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EDITED BY:

VERONICA IGBANUGO & ADEMOLA O. ABASS

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Editorial

According to the World Health Organizations world report on disability, there are more than a billion people with disabilities worldwide, many of whom face substantial barriers to participating in physical activity. Engaging in a healthy lifestyle with a disability can be a daunting task. Lack of exercise is a serious public health concern for all people, but people with disabilities are at much greater risk of the serious health problems associated with physical inactivity. Generally, adults with disability are said to be twice as likely to be physically inactive than were those with no disability. Article 30 of the United Nation's Convention on the Rights of Persons with Disabilities states that, adults and children with disabilities must have access to recreational, leisure, and sporting activities in both inclusive and disability-specific settings. The outcome of inclusive physical activity communities is a society that respects and values the rights of all to have equal access to physical activity.

The 2011 conference was targeted at what can be done to promote inclusion of people with disabilities in physical activity initiatives. Many papers published in this edition of the JONASSM were targeted at factors influencing physical activity and exercise participation for people with disabilities, barriers and opportunities available to special people in recreation, leisure and sports, and health, wellness and fitness issues related to people with disability. The editorial team appreciates all contributors and other members of NASSM for your unflinching support in sustaining the legacies of our great association.

Prof. V.C. Igbanugo.
Dr. A.O. Abass

on

Journal of Nigeria Association of SPORTS SCIENCE &MEDICINE

GUIDELINES FOR AUTHORS

The Journal of Nigeria Association of Sports Science and Medicine is the official publication of the Nigeria Association o Sports Science and Medicine. A blind review process is rigorously followed. Normally I authors submitting manuscripts are expected to be currently registered members of NASSM. Manuscripts from non-members are also considered by the editor for review.

The following guidelines are to assist authors in preparing manuscripts to be submitted and considered through review and editorial processes.

Language

- Submit all manuscripts in English

Topic

- Subject matter from all areas of health, physical education, recreation, sport, and dance, interpreted in the broadcast manner possible.
- Report of research studies or project should include a section on practical implications and applications of the study or project.

Manuscript Preparation

- Use APA format being sure it is employed consistently throughout the manuscripts.
- All manuscripts must be computer generated, double spaced, with 1" margins, and pages numbered.
- Incorrectly prepared manuscripts will be returned without review to corresponding authors.
- Prepare a title page containing each author's name, position, affiliation, address and telephone numbers, and e mail address. This is the only page where identifying information is to appear.
- For multiple authorship, identify which author should receive correspondence from the editor.
- Follow the title page with the abstract, and then the full content of the manuscript. These pages are to contain n information identifying the author(s).
- Try to make the manuscript no longer than 8 to 12 double-spaced pages -these make the best and most appropriate length articles.
- Include an abstract of between 100 and 200 words. The abstract should be a succinct summary of the information presented in the article.
- Receipt of manuscript is acknowledged to corresponding author by editor.

Submission Process

- Submit relevant pictures to give greater impact to your manuscript-black and white prints are preferred although clear color prints, slides, and digital pictures can be used.
- Submit three computer generated double-spaced copies of your manuscript and abstract. Include one copy of t}, manuscript and abstract on a virus-free floppy computer diskette in M5-Word Format. If possible, also send a material in the form of an e-mail attachment (Ms-Word Format).
- Corresponding author is notified of status of manuscript as soon as recommendations are received from reviewers. This process may take longer than might be expected since reviewers are located throughout tl1 world.
- Order of manuscript acceptance and publication is not the same since many factors must be considered for each issue.
- Lead author receives two copies of the issue in which his/her article is published.
- Send manuscripts and direct any correspondence to the attention of the Managing editor. Prof. V.C. Igbanugo Dept. of Human Kinetics and Health Education, University of Ibadan, Ibadan. (Adapted from ICHPER.SD Journal)

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CONTENT

Journal of Nigeria Association of SPORTS SCIENCE &MEDICINE

SPORTS INJURY PATTERNS AMONG NIGERIAN ELITE PARA-SPORTS ATHLETES

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Abstract
This retrospective study investigated pattern of sports injury among Nigerian elite para-sports athletes. It focused on types of sports injury sustained, the parts of the body affected and intensity of the injuries. The participants of the study included 47 male and female parasports athletes who had participated in national championship and/or represented Nigeria in international competitions. A self-developed structured questionnaire with r-value of 0.78 was validated for the purpose of data collection, and the data collected were analysed using simple percentage and component bar chart. Findings showed that the types of sports injury sustained by the athletes include, sprain, strain, dislocation, fracture, muscle cramp and wound; and the parts of body affected by the injuries are majorly the shoulder joint, wrist, arm/elbow region and the ankle. The intensity of the sports injury sustained was mainly moderate injuries, but there were also minor and major sports injuries.

Introduction

The idea of people with disability getting involved in sport and physical activity is not so unpopular in recent time. According to Sports and Development Organisation [2011], in many countries, opportunities exist from the grassroots to elite levels for people with disability to showcase their abilities in sport and physical activity. Webborn, Willick and Reeser [2006] opined that the fact that injuries represent an unfortunate and seemingly unavoidable consequence of sports participation is no less true for athletes with disabilities than for able-bodied athletes. Yet, despite the growing awareness and popularity of sports for the disabled, a relative dearth exists of published researches devoted to understanding the injury patterns and risk factors for injury among elite disabled athletes.

Previous studies have investigated the frequency and types of injuries in athletes with disabilities, some of them have focused on risk factors that influence the frequency and types of injuries [Patatoukas, Farmakides, Aggeli, Fotaki, Tsibidakis, Mavrogenis, Papathanasiou, & Papagelopoulos, 2011; Ferrara & Buckley, 1996]. According to Patatoukas et al [2011], a study measured and described the prevalence and incidence of injuries that occurred in wheelchair athletes. The study reported that 33% of the injuries sustained by disabled athletes were soft tissue injuries and most of the responding athletes (72%) reported at least one injury during their participation in sports. The majority of injuries were associated with wheelchair track (26%), basketball (24%) and road racing (22%). In another study, Patatoukas et al [2011] observed that 51% of the injuries sustained by the 151-member 1988 Canadian Paralympic team were musculoskeletal, 49% were acute, and the shoulder, low back and knee were the most common injured regions.

Parasports which are sports played by persons with disability, are no longer new in Nigeria as athletes of this category have been representing the nation in various international competitions [Aiyejana, 2009; Ugborgu, 2003; Ugborgu & Ogunbayo 2003]. The Nigerian parasports athletes are consistent and committed to good performance for the nation at every international outing. The performance at the Beijing 2008 Summer Olympic Games is a testimonial; where the mainstream athletes were unable to win a gold medal [Olympic IT, 2011], the parasports athletes won 4 gold, 4 silver and a bronze [Baroka, 2008]. In another recent international competition [3rd Faaz International Power lifting Championship in Dubai, UAE 2011], the Nigeria contingent won various medals [Babarinsa, 2011].

It is essential that athletes of such high profile are given adequate attention especially in the area of injury prevention. Creating a database on types of injury, frequency, parts of body affected and intensity is a major tool for prevention of future sports injury [Dansu, 2011; Johnson, 2007]. This retrospective study was therefore designed delve into pattern of sports injury among Nigerian elite parasports athletes. The primary focus was on:

i. the type of sports injury sustained by the parasports athletes;
ii. the parts of the body affected by the sports injury sustained; and
iii. the intensity of sports injury sustained.

Methods

Research Design

The research design that was adopted for the purpose of this study is the ex-post-facto design. The design is appropriate because the population of the study is a naturally occurring group, and the study was interested in "after the fact" of sports injuries among the group.

Participants

The population of the study was all Nigerian elite parasports athletes who had at one time or the other represented states or the nation in national and international competitions. Out of these, 47 participants that comprised of 31 [66%] males and 16 [34%] females were purposively selected for the study. Of these participants, 13 [27.7%] of them were below the age of 30 years, while 23 [48.9%] were within the age range of 30 to 40 years. The rest of the participants [23.4%] were above the age of 40 years. Only 12 [25.5%] of the participants had represented Nigeria in International competition.

Table 1 shows the distribution of the participants by sports

Table 1

Frequency and Percentage Distributions of Participants by Sports

Sports	Frequency	Percentage
Power Lifting	24	51.1
Wheelchair basketball	11	23.4
Athletics	05	10.6
Table tennis	03	6.4
Swimming	04	8.5
Total	47	100

Table 1 shows that power lifting athletes were of the highest percentage [51.1%] in this study. This is followed by wheelchair basketball [23.4%], and table tennis had the lowest percentage [6.4%].

Instrumentation

A self developed questionnaire titled ***Questionnaire on sports Injury among athletes [QSIA]*** was used for data collection in this study. The questionnaire has two sections. Section A sort information on demographic data of the participants, which include their gender, age, sporting/international experience and sports of participation. Section B dealt with data on types of sports injury sustained by the athletes, the parts of the body affected, events of the injury and severity of the injury. Copies of the instrument were served to three experts in physical education and sports science for validity; the questionnaire was thereafter subjected to test-retest method of reliability test that gave r value of 0.78.

Administration of the Instrument

With the aid of three trained research assistants, copies of the validated questionnaire were administered to the participants of this study during the 17th National Sports Festival held [Garden City Games 2011] in Port-Harcourt, Rivers State Nigeria. The participants were visited in their various venues of event, and the copies of questionnaire administered to them were retrieved immediately to avoid loss. Of the 51 copies that were administered, 92.2% were retrieved, and this is considered adequate for the study.

Data Analysis

The data collected for the purpose of this study were coded and analyses using simple percentage and pictorial analytical tool of component bar chart were used to further describe the results.

Results

Table 2 presents types of sports injury sustained by the participants

Table 2

Frequency and Percentage Distributions of Injuries by type

Injury	Frequency	Percentage
Fracture	09	12.0
Sprain/Strain	28	37.3
Dislocation	23	30.7
Muscle cramp	04	5.3
wound	11	14.7
Total	75	100

Result presented in table 2 shows that 75 sports injury were reported by participants in this study, and sprain/strain recorded the highest percentage [37.3%]. This is followed by dislocation [30.7%]; and muscle cramp recorded the lowest percentage [5.3%].

Figure 1 presents the parts of the body affected by the sports injuries reported in this study.

Figure 1: *Component bar chart on body parts affected by sports injury*

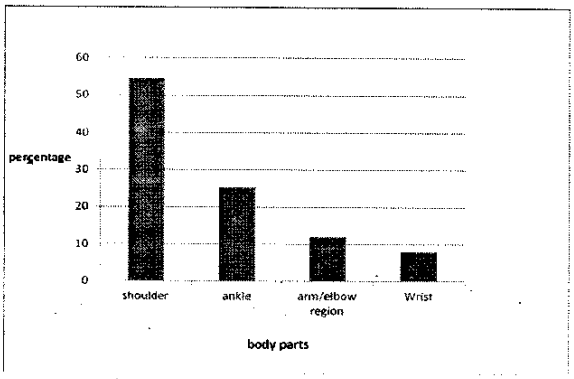

Figure 1 shows that injuries to the shoulder recorded the highest percentage [55%] while the wrist had the lowest percentage [8%].

Table 3 presents results on events that athletes were involved in while the injuries were sustained.

Table 3

Frequency and Percentage distributions of injuries by event

Event	Frequency	Percentage
Training session	15	20.0
National Competition	37	49.3
International Competition	23	30.7
Total	75	100

Table 3 shows that most of the sports injuries sustained by the participants were during competitions; 49.3% national competitions, and 30.7% international competitions.

Table 4 presents severity of sports injuries sustained by athletes. Severity of injury is used as defined by Ferrara and Buckley [2010]. They defined severity as number of days athletes spent off active participation as a result of sports injury. The cut off is as follows:

0 – 7 days missed = minor injury

8 – 21 days missed = moderate injury

22 0r more days missed = major injury

Table 4

Frequency and percentage distributions of injuries by intensity

Intensity	Frequency	Percentage
Minor	22	29.3
Moderate	35	46.7
Major	18	24.0
Total	75	100

Result in table 4 shows that the highest percentage of sports injury reported by the participants [46.7%] is moderate [8 – 21 days missed], while major sports injury [22 days or more missed] recorded the lowest [24%].

Figure 2 presented percentage distribution of types of injury by part of body they affected:

Figure 2: *component bar chart on types of injury by body parts affected*

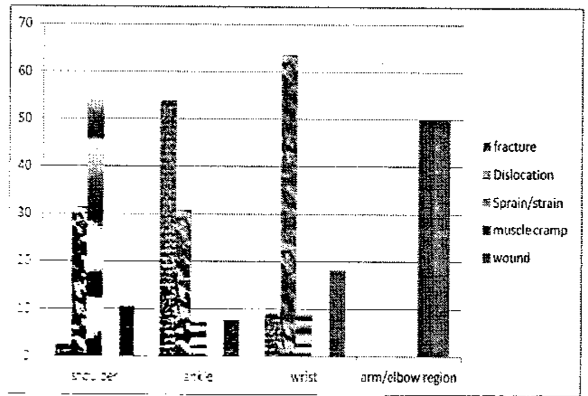

Figure 2 shows that 4 types of sports injuries were recorded for shoulder, and the most frequent among all are sprain /strain [55.3%], followed by dislocation [31.6%]. For the ankle, fracture recorded the highest percentage [53.9%], and dislocation is the commonest sports injury at the wrist [63.6%].

Discussion

The findings of this study shows that sprain, strain and dislocation are the most frequent sports injuries sustained by the parasports elite athletes [see table 2], and mainly to the shoulder joint [see figure 1]. These are mainly body joint-related injuries, and it could be as a result the nature of the sports in which the athletes are involved. High percentage of those who participated in this study were into power lifting; whose performance is dependent on flexible joints of the upper limb and high level of strength in related muscles. Ferrara, Buckley and McCann [1992] gave a similar report in a cross-disability retrospective injury survey of parasports athletes. They reported that 32% of the respondents had at least one sport-related injury, and shoulder and arm/elbow region injuries accounted for 57% and 53% of total injuries. In addition Ferrara, Buckley and McCann [1992] reported that 63 of the 128 reported injuries in 319 athletes from different disability organizations were sprains and strains. The findings of this study further show that high percentage of the sports injuries sustained were moderate [see table 4], and were sustained during competitions [table 3]. These findings are worrisome since 8 to 21 days of non-participation during competitions is a great loss. Ferrara and Buckley [2010] gave a similar report of 29% moderate and 19% major injuries among athletes with disability. Injury is one of the major reasons why people quit sports; therefore, it is very essential to employ every means of preventing sports injury, especially [illegible] sportsmen. Several authors [illegible] 2006; Nader, 2005; Okuneye [illegible] and Ogungbangbe, [illegible]

and Ososanya, 1991] have emphasized the need to pay serious attention to various strategies for preventing sports injury.

Conclusion and Recommendations

Based on the findings of this study, it is concluded that Nigerian elite parasports athletes sustained sports injuries during their training and competitions, but higher percentage of the injuries were sustained during competitions. The types of sports injury sustained by the athletes include, sprain, strain, dislocation, fracture, muscle cramp and wound; and the parts of body affected by the injuries are majorly the shoulder joint, wrist, arm/elbow region and the ankle. The intensity of the sports injury sustained was mainly moderate injuries, but there were also minor and major sports injuries.

It is therefore recommended that proper attention should be given to injury prevention among the parasports athletes during training and competitions. Since the types of injury sustained by these athletes are musculoskeletal in nature, prevailing preventive strategy should focus on specific conditioning along with preexercise stretching and warm-up as well as postexercise cool-down and stretching. Musculoskeletal injuries, as well as fatigue and exhaustion, can be reduced by assuring adequate nutrition and fluid status, therefore, there should be instruction in the use of proper protective and adaptive equipment and clothing. In addition, the location where the sporting event is to be held should be evaluated before each training and competition for potential hazards, such as falls. It is further recommended that there should be a follow-up to this study to create a lager database for sports injury among the Nigerian parasports athletes.

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