

Physiotherapy Involvement in School Based Sports Activities in Enugu Metropolis

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Abstract. Sports-based activities have become an integral part of school curriculum and its effectiveness on students' performance cannot be overstated. However, the drawback associated with increased participation in sports has always been the high risk of musculoskeletal injury, especially since personnel supervising these school sports activities are not always medically trained. The objective was therefore to determine the extent of involvement of sports physiotherapists in these activities from schools' awareness to their willingness to adopt physiotherapy using qualitative interview method with open-ended questions.

The study included 20 schools in Enugu metropolis with a mean student population of 350. The results showed that as much as 90% & 15% of the schools were aware of physiotherapy and sport physiotherapy respectively, 100% agreed with the benefits sports physiotherapists would bring to their schools, and 65% was willing to adopt sports physiotherapy with the most common limiting factor being financial constraints.

In conclusion, the study showed that at large most schools do not recognize the value of sports physiotherapy in injury prevention & management and financial constraints played a role in the poor uptake of physiotherapists in schools. This creates the need to implement policies that would be advantageous to inculcating sports physiotherapists in school-based sports activities for injury prevention & management.

Keywords: sports, physiotherapy, school-based activities, involvement

Background of Study

Sports based activities have become an integral part of the school curriculum and its effectiveness on the students' performance cannot be over stated, as it has an interest in providing a meaningful and culturally situated sporting experience to students.

Young people spend a large portion of their time at schools and colleges. A significant amount of learning takes place in these institutes. Along with quality education, it is vital that sports and physical education are made accessible and regular part of learning during these formative years. This naturally makes organized sports a vital component of social and academic experiences for many students. Activities that encourage physical movement and exercise in students create an enjoyable experience for students in schools and colleges (Nayana, 2019).

Sport has also been shown to serve as a mechanism for the transmission of values, knowledge, and norms in creating social harmony. The specific values conveyed may be those of the dominant society, or they could be those of a subgroup. Therefore, sport could contribute to either differentiation or stratification or to integration into the overall society. Evidence indicates that different sports appeal to different social stratifications in the society and may reinforce cultural or societal differences. Sport also may serve to transmit general societal values, which leads many sport authorities to believe that sport has positive value for the

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participants in building character, discipline, a strong work ethic, and the ability to work in teams (Malina et al., 2021).

When sports are made an integral part of the curriculum, students report healthier eating habits, better levels of cardiovascular fitness, increased parental support, and decreased levels of anxiety and depression (Nayana, 2019).

Over the recent years, high school sports for the youth have become organized and competitive in nature worldwide (Theisen et al., 2014). In Enugu, a number of critical sporting events are organized and comprises the primary and secondary school sporting calendar every year. The most common annual sporting events include the Inter-House Sports competitions and in other cases inter-school competition on various sports. These events are a testament to the popularity of school sports in Enugu and the support by educational structures for inclusion of sport in the school curricula. As earlier said, sports are important for the physical, psychological and emotional health and development of adolescents (Emery, 2003). However, the drawback associated with the increased participation in sport has always been the high risk of injuries (Spinks et al., 2007; Hogan et al., 2003). This is a major concern especially if there are no resident or part time medical personnel such as physiotherapists working consistently with the school teams and everything seems to rest with the sport coaches and or PE teachers.

Sports and Exercise Physiotherapists are involved in the prevention and management of injuries resulting from sport and exercise participation at all ages and at all levels of ability. These specialized physiotherapists provide evidence-based advice on safe participation in sport and exercise.

The New Zealand Sports Physiotherapy organization defines a sports physiotherapist as: *"A recognized professional who demonstrates advanced competencies in the promotion of safe physical activity participation, provision of advice, and adaptation of rehabilitation and training interventions, for the purposes of preventing injury, restoring optimal function, and contributing to the enhancement of sports performance, in athletes of all ages and abilities, while ensuring a high standard of professional and ethical practice."*

Sports and exercise physiotherapists work in a wide variety of settings. Many of them work with active recreational athletes in private practice or clinic settings. They can also be involved in social and club level sports and attend training sessions. Sports and exercise physiotherapists often work in the elite athlete setting in competitive and professional sports, working and travelling with elite individual athletes or teams, and integrating their services with other medical professionals, coaches, strength and conditioning personnel and other support staff. Sports and exercise physiotherapists are also actively involved within various sporting organizations and schools to coordinate physiotherapy services, injury prevention, rehabilitation and injury surveillance programs during sports activities (Sports and Exercise Physiotherapy New Zealand, 2019).

The drawback associated with the increased participation in sports evident even in school-based sports is the high risk of injuries. Sports have been implicated as a leading cause of musculoskeletal injuries among adolescents in high schools (Spinks et al., 2007). Absolute rates vary with sport, context and methodological procedures. This implies that the school coaches need to have extensive knowledge not only in coaching and training of students but should also have a deeper understanding on injury prevention measures and be aware of the role of the various medical personnel who can assist school athletes in the various respects (Nshiminiya et al., 2012; Frantz, 2007).

In Enugu, there is dearth of epidemiological data on youth injuries. There are no studies that have been published documenting the extent of this problem in this part of the world. This is a significant shortcoming militating against effective preventative strategies in schools for sports injuries.

However, a common observation of the inter-house sports in various schools and the interscholastic competitions showed that sports-related injuries are common among high school adolescents. Most of the injuries observed were musculoskeletal in nature and were not severe and could have been avoided or the severity reduced through proper education, specific training of essential skills in respective sports, and acquisition of the pre-requisite physical, motor and physiological attributes by athletes (Mackey et al., 1998). This could be done by the local school sports coaches with the assistance from medical professionals such as physiotherapists. Surprisingly, none of the participating schools in the tournaments had a resident sports physiotherapist with them.

This observation spurs the question whether the role of physiotherapists is known in school sports by PE teachers, sports coaches, directors/proprietor or coordinators particularly those involved in contact sports and athletics.

The primary concerns for lacking adequate physiotherapy knowledge among sports coaches include but not limited to improper rehabilitation of injures and increased recurrence of injuries (Johnsey, 2013; Dissanayaka, 2014).

Statement of Problem

A lot of schools are getting involved in sports based activities as part of their extracurricular activities and also to promote their students physical and mental health. Anecdotaly, it was observed that during such activities, students incur some forms of sports injuries based on the report and hospital presentations as seen in the clinics. It has become worrisome that some of these sports injuries are not properly managed probably because of the lack of or inadequate preventive strategies employed by these various schools to ensure that children participate safely in these sports activities.

A study was therefore imperative to ascertain why these sport injury cases present to clinic in worse conditions and also to find out the root cause of the issue from various schools where most of the time the job of preventive strategies and injury management is left for sports coaches and school teachers with unrelated medical degrees/ pre-requisite qualifications and just passion in the respective sport. These sport/PE teachers are likely going to handle the treatment of the injuries at a minimal level and in very rare scenarios actively aim at the rehabilitation/prevention of injuries. Sadly, their decent knowledge of the importance of physiotherapy does nothing to transmute to practical knowledge of acquiring the services of sports physiotherapists.

Based on these issues, an interest was spurred to survey schools in Enugu Metropolis LGA so as to determine the involvement of sport physiotherapists in such sports based school activities. The factors that affect the uptake of sports physiotherapist and adoption of physiotherapy practices in schools was also looked into.

Research Objectives

General Objectives

The main aim of this study was to determine the involvement of sports Physiotherapists in school-based sports activities in Enugu Metropolis by evaluating the awareness of sports physiotherapy among schools and their attitudes, beliefs and perceptions of sports physiotherapists' abilities in school based sporting activities.

Specific Objectives

To reach the aforementioned aim, the study sought to:

- Determine the level of awareness of sports physiotherapy among schools in Enugu metropolis;

- Determine the involvement of sports Physiotherapists in school-based sports activities;
- Determine the attitudes of school administrators in sports physiotherapists' abilities in school based sporting activities;
- Determine the perception of school administrators in sports physiotherapists.

Research Questions

To effectively evaluate the level of awareness of sports physiotherapy among school administrators and the resulting perceptions and beliefs in a sports physiotherapists' ability in school based sports activities, consideration was given to the following questions;

1. What is the level of awareness of sports physiotherapists or physiotherapists in general among school administrators in the Enugu metropolis?
2. What's the level of involvement of sports Physiotherapists in school-based sports activities
3. To what extent are school administrators willing to adopt sports physiotherapists in school-based sports activities?
4. What are the varying perceptions of school administrators concerning physiotherapists/sports physiotherapists?

Significance of the Study

This study would be beneficial in understanding what needs to be done to improve the level of awareness and knowledge school administrators and PE coaches have about sport physiotherapist and their knowledge of what needs to be done to prevent sports injuries during their school sports activities and training.

The data would be used to standardize policies surrounding sports coaching and focus group in charge of sports teams and students that are involved in sporting activities.

The empirical evidence from this study can be used by sport physiotherapists and coaches to understand the relevance of having a standard team to supervise students during sporting activities.

In addition, the outcome of this study would verify that although some coaches or school administrators are aware of the importance of having a medical personnel especially a sport physiotherapist, on ground for sports injuries and prevention, they need to implement that knowledge into practice and involve sports PTs practically.

This research will in turn serve as a reference point for future research on similar areas of study.

Scope of the Study

This study was delimited to the following:

1. Primary schools in Enugu Metropolis including schools with both primary and secondary sections.
2. Primary schools that have been in existence for at least one year.

Materials and Methods

Participant Selection

The study involved 20 primary schools chosen from Enugu Metropolis among which each school actively involve their student in regular physical/sporting activities. The individual school administrators were briefed on the aim of the study and consent was gotten before going ahead with the recorded interview with pre compiled questions. The completion of the interview affirmed their consent and they were assured of the confidentiality of all information they gave.

Selection Criteria

Inclusion Criteria

The following were considered as criteria for inclusion:

- Primary schools in Enugu metropolis including schools with both primary and secondary sections.
- Primary schools that have been in existence for at least one year.

Exclusion Criteria

The following were considered as criteria for exclusion:

- Nursery schools without primary or secondary school affiliation
- Schools that are less than one year in existence

Instrumentation

The following instruments were used to collect data;

1. A print out of the intended interview questions
2. Pen
3. Recorder (phone)

Description of Instruments

1. The semi-structured questionnaire was constructed by a small focus group of physiotherapists and consists of preset open-ended interview questions, a total of 19 items across 3 different constructs. These were;
 - **Demographics** eg school name, population of students etc
 - **Knowledge and awareness** eg are you aware of physiotherapy, source of information etc
 - **Attitudes, beliefs and perceptions of sports physiotherapists abilities** eg who supervises sports activities and what's their qualification
2. A pen used to transcribe important key responses on paper
3. A recorder used to capture all the extra information given by the respondent

Ethical Consideration

Informed consent will be obtained from each participant before the collection of data.

Methods

Sampling Technique

For the purpose of this research and its analysis, purposive sampling was used to select participants. This sampling method was used since there was main goal of understanding the perception of schools in Enugu metropolis regarding sports physiotherapy. The participants had to include private and public schools in the area, schools which were highly and lowly populated, schools which had high and low period of existence and schools that where several sporting activities were done. They were selected from trans-ekulu, GRA, Independence Layout, New Haven, Uwani, Abakpa, and Ogui road.

Research Design

The research was a qualitative cross-sectional survey.

Procedures for Data Collection

An introductory letter was collected from the Department of Medical rehabilitation, University of Nigeria Enugu campus and was shown to the school administrators of the different schools involved in the study where the aim and objectives of the study was carefully explained to them including details of the interview procedure. Their permission was then sought in order to go ahead with recording their responses during the interview.

Method of Data Analysis

Qualitative analysis was undergone to answer the research questions and present evidence by revealing the different feelings and perceptions of schools on sports physiotherapists. For this qualitative research and analysis, a one-on-one in-depth interview was done to collate precise information from the various schools' representatives. This data collection method was chosen because it would help gather clear-cut information from these individuals and they can openly and freely express how they feel and what they understand about the particular subject matter.

The survey was conducted in 20 schools and the questions aimed to answer the 3 research questions of this work which include:

- a) What is the level of awareness of sports physiotherapists or physiotherapists in general among school administrators in the Enugu metropolis?
- b) To what extent are school administrators willing to adopt sports physiotherapists in school-based sports activities?
- c) What are the varying perceptions of school administrators concerning physiotherapists/sports physiotherapists?

The survey comprised about 11 questions in total with a few served as linking questions. It was categorized into 2 – knowledge and awareness of Physiotherapy and Sports Physiotherapy then Attitude, beliefs, and perception of sports physiotherapist abilities.

The data generated was in three forms; field notes, audio recording, and transcripts. Each audio recording was transcribed to extract its content and enable coding or indexing of generated data.

To analyze the collected data, the thematic method of qualitative data analysis was used to gain insight from this data. This method was most fitting because it is effective when discovering people's various beliefs, opinions, ideas, and motivations about certain things, and in this case the various schools' perception, attitude, and knowledge of sports physiotherapy and their roles in school-based sports.

Analysis and Discussion

Results

Table 1. Demographics of schools

Schools	Type	Period of Existence	Population
Housing Estate Primary School	Public	6 Years	500
Graceland College	Private	9 Years	350
Swiss Kids	Private	5 Years	360
Mike Terry	Private	7 Years	500
Spring of Life	Private	16 Years	450
Pine Crest	Private	15 Years	145
AirForce Primary School	Public	21 Years	750
Marvelous Grace	Private	14 Years	200
New Haven Primary School	Public	70 Years	700
Roseville School	Private	3 Years	100
Abakpa Nike Primary School	Public	28 Years	460
NOWA Primary School, 82 Division	Public	6 Years	200
University Primary School	Public	4 Years	300
Command Children's School Emene	Public	30 Years	470
Gab-Selina Schools	Private	17 Years	300
Wisville Academy	Private	6 Years	120
Bloomsville	Private	2 Years	31

Kingdom Heritage Model School	Private	16 Years	685
Praiseland	Private	20 Years	110
Corner Stone Primary School	Public	15 Years	320

Table 1 illustrates brief demographics of participant schools for this survey. The oldest school was New Heaven Primary school at 70 years while the youngest was Rosville School at 3 years. The total number of private schools were 12 and public schools 8. The most populated school was Airforce Primary School while the least populated was Bloomsville.

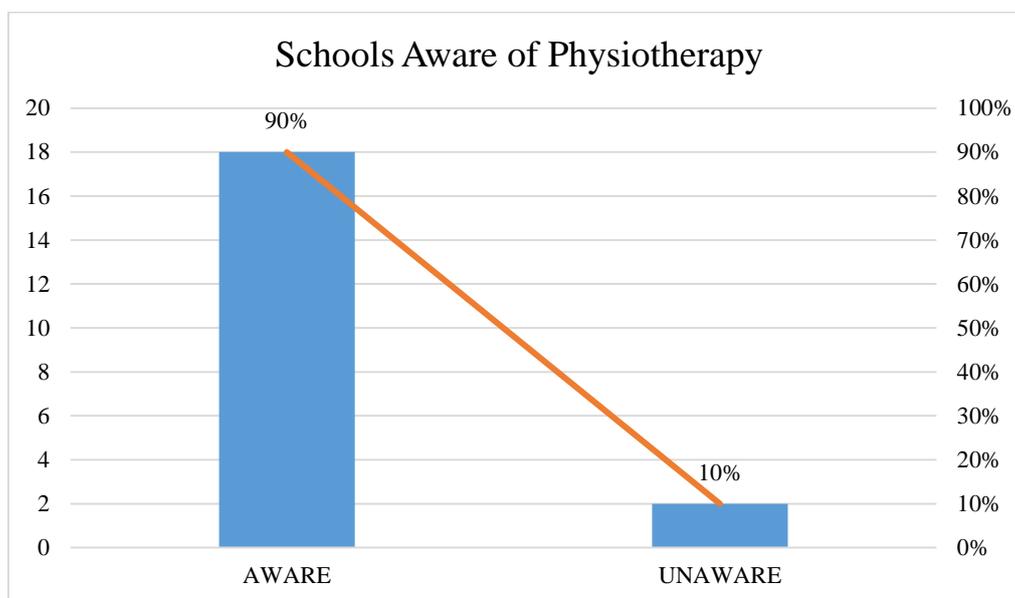


Figure 1. Awareness of physiotherapy

The above shows the statistical representation of the data collected from the 20 schools where the survey was conducted. The bar chart above shows how each school reacted, 18 out of 20 showed awareness while the remnant 2 did not.

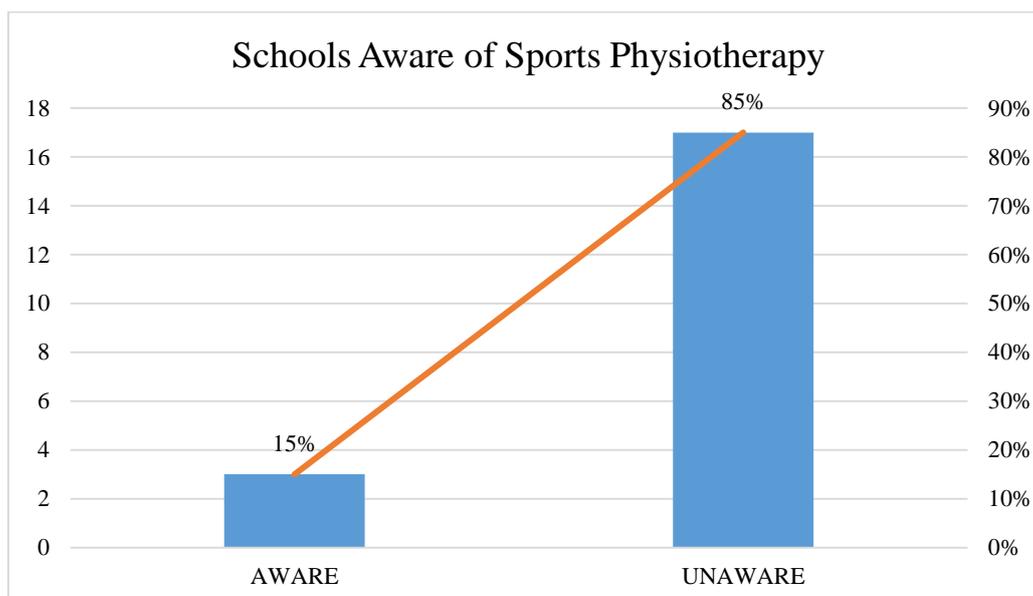


Figure 2. Awareness of sports physiotherapy

The above shows the statistical representation of the data collected from 20 schools to understand the level of awareness of sports physiotherapy. The survey was conducted on 20 schools and 17 of them were unaware while the remnant 3 had a level of knowledge.

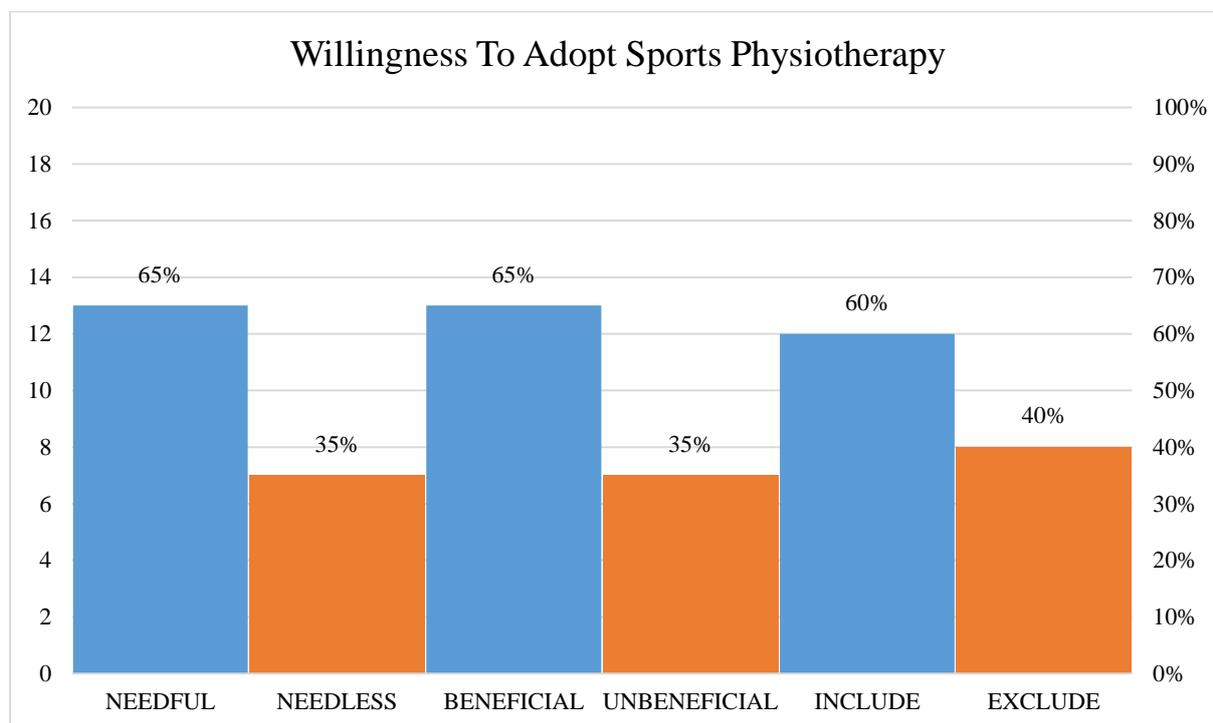


Figure 3. Willingness to adopt sports physiotherapy

The representation above describes the different schools' reactions towards sports physiotherapy. Out of 20 schools, 13 found sports physiotherapy needful in their school and while the remaining 7 saw it needless.

Regarding its benefit to students in injury prevention, about 13 schools stated it would be beneficial while the rest didn't recognize its benefits.

As seen above too, 12 schools were willing to include sports physiotherapists as part of team members during sporting activities while the remaining 8 choose to exclude.

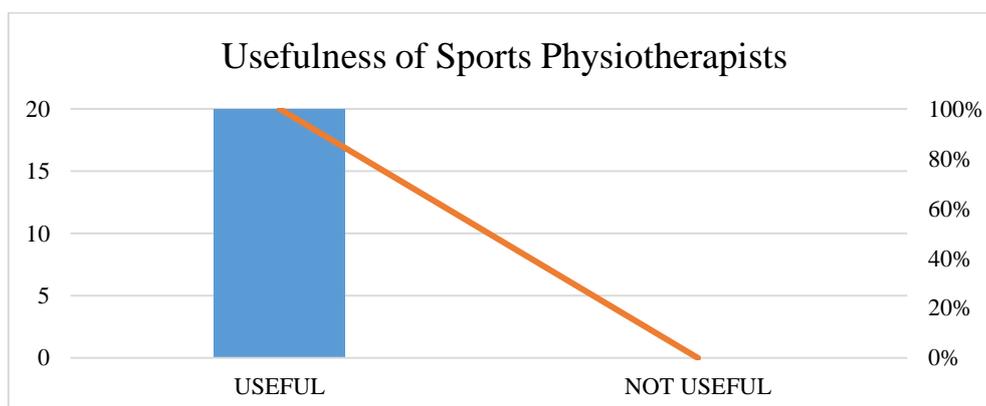


Figure 4. Usefulness of sports physiotherapy

From the above chart, all 20 schools noted that physiotherapy and sports physiotherapy were useful in school sports.

Discussion

Insight drawn from the survey revealed the different schools' reactions to the field of physiotherapy and sports physiotherapy. The results for the first section of the questionnaire and research questions which deals on the level of awareness of physiotherapy and sports physiotherapy show that 90% of the schools were aware of what physiotherapy is and some of their roles while 10% lacked prior knowledge of physiotherapy. The results further show that 85% of the schools had no prior knowledge of sports physiotherapy while the remnant 15% understood its roles and duties in sports activities. From this result, it was concluded that schools in the Enugu metropolis have very minimal knowledge of sports physiotherapy and their roles in sports activities, but they possess basic knowledge of physiotherapy as some have had personal experiences.

According to data realized from the survey, it was observed that different schools had different reactions towards sports physiotherapy. Out of 20 schools, 13 found sports physiotherapy useful in their school and indicated needs it could meet while the remaining 7 felt its need had been met by coaches and they also had little or no injury occurrences.

Considering its benefit to students in injury prevention, about 13 schools stated it would be beneficial to them and assist in injury prevention and management while the rest didn't recognize its benefits. Most of the schools that did not see its benefit were mostly private schools as they alluded to having experienced coaches capable of handling and managing injury cases, so they objected the benefits of sports physiotherapy.

12 schools were willing to include sports physiotherapists as part of team members during sporting activities and referred to their only limitation as funding, while the remaining 8 felt it would be unnecessary to include sports physiotherapists as they are very close to and are affiliated with various hospitals, participate in less injurious sports, and have little or no injury cases.

The percentages of positive responses based on the 3 fields – need in school, the benefit derived and reasons to include or exclude was represented as 65%, 65%, and 60% respectively this percentage had a mean value of 63.3% as the percentage of positive feedback received from the total schools investigated, while the percentages of negative responses were as follows 35%, 35%, and 40%, with a mean score of 36.6% as the value of negative feedback received.

Most of the positive responses of inclusion came from the public schools being that the number of student participating in the sports are much as a result of their increased population and there are no experienced or qualified coaches to coordinate the sports and help manage and prevent injuries. So they all had reasons for inclusion with limitation being government funds.

From this data, it is easy to conclude that the majority of the schools in the Enugu metropolis have a positive response towards sports physiotherapists and are very willing to include or adopt sports physiotherapists in school-based sports provided some limitations like funding can be met.

The last question on the questionnaire served to substantiate the kind of perceptions schools in the Enugu metropolis had concerning sports physiotherapists, the results of that analysis were 100% positive. The schools made upbeat and irrefutable remarks about sports physiotherapists based on knowledge gained about them and how they their role within and outside school-based sports.

This shows that they appreciate sports physiotherapists and are very receptive to the idea of including them in all school-based sporting activities.

Conclusion

This analysis made explicit the fact that coordinators, sports coaches, PE teachers, and students lack accurate knowledge of physiotherapy and its usefulness in the prevention and rehabilitation of sports injuries amongst students.

Many lacked the most minor of details about sports physiotherapy; its existence, practice, and inclusion in sports activities. The assessment led to the interpretation that some of them were aware of physiotherapy as a profession, its scope of practice, and equipment used. But at large they did not recognize its value in injury prevention, especially in school sports. This led to the poor uptake of physiotherapists in schools. Financial constraints too played a role in the absence of physiotherapy in the school sports environment. It is a little difficult for government-sponsored schools to retain physiotherapists permanently especially since there's a scarcity of them and the cost of retaining those keeps accruing. Since most of the PE teachers and sports coaches have a level of awareness of physiotherapy it would not be too difficult to include physiotherapists as part of the school sports sector or inculcate physiotherapy practices in them employing training workshops. Some of them usually refer sports injury cases to physiotherapists when they are at more crucial stages, but it is paramount that they understand the need for early identification of some of these problems as well as preventive measures. This further creates a need to raise awareness among school sports coaches and PE teachers of the potential role that could be played by the physiotherapist in both training games and competitive sports. Training matches offers physiotherapists an opportunity to implement preventative strategies, educate students, and for screening students for various functional or biomechanical deficits that predispose them to injuries (Chiwariidzo & Msiska, 2015; Swinth, 2002; Sandler, 1997; Rapport, 2002).

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