learners with PI who may be in need. This seems to suggest that due to time limit; the PT is not able to cater for individual pupils' needs. This implies that pupils are not being assisted fully on their needs such as getting the right equipment for their needs from time to time. This conforms to a study by Kandersamy (2012) which revealed that there were inadequate PT services. The qualitative data from teachers also support the statement that PTs rarely help pupils with PI to get the right equipment. For instance, the following statement was made by a teacher from FG4:

Due to high physiotherapist pupil ratio, they are not able to monitor and attend to all pupils' needs as required. A learner may outgrow his/her equipment or the equipment may become faulty but if the physiotherapist is not around, the problem may be difficult for us to address (FG3).

The qualitative response of teachers indicates that it's not easy for the available PTs to play their roles effectively to meet the needs of most learners since there is high PT learner ratio. Since some equipment may be important for independent living and some may assist with particular tasks, it means that if pupils do not get adequate assistance from PT to get the right equipment then they may be more dependent on others and may not be able to complete some tasks which may be essential as far as their academic achievement is concerned. The schools should therefore ensure that the PTs help learners with PI to get the right equipment always. This is in line with a research by Mwendwa (2010) which revealed that CPSK has not been able to provide many of the essential rehabilitation services to children with CP due to lack of human resources.

On the effectiveness of the physiotherapy services received by the pupils with PI, the results of the study indicate that these services are rarely effective in helping the learners improve their physical well-being. For instance, whereas only 56 (19.2%) and 52 (17.8%) of the respondents agreed and strongly agreed, respectively, that physiotherapist's help them to improve their physical well-being, majority [78 (26.7%) strongly disagreed and 94 (32.2%) disagreed] of the pupils with PI refuted the claim that PTs significantly help them to improve their physical well-being. However, 12 (4.1%) of them remained non-committal on the claim that physiotherapist's significantly help them to improve their physical well-being, translating to a mean rating of 2.69 with a standard deviation of 1.48.

These results seem to suggest that pupils are not helped by PTs to improve their physical well-being which is also vital for psychological well-being as well as good quality of life, hence, there is poor access to PT services. Learners' well-being is useful in undertaking different tasks or being actively involved in learning activities. There is therefore need for improvement in PT services to address their physical well-being. This conforms to an inquiry by Mwendwa (2010) which revealed that many of the essential rehabilitation services are not being received by children with PI due to lack of human and material resources. The following qualitative data from one of the PTs bears the same concern when they were asked if they help learners with PI to improve their physical well-being:

I always try to deliver my services as much as I can but due to high population of pupils and given that I'm only one person offering these services, I may not be able to attend to all learner's needs effectively (P6).

The interview excerpt confirms that PTs lack adequate time to provide PT services, implying that most pupils are not able to benefit from PT services which are essential for their well-being since PTs are not adequate. This conforms to findings by Govindaswami (2010) which determined that many PTs are experiencing difficulties in providing PT services due to not having been provided with the necessary support. The headteachers should ensure that PTs in their schools assist pupils to improve their physical well-being. The following qualitative data from a headteacher bears the same concern when headteachers were asked if PTs help pupils to improve their physical well-being:

He helps them but his time is somehow limited since he only visits them once a week...if he has more pupils than he can handle then others may be disadvantaged (HT5).

The interview excerpt from the headteacher indicates that the PT helps learners but his time with learners is limited, suggesting that he is not able to provide PT services that address physical well-being of majority of pupils. The schools should ensure that PT services address the physical well-being of all pupils so as to promote their academic performance. This conforms to a study by Kandersamy (2012) which revealed that there were inadequate PT services. The following qualitative data from FGDs with teachers bears the same concern when they were asked to say if PTs help learners to improve their physical well-being:

He does but just to some extent...I don't think it is logical to cater for majority of learners' physical well-being needs just a day in a week or four times in a month when he is alone (FG1).

The qualitative data from teachers indicate that the PT does not fully cater for the physical well-being of learners due to time limit, implying they are disadvantaged as far as their physical well-being is concerned, and this may interfere with how they undertake different tasks or participation in learning activities, hence needs to be addressed. This conforms to a research by Kohl (2013) which revealed that there is need for physical exercises to improve health and facilitate academic performance.

On the relevance of equipment meeting the needs of pupils, the study findings show that only a small proportion 106 (36.3%) of the respondents were satisfied (mean=2.63) that their PTs help them check their equipment to ensure that it continues to meet their changing needs as they develop

and grow. However, a majority 176 (60.3%) of the learners were not satisfied that their PTs' help in checking their equipment to ensure that it continues to meet their changing needs as they develop and grow. This seems to suggest that PTs are not able to check pupils' equipment continuously, which may cause discomfort to pupils, over-dependence, and lack of concentration which may impact negatively in their learning. This therefore indicates that there is poor access to PT services by pupils, and their ability to have quality life is not being addressed, hence the need for more PT services in these schools. This is in line with a study by Wachianga (2010) which found out that there was a problem with provision of mobility services in public schools for learners with PI.

Pupils with PI do grow and develop hence their needs may change from time to time. It is important that their equipment always meet their changing needs. It is evident that their changing needs are not adequately met. If this is not done, they may not be able to achieve their potential due to discomfort. There is need for schools to ensure that pupils' changing needs are met by the PT. The PT should spend more time with the learners to identify their changing needs as well as meeting their needs. This is in agreement with an investigation by Westcott (2018) which established that there is need to improve active mobility practice so as to improve participation. This was supported by the qualitative data from headteachers when they were asked whether the PTs help check pupils' equipment to ensure that it continues to meet their changing needs as they grow and develop as follows:

The PT monitors pupils' equipment but I think it is a challenge for him to meet the needs of all pupils due to time schedule (HT2).

The interview excerpt from the headteacher reveals that the PT is not able to effectively perform PTs' role of checking learners' equipment to ensure that it continues to meet their changing needs as they grow due to time schedules, and which is vital as far as their academic achievement is concerned. There is therefore need to increase the time spent by PTs with pupils so as to improve their motor ability. This is in line with a study by Effgen (2016) which established that there is need for greater motor abilities to enable learners navigate and manipulate their environment hence promote their academic performance. This was also supported by the qualitative data from PTs when they were asked whether they help pupils by checking their equipment to ensure that it continues to meet their changing needs as they grow and develop as follows:

I usually have limited time with these pupils. I always collaborate with some teachers to assist me in identifying any discomfort in learners (P).

The interview excerpt from the PTs indicates that the PTs do not have sufficient time to provide PT services. This may suggest that pupils with PI do not receive PT services such as those that address checking their equipment to ensure that it continues to meet their changing needs as they grow and develop, hence reduces their motor abilities which is vital in academic achievement. There is need to ensure that PT services address all learners' educational needs. This conforms to findings by Govindaswami (2010) which determined that many PTs are experiencing difficulties in providing PT services due to not having been provided with the necessary support. This was also supported by the qualitative data from FGDs with teachers when they were asked whether PTs help pupils' by checking their equipment to ensure that it continues to meet their changing needs as they grow and develop as follows:

We have about 250 pupils in this school versus only one physiotherapist who only comes here to provide physiotherapy services once a week. It's not easy for him to monitor all the equipment used by learners. In some cases, we report to him if we notice some continuous discomfort in the learner...however, we do not have the expertise to identify all the cases (FG5).

The qualitative data from teachers indicates that PTs provide services once a week, implying that a pupil who needs a change in his/her equipment should wait until the following week. This implies that this learner will be uncomfortable all this time hence affecting his/her valued function and quality of life which may cause poor concentration and inability to perform certain tasks in class. This is in agreement with findings by Kandersamy (2012) which revealed that there were inadequate PT services and also that there was need for more PT services to improve health outcomes.

Likewise, whereas only 110 (37.5%) of the learners agreed that their PTs always assists them to change their equipment when necessary, majority 168 (58.9%) of pupils who took part in the survey observed that their PT rarely assists them to change their equipment even when it is necessary, translating to a mean rating of 2.68 with a standard deviation of 1.46. This implies that attaining valued function and quality of life have not been met. Equipment do have tear and wear or may fail to serve its purpose at some point for instance when the learner has outgrown them or when they become faulty and need repair.

Equipment should be monitored and changed when necessary, this is not well done and may cause discomfort to pupils hence affect how they perform different tasks or operate in the learning environment. The schools should ensure that learners' equipment is continuously monitored by the PTs as well as changing them when necessary. This conforms to an inquiry by Wachiana (2010) which found out that there was a problem with provision of mobility services. The following qualitative data from a headteacher supports the same statement that most pupils are not assisted by PT to change their equipment:

The PT helps pupils to change their equipment, however, he may not be able to perform this role effectively due to time limit and being that he is alone versus many of them (HT1).

The interview excerpt from a headteacher indicates that not all learners with PI benefit from PT services such as helping them to change their equipment when necessary. A comfortable equipment is vital in performing different tasks or being actively involved in class activities, hence the need to be assisted to change the equipment so as to be more comfortable. This is in line with a research by Govindaswami (2010) which determined that PTs are experiencing difficulties in supporting pupils with PI due to lack of necessary support such as resources among others. The following qualitative data from a PT also supports the same statement that most learners with PI are not assisted by PT to change their equipment:

I do help them to change their equipment when I am around, that is, on weekly basis but mostly I get overwhelmed (P5).

From the interview excerpt, it is evident that only a few pupils are being helped by the PT to change their equipment. This means that even if other their equipment needs to be changed immediately

then they have to wait until the PT comes the following week, and this may cause them discomfort. The following qualitative data from a teacher supports the same statement that most learners with PI are not assisted by PT to change their equipment:

In most cases, the physiotherapist attends to pupils through physical exercises than helping them change their equipment (FG2).

The qualitative data indicates that most learners with PI receive physical exercises than changing their equipment. They may need to change their equipment from time to time with the help of a PT, however, the findings indicate that they rarely get these services which are vital for their comfort. The headteachers should ensure that all learners are helped by PTs to change their equipment to help improve their mobility. This is in agreement with a research by Westcott (2018) which established that there is need to improve active mobility practice so as to improve participation.

As a whole, pupils with PI are generally not satisfied with physiotherapy services offered to them. This was reflected by a mean moderate rating of 2.63 (SD=1.43), where only a few 108 (37.0%) of the sampled learners were satisfied with physiotherapist's help that they receive in school. Close to three out of every five 172 (58.9%) of the respondents insinuated that they are not satisfied at all with physiotherapist's help that they receive in their schools, but 12 (4.1%) were not sure whether they were satisfied or not. The PTs' services are vital in helping pupils with PI in mobility skills, muscle strength and motor skills and advice on activities to help to improve learners' access to curriculum hence contributing to good academic performance.

Since majority of them are not satisfied with the PT services, it can be argued that their mobility skills, muscle strength, motor skills, or advice to improve learners' access to curriculum that the PTs should address are not adequately taken care of, therefore improving the quality of their lives are not adequately met. This finding is in line with a study by Adams, Jones and Sheppard (2015) which found out that there was imbalance between increasing service demands and limited PT capacity, and decreased PT services. The following interview excerpt from one of the headteachers bears a testimony to this, for instance when they were asked to say whether they were satisfied with the PT services offered to pupils, one of them said:

Even though there are two residential physiotherapists in school, they do not meet most of the needs of pupils who need their services since their needs are more than they can provide (HT2).

The interview excerpt from the headteacher indicates that most of the needs of learners are not met by the PTs. This implies that the PT services provided for the pupils are not adequate, therefore their academic needs which should be addressed by the PT are not being addressed, therefore there is need to increase the PT services in the schools. This finding is in line with an inquiry by Archer and Garcia (2014) which revealed that academic performance and well-being in children is associated to how intensely pupils exercise, well-being and to self-regulation. The following interview excerpt from a PT also bears a testimony to this, for instance when PTs were asked to say whether they were satisfied with the PT services that they offer to learners with PI, one of them said:

I am not that satisfied with the services that are offered...I'm alone and the PT demands of these pupils are too high (PT2)

The interview excerpt from the PT indicates that the PT services are not satisfying the PT needs of learners due to the limited number of PTs. Therefore, there is need to increase PT services to pupils.

The qualitative data from FGDs with teachers also support the finding that pupils with PI are not satisfied with the PT services that they receive. For instance, when teachers were asked on the same, the following response came from FG2:

The school has only one physiotherapist who is hired and programmed to visit learners once a week. With the current population of learners, he is not able to meet most of their needs (FG2).

The qualitative response shows that not all pupils benefit from PT services in school due to limited time that the PTs spend in providing PT services. This is in line with a research by Govindaswami (2010) which determined that PTs are experiencing difficulties in supporting pupils with PI due to lack of necessary support such as resources among others. Learners with PI may not be satisfied with PT services since they do not access them when in need, they are not helped by the PT to get the right equipment, PT does not help them to improve their physical well-being, and they are not assisted to change their equipment when necessary by the PT. This implies that most of the PT roles in schools of pupils with PI are not adequately met, that is, improving learners' quality of life and attaining valued functioning are not met. The schools should organize for more teachers to be trained as PT assistants and should as well reschedule the time that PT spends with learners so that PTs can fully play their roles in schools.

Similarly, many 162 (55.5%) of the pupils did not agree that physiotherapist's services help them improve their academic performance, only a handful 116 (39.7%) of the sampled learners were in agreement (mean=2.74) that physiotherapist's services help them improve advice on activities to help to improve pupils' access to curriculum hence contributing to good academic performance. From the findings, it can be argued that the PTs have not effectively played their role of advising learners on activities to help them improve as far as access to curriculum is concerned.

This indicates poor access to PT services, and there is therefore need for schools to ensure that PT services address the issue of access to curriculum and help learners with PI improve in academic performance. This finding is in line with a research by Mwendwa (2010) which revealed that CPSK has not been able to provide many of the essential rehabilitation services to children with CP due to lack of human and material resources. The following interview excerpt from a headteacher also bears

a testimony to this, for instance when headteachers were asked to say whether PTs' services help learners with PI to improve their academic performance, one of them said:

I think the PTs' participation in academic performance of pupils is minimal since they are overwhelmed due to high workload...I therefore don't expect them to address all areas of academic performance of learners with PI (HT3).

From the qualitative data from a headteacher, it is clear that PT services have not helped learners with PI as far as their improvement in academic performance is concerned owing to the fact that the PTs are overwhelmed. This implies that they are not able to reach out to majority of pupils, hence it is vital for schools to ensure that all learners are helped to improve in academic performance through PT services. This finding is not in line with a research by Kandersamy (2012) which revealed that there was low demand for PT services, this might have been caused due to the fact that the previous study was carried out in a different country and only qualitative approaches and a

smaller sample size were used while in the current study, both quantitative and qualitative methods and a bigger sample size were used.

The qualitative response by PTs also support the same findings that pupils with PI are not helped by PTs to improve in their academic performance. For instance, when PTs' opinions were sought on whether they help learners with PI to improve in their academic performance, one of them said:

Yes, the services I provide to pupils address their academic performance, however the time I spend with them is too short to allow them benefit fully as far as their academic performance is concerned....so not all pupils are able to fully benefit from it (PT6).

From the interview excerpt from PT, learners with PI are not fully benefiting academically from PTs' services due to limited time spent with PTs. There is need for schools to ensure that they fully benefit from PT services as far as their academic performance is concerned. This finding is in line with an inquiry by Macdonald, Milne and Pope (2018) which established that several components of motor proficiency in primary settings are vital as far as academic performance is concerned. The qualitative data from FGDs with teachers also support the findings that PTs' services have not helped pupils to improve in their academic performance. For instance, when teachers were asked whether PTs help learners to improve their academic performance, the following response came out from FG2:

Physiotherapist plays his role to help pupils perform well but due to inadequacy of the services, most pupils are not fully benefitting from physiotherapy services (FG2).

The interview excerpt indicates that not all learners with PI benefit from PTs' services as far as their academic performance is concerned. This is in line with a study by Adams, Jones and Sheppard (2015) which found that there was imbalance between increasing service demands and limited physiotherapist capacity. One of PTs roles is to advice on activities to help improve access to curriculum. The study results imply that the fact that there are PTs in schools does not mean that most pupils benefit from their services. Poor attainment of valued functioning which is expected to be provided by the PTs, may influence pupils' academic achievement. PTs should play all their roles for learners to benefit from them academically.

Although, 62 (21.2%) and 48 (16.4%) of the pupils agreed and strongly agreed, respectively, that they receive adequate physiotherapy services, majority of the learners as reflected by 70 (24.0%) who strongly disagreed and 102 (34.9%) who disagreed insisted that they do not receive adequate physiotherapy services, reflecting a mean response rating of 2.71 (SD=1.45). This implies that however much learners with PI receive physiotherapy services, the PT services are not adequate, hence they have poor quality of life, and lack valued function. Adequate PT services are vital for academic performance of pupils with PI hence it is important for the schools to ensure that there are adequate PT services for pupils with PI. This finding is in line with a research by Adams, Jones and Sheppard (2015) which revealed that there was imbalance between increasing service demands and limited PT capacity.

The headteachers also support the findings that PT services are inadequate for learners with PI, for instance when they were asked to comment on the adequacy of PT services, one of their responses was:

We have only one PT who provides PT services to all pupils with PI in the school once a week, given the high population of learners, it is not possible for all or majority of them to receive adequate services from him (HT5).

The interview excerpt from the PT indicates that the PT services received by learners in schools are not adequate due to high workload of the PT. The PT services are vital in addressing academic performance of pupils. There is therefore need to increase PT services in schools so that all pupils with PI can benefit from them. This finding is in line with a study by Rochmes (2016) which revealed that there was need for provision of physical health services to pupils with PI. The following interview excerpt from a PT bears the same testimony when they were asked to say whether learners with PI receive adequate PT services:

I do try although it is not easy for me to provide adequate PT services to all pupils with PI in the school...I'm the only one doing this in this school and I only provide these services once a week (P4).

The interview excerpt from the PT indicates that PTs do not have sufficient time to provide PT services to all pupils with PI. This implies that pupils with PI do not receive adequate PT services which are essential for their academic performance, hence it is vital to address it so that learners with PI may benefit from it academically. This finding is in line with an investigation by Westcott (2018) which revealed that there was lack of emphasis on active mobility practice by engaging learners within therapy sessions. The qualitative data from FGDs with teachers also support the findings that pupils with PI do not receive adequate PT services, for instance, when teachers were asked to say whether PT services for learners with PI are adequate, one of the FGs responded by saying:

When physiotherapist comes once every week, not all pupils who require his services are attended to because there are many learners who require their services...not even in one month (4 times) has he been able to attend to the needs of all learners (FG4).

The qualitative response from FGD indicates that PTs' services received by learners with PI are not adequate. This is due to lack of enough PTs in school and the limited time spent by the available PTs with learners with PI. This agrees with a study by Chidobe (2012) which found out that there was unavailability of physiotherapy services. Pupils with PI have varied needs, the PT only comes to school once a week, and these learners have changing needs. This means that some of their needs may not be met due to high PT learner ratio. It is therefore important that more PTs are hired or employed in schools and they should ensure that all learners' needs are met.

On whether physiotherapist really support needs of learners, the study findings show that only a small proportion 116 (42.3%) of the respondents were satisfied (mean=2.73; SD=1.49) that their PTs help them to achieve their maximum function. However, a majority 171 (62.9%) of the learners were not satisfied that their physiotherapist helps them to achieve their maximum function. This confirms that majority of learners with PI hardly receive adequate and appropriate physiotherapy services in their schools. These pupils need to achieve maximum function to operate near normal, and this helps them undertake different tasks as far as their learning is concerned. It is important that PT services help them achieve maximum function, however, this is not the case. This finding

concur with the findings from a research by Kandersamy (2012) which revealed that there were inadequate PT services. This was supported by qualitative data from headteachers. For instance, when headteachers were asked whether PTs help learners with PI achieve maximum function, the following response was noted:

The PT helps pupils to achieve their maximum function, however, there is only one PT...he is overwhelmed due to high workload. This may make him not attend to all learners who need PT services in time. (HT1)

The interview from the headteacher indicates that, in as much as the PT helps pupils with PI, the high workload makes him not to offer adequate PT services to all pupils who need PT services. This implies that not all learners with PI benefit from PT services as far as achievement of their maximum function is concerned. There is therefore need to increase PT services. This conforms to findings by Govindaswami (2010) which determined that many PTs are experiencing difficulties in providing PT services due to not having been provided with the necessary support. The qualitative data from the PTs also bears the same testimony to this finding. For instance, when PTs were asked to say whether they help learners with PI to achieve maximum function, the following response came out:

I have been helping and I'm still helping them to achieve maximum function but I am overwhelmed due to high population given that I'm alone...I cannot perfect it. (PT1)

The interview excerpt from the PT indicates that even though pupils with PI are helped to achieve maximum function, this cannot be attained due to high workload. This implies that there is need for more PTs if all or majority of learners are to achieve their maximum function. This concurs with an inquiry by Wachanga (2010) which established that there was a problem with provision of mobility services in public schools for pupils with PI. The qualitative data from teachers also bears the same testimony, for instance, when teachers were asked to say whether PTs help pupils with PI achieve maximum function, this response came out:

The PT helps pupils achieve maximum function, however, not all learners receive these services adequately due to high workload by the PT (FG3).

The qualitative response from teachers shows that not all learners with PI are attended to by the PT as far as achieving maximum function is concerned. It can be argued that even though all pupils are expected to achieve maximum function, majority of them may not achieve it due to high workload. This conforms to a study by Adams, Jones, and Sheppard (2015) which established that there was imbalance between increasing service demands and limited PT capacity. It is therefore necessary for all schools for learners with PI to ensure that all pupils achieve maximum function.

Equally, although 62 (22.8%) and 49 (18.0%) of the learners agreed and strongly agreed, respectively, that physiotherapy services help modify architectural barriers in the school, majority of the pupils, as reflected by 77 (28.3%) who strongly disagreed and 97 (35.7%) who disagreed, insisted that they do not receive adequate physiotherapy services that modify architectural barriers, signifying a mean response rating of 2.68 (SD=1.48). This seems to suggest that most schools in Nyanza Region still have some architectural barriers. This implies that, however much learners with

PI receive physiotherapy services, the PT services are not adequate enough to significantly modify their architectural barriers. Modification of architectural barriers is vital for their valued function, and adequate PT services are important for their academic performance, therefore it is important for schools for pupils with PI to ensure that there are adequate PT services. This conforms to a research by Adams, Jones and Sheperd (2015) which found that there was decreased access to PT services.

The qualitative data from headteachers also supports the same findings. For instance, when headteachers were asked to say whether PTs help modify architectural barriers in the schools, the following statement shows the response:

The PT sometimes offers pieces of advice on architectural barriers, however, there are some architectural barriers. (HT4)

The interview excerpt from the headteacher indicates that even though the PT offers advice on architectural barriers, there are still some architectural barriers in the school. This implies that learners with PI still experience some barriers in the environment. They need a barrier free environment in order to access every place easily. Architectural barriers may bar them from accessing different places in the learning environment hence negatively affect their valued functioning. There is therefore need to make all places within the learning environment more accessible. This is in line with an inquiry by Mwendwa (2010) which revealed that CPSK has not been able to provide many of the essential rehabilitation services due to lack of human and material resources. When the PTs' opinions were sought on their contribution on helping modify architectural barriers, the following statement was made:

I do advice the school on the same, however, there are some steep ramps and toilets that need adaptation. (PT2)

The interview excerpt from the PT shows that there are still some barriers to free movement such as steep ramps and toilets that are not adapted among others. This implies that there are still some architectural barriers in schools for pupils with PI. It can be argued that even though the PT is expected to help modify architectural barriers, there are still architectural barriers in the schools, an indication that their role has not been played well. It is therefore vital for the schools to ensure that there are no architectural barriers so as to enable learners with PI attain maximum function. This conforms to an inquiry by Chidobe (2012) which found that there was unavailability of PT services. From the FGDs with teachers, it came out that there were architectural barriers in schools. The following statement bears the testimony:

There are some architectural barriers in schools, some ramps are too steep and too rough for learners with PI to access different places with ease. (FG3)

The qualitative response from teachers indicates that there are architectural barriers in the schools. This implies that the accessibility to different places may be difficult for pupils, and this may limit their movement to different places thereby making them not achieve their valued function, hence the need to ensure that all places are accessible. This conforms to a study by Kiyuba and Tukur (2014) which revealed that there was poor access to learning environment.

By the same token, majority 172 (63.2%) of the pupils did not agree that physiotherapist's services help them manage their balance, only a minority 108 (39.7%) of the sampled learners were in

agreement (mean=2.66; SD=1.46) that physiotherapist's services help them improve in management of their balance hence contributing to good academic performance. From the findings, it can be inferred that the PTs have not effectively played their role of helping the learners with PI improve in their management of balance, thus hampering their access to curriculum. This indicates poor access to PT services which hinders learners with PI from attaining their valued functioning; there is therefore need for schools to ensure that PT services address the issue of access to curriculum and help pupils with PI improve in academic performance.

It can be argued that the role of PT in helping pupils with PI manage their balance is not well played, and this makes learners with PI not to manage their balance well. This finding conforms to an investigation by Adams, Jones and Shepperd (2015) which revealed that there is imbalance between increasing service demands and limited PT capacity. When headteachers were asked to say whether PTs help pupils with PI to manage their balance, among the responses was:

The available PT helps learners with PI manage their balance, however, the workload is just too high for him.... not all pupils may benefit from these services.
(HT4)

The qualitative response from the headteacher shows that, even though the PT helps learners with PI to manage their balance, the high workload may make him not to deliver PT adequate services. This seems to suggest that there are pupils who are not being helped by the PT to manage their balance, hence, the need to ensure that all pupils with PI are assisted by the PT to manage their balance. This is in line with a research by Chidobe (2012) which established that there was unavailability of PT services. The qualitative response by PTs also indicated that learners with PI are not adequately helped by PTs to manage their balance, for instance when asked the same question, the following response was made:

I do help pupils with PI to manage balance, however, the workload is too high for me, I therefore may not be able to attend to all learners with PI at the right time.
(PT6)

The qualitative response from PT indicates that learners with PI are helped by PT to manage to manage their balance, however, not all pupils with PI can be helped at a time of need due to heavy workload for the available PT. This implies that some learners with PI miss PT services that can help them manage their balance, or these services may be delayed for some of them and this may affect how they manage their balance. This is in agreement with a research by Kandersamy (2012) which revealed that there were inadequate PT services. There is need for more PT services in schools for pupils with PI. When teachers were asked to comment on the role of PT in helping learners with PI to manage their balance, the following response was noted:

That is done but he is alone. Also, the time allotted for PT services may not allow most learners with PI to benefit as far as managing their balance is concerned.
(FG3)

The qualitative response from teachers indicates that the PT helps pupils manage their balance, however, he is alone and given the high population of learners, the time allocated for PT services is not enough to serve all pupils. This implies that there are pupils who do not benefit from PT

services of being helped to manage their balance since the PT only works within stipulated time and he is alone. This conforms to findings by Govindaswami (2010) which determined that many PTs are experiencing difficulties in providing PT services due to not having been provided with the necessary support. There is need for schools of pupils with PI to ensure that PT services help learners to manage their balance.

Likewise, on enabling mobility within classrooms and school, the results of the survey indicate that psychotherapist's advice is not adequate. This was mirrored by a mean response of 2.67 with a standard deviation of 1.46. While only 61 (22.4%) and 47 (17.3%) of the sampled PI pupils agreed and strongly agreed that PT always advise them on mobility within classroom and school grounds, a sizeable proportion 174 (64.0%) of the surveyed PI learners insisted that they hardly receive any advice on mobility within classroom and school grounds. This is an indication of poor physiotherapy services offered to learners with PI in public schools within Nyanza Region. This indicates that majority of learners with PI are not satisfied with the PTs' advice on mobility within the classrooms and school grounds.

This implies that they do not access adequate PT services as far as their advice on mobility within classrooms and school grounds are concerned. Information or knowledge on mobility within classrooms and school grounds is vital as it helps them access the learning environment with ease, however, they do not access it. There is need to ensure that all learners with PI access advice on mobility within classrooms and school grounds. This is in line with an investigation by Wachanga (2010) which found that there was a problem with provision of mobility services in schools for learners with PI. The qualitative response from headteachers also had the same testimony, for instance, when headteachers were asked to say whether PTs advice pupils with PI on mobility within classrooms and school grounds, the response was:

Pupils with PI get pieces of advice concerning mobility, but there is need for more of PT services because the one around cannot manage all that alone. (HTI)

The qualitative response from the headteacher indicates that even though the PT advises learners with PI on mobility, such services does not meet the requirement since there is high learner PT ratio. This seems to suggest that learners with PI may still have difficulty with mobility within classrooms and school grounds. There is need for the schools to address the issue of inadequate PT services. This conforms to a study by Westcott (2018) which established that there is need to improve active mobility practice so as to improve participation. The PTs also support the same finding, for instance when PTs were asked to say whether they give pieces of advice on mobility within classrooms and school grounds, the response was as shown:

I do advise them on mobility but only to learners that I can access when I'm around since I do a lot of work and I'm alone. (PT3)

The interview excerpt from the PT indicates that the PT only gives advice on mobility to pupils that he can access. This implies that since there is only one PT with many learners with PI, many of them may not be able to access PT services involving mobility within classrooms and school ground. This finding is in line with a study by Kandersamy (2012) which revealed that there were inadequate PT services. From FGDs with teachers on the role of PT on advising learners with PI on mobility within classrooms and school grounds, the response was:

The PT helps pupils with PI on mobility within the learning environment, however, there is no consistency in this since it is rarely done. (FG2)

The qualitative data from teachers indicates that the PT advises learners with PI on mobility but not consistently as this is rarely done. It can be argued that since the PT rarely gives advice to pupils with PI, most of them do not benefit from PT services which entail mobility within the classrooms and school grounds. This conforms to a study by Westcott (2018) which established that there is need to improve active mobility practice so as to improve participation. Schools should ensure that all learners are adequately advised on mobility within classrooms and school grounds to enhance their valued function.

4.4.1 Hypothesis testing the Objective

H₀: *There is no statistically significant relationship between access to physiotherapy services and academic performance of learners with PI in public primary special schools in Nyanza Region.*

Pearson Product Moment Correlation Coefficient was computed with scores on access to PT services as independent variable and academic performance as dependent variable. Mean response across a set of items of Likert scale responses was computed to create a continuous variable, within an open interval of 1 to 5 suitable for the use of parametric methods as explained by Sullivan and Artino (2013), where high scale ratings implied high perceived level of PT services in public special primary schools of learners with PI. The academic performance was computed from the mean average scores of the learners in the three exams that were administered to them in term 2, 2019; term 3, 2019; and term 1, 2020 as shown on table 3.

Table 3: Relationship between Access to Physiotherapy Services and Academic Achievement

		Academic Achievement
Physiotherapy Services	Pearson Correlation	.448**
	Sig. (2-tailed)	.000
	N	292

From Table 3, it is evident that there was statistically significant positive correlation between access to PT services and academic performance ($n=292$; $r = .448$; $p < .001$). Since p-value is less than 0.05, the null hypothesis was rejected. Hence, it was concluded that there is statistically significant positive relationship between access to PT services and academic performance among pupils with PI, with high level access to PT services associated with improved academic performance and vice-versa. This finding conforms to a study by Cid and Diaz (2017) which revealed that physical exercise is associated with improved academic performance and Rasberry, Lee, Robin, Lisa, and Covile (2011) which revealed that there is association between school-based physical activity and academic performance representing measurements of academic achievement. Physiotherapists should ensure that learners' physical well-being is up to date. Further, to estimate the level of influence of access to PT services on academic achievement, a coefficient of determination was computed by use of regression analysis and the result was as shown in Table 4.

Table 4: Model Summary on Regression Analysis of Access to Physiotherapy Services on Academic Performance of Learners with PI

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.448 ^a	.201	.198		18.7753

a. Predictors: (Constant), Physiotherapy services

Model	Unstandardized Coefficients	Standardized Coefficient	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error			Lower Bound	Upper Bound
1 (Constant)	86.27	12.395	6.96	.000	61.883	110.673
Physiotherapy services	43.257	5.070	8.533	.000	33.279	53.235

a. Dependent Variable: Academic Performance

$$Y = \alpha + \beta_3 X + \varepsilon$$

$$\text{Academic Achievement} = 86.278 + 43.257x + \text{error term.}$$

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25665.250	1	25665.250	72.807	.000 ^b
	Residual	102228.395	290	352.512		
	Total	127893.646	291			

a. Dependent Variable: Academic Achievement**b. Predictors: (Constant), Physiotherapy services**

The model summary (Table 4) reveals that access to PT services accounted for 19.8%, as signified by *Adjusted R*² =.198, of the variation in academic performance of pupils with PI. This finding means that variation in the access to physiotherapy services explains about 20% of the variability in academic performance of pupils with PI in public primary special schools. This is a substantial influence on a dependent variable by one predictor. This implies that there is poor access to PT services which are vital for quality of life and valued function for learners with PI such as mobility skills, joint range of movement, muscular strength and motor skills among others, and this contributes to poor academic performance.

It is evident that the slope coefficient for PT services was 43.257, connoting that academic achievement of learners with PI improves by this unit for each one-unit positive change in PT services among pupils with PI in public primary special schools. Likewise, an improvement in PT services by one standard deviation is associated to improvement of academic achievement by .448 standard deviations. This is in line with an inquiry by Westcott (2018) which found out that there is a positive association between both physical activity and fitness and academic performance. This further implies that access to adequate PT services are associated with high academic performance of learners with PI. This is in line with Chiarello and Lisa (2016) which revealed that learners who received physical therapy made progress on academic goals. The schools should therefore ensure that all the PT needs of learners with PI are met.

From the ANOVA output as suggested by Bhandary (2020), there is sufficient evidence to conclude that access to PT service is a significant predictor of academic achievement $F(1, 290) = 72.807, p < .001$, Adjusted $R^2 = .198$. Hence, it was concluded that there is statistically significant influence of PT services on academic performance. This implies that pupils with PI in special primary schools with adequate and accessible PT services are presumptive to have better academic achievement. This finding agrees with a research by Kohl (2013) which revealed that improved physical activity and fitness is associated with improved academic achievement.

Also, pupils with PI who receive PT services are likely to perform well than when they do not receive PT services. This finding agrees with an inquiry by Effgen et al (2016) which revealed that children who have greater motor abilities tend to have better academic achievement.

5.0 Conclusions and Recommendations

5.1 Conclusions

The study established that; there was poor access to PT services for learners with PI reflected by a mean response of 2.73 with a standard deviation of 0.49 in the scale of 1 to 5. The qualitative data also revealed that there was poor access to PT services which made it difficult for learners with PI to achieve their valued functioning. On establishing the relationship between access to PT services and academic performance of pupils with PI, the study determined that there was a statistically significant positive correlation between access to PT services and academic performance of learners with PI ($n = 292$; $r = .448$; $P < 0.001$) with high level access to PT services and associated to improved academic performance and vice versa.

It was also established that when access to PT services is increased by one-unit, academic performance would improve by 15.488 marks. It was therefore concluded that, poor access to PT services for pupils with PI in public primary special schools for learners with PI in Nyanza Region contributes to their poor academic performance. Hence, access to PT services is an important aspect as far as academic performance of learners with PI is concerned.

5.2 Recommendations

In line with the findings that there is poor access to PT services, and that there is statistically positive relationship between PT services and academic performance of learners with PI, the government and stakeholders need to focus on strategies to improve access to PT services in these schools. This would improve learners with PIs' mobility, joint range of movements, fine motor skills and gross motor skills among others which are useful in learning and which help improve their valued functioning and quality of their lives hence enhance their academic performance.

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