

PREVALENCE OF HAMSTRING STRAIN AMONG THE YOUNG FOOTBALLERS AT BKSP

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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation

entitled-

Prevalence of Hamstring Strain among the young footballers at BKSP

Submitted by **Myeen Uddin Ahmad**, for the partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).

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Declaration

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study. I would be bound to take written consent from the Department of Physiotherapy of Bangladesh Health Professions Institute.

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Abstract

Purpose: To evaluate the prevalence of Hamstring strain among the young footballers at BKSP. *Objective:* To identify the prevalence of Hamstring strain among the young footballers at BKSP, to expose the injured participants age and association of different factors with age. *Methodology:* A quantitative cross-sectional study design was chosen to achieve the objectives of the study. 80 subjects were selected through convenience sampling technique from the injured female athletes who trained in BKSP by using a structural questionnaire to collect data. *Results:* The result of the study demonstrates that, 42.5% (n=34) footballers were affected by hamstring strain and other 57.5% were affected by other injuries, most commonly affected age is 19 which has 26.30% injury rate and 18 years which has 21.30 % rate of hamstring strain injury, there was an association between age and morning soreness which was found significant by testing chi square value. The value was found 0.039 which was below 0.05 so the value was significant. The prevalence of feeling of pain was 62%(n=56) never felt pain 25%(n=20) felt pain often. *Conclusion:* The vulnerable age range is over 18 or 19 were frequent hamstring strain occurring among footballers and noticeably flexibility and overuse are the key issues to cause of injury. Health education and perform regular physical activity along with physiotherapeutic exercises can prevent injury.

Keywords: Prevalence, Sports Injury, Young footballers.

Acronyms

BHPI : Bangladesh Health Professions Institute

BKSP : Bangladesh Krira Shikkha Protisthan

BMRC : Bangladesh Medical Research Council

DOMS : Delayed Onset Muscle Soreness

HSI : Hamstring Strain Injury

IAAF : International Association of Athletics Federations

IRB : Institutional Research Board

MRI :Magnetic Resonance Imaging

ROM :Range Of Motion

SPSS : Statiatical Pacage of the Social Sciences

TTRTP : Time To Return To Play

WHO : World Health Organization

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CHAPTER-I INTRODUCTION

1.1 Background

Injuries are the real dangers to every one of the competitors of the world. As we notice in day by day daily paper sports damage causes extraordinary enduring both the male and female competitors everywhere throughout the world. Numerous awesome competitors were not able take an interest in the immense occasion on account of being harmed, we find on the planet competitor history. This issue is more intense among Bangladeshi competitors (Fuller, 2006).

Total populace has expanded in an awesome number, prominence of prominent recreations additionally expanded, therefore an ever increasing number of individuals are getting to be noticeably inspired by games of games. The quantity of games establishment are developing, they are masterminding continuous game occasion. Before taking part in a game occasion member requires overwhelming preparing; amid this instructional meeting, and keeping in mind that they take part, this game competitors begins understanding the need of physiotherapy to beat the harm and keep body fit for the actions (Domingues, 2013).

Football, as the most well known game on the planet and another developing industry, immeasurably affects human life. For instance, the World Cup 2006 in Germany charmed 3,359,439 observers, who viewed coordinates in 12 sublime stadiums. Besides, an expected overall group of onlookers were more than 3 billion. In the interim, World Cup 2006 impacted an inn, retail and general utilization, which altogether expanded amid the title. Amid and after this occasion, trillions of data and information were gathered, put away, recovered, appropriated, thought about and dissected, for example, plan arranging, picking a place for 64 matches, a composite 12 stadiums organizing, tickets pitching to 3,359,439 onlookers, inns indicating for groups from 32 nations, TV assentions marking, matches comes about recording, players information numbering, refs picking, reward setting, supports exercises, and so on. (Yang, 2011).

Hamstring strains are common in athletes participating in high speed running or activities requiring extremes of range of motion (ROM) such as football, basketball, cricket etc posterior thigh strains were the most common diagnosis (16%) in a sports injuries surveillance study of the 2007 IAAF (International Association of Athletics Federations) World Athletics Championships. Possibly, anatomical reasons (spanning of the hip and knee joints) make them prone to injury and it is not uncommon as prolonged absence from training and re injury. For prescribing appropriate rehabilitation and predicting recovery time the characterization of the severity of muscle strain is important (Hägglund et al., 2011).

One of the most common problem in football players is hamstring strain and it is reported as to represent 20–37% of all time-loss injuries at men’s professional level and 18–23% at the amateur level. Out of different injury types muscle injuries are a heterogeneous group and somewhat diffuse terminology. Traditionally, they simply can be categorised as delayed onset strains (distraction injuries), muscle soreness (DOMS) and contusions (compression injuries). However, muscle injuries were classified into functional and structural-mechanical injuries, where functional injuries are minor fatigue-induced or neurogenic injuries causing hardening of the muscle, while structural-mechanical injuries are muscle tears or strains of muscle fibres or bundles. The first step in injury prevention is to evaluate the epidemiology of injuries and establish injury risk and injury circumstances. Although muscle injuries occur frequently, but understanding of the factors that predispose players to muscle injury is limited. Prospective epidemiological studies of this type can be expected to provide the benchmark data for establishing injury prevention and rehabilitation programs. Unfortunately, few prospective studies have been carried out that both involve senior professional footballers and provide the level of detailed information on muscle injuries that is required for this purpose (Ekstrand et al., 2011).

Ekstrand et al., (2006) studied male professional players in Europe and found that the risk of injury was similar when playing on artificial turf and natural grass (Fuller et al., 2007) found no major differences in the incidence, severity and nature of injuries when studying

male and female amateur players from colleges and universities in USA. Steffen et al. (2007), studied young players in Norway and found a similar risk of acute injuries on artificial turf as on grass. It is established that on grass surfaces the incidence and pattern of injury among elite female players are slightly different from those of elite male (Hägglund et al., 2008).

Mechanisms of hamstring injuries have been mainly studied in sprint actions, but Askling et al reported a series of elegant and interesting articles where different types of hamstring strains related to specific patterns of injury were studied. They reported that hamstring injuries related to sprint actions affected mainly the proximal part of the biceps femoris, whereas overstretching injuries mainly involved the free proximal portion of the semimembranosus muscle (Mendiguchia, 2011).

1.2 Rationale

Now a day's and before football become one of the most popular way of recreation to the young generation. Young football players play it very often and them suffering from different types of sports injury. Although some studies have dealt with common sports injuries among football players in other countries, the exact nature and prevalence of these injuries has not been studied before in Bangladesh. This study was formulated to fill the gap of knowledge in this area. The aims of the study were to assess the hamstring strain among the young football players at BKSP. After publishing this study awareness will be increased and may provide proper recommendation for every single risk which will be helpful for the players. Beside this it was help to established proper guideline and proper technique. Young football players will be informed about the percentages of hamstring strain injury from this study thereby they could take necessary steps to get prevention from this injury. This study was also help to discover the lacking area of young football players especially about their posture before doing any activities and during playing. Beside this it was helpful to professional development which is mandatory for current situation. So physiotherapist can help them to teach and give proper education about the posture the condition and preventive methods and it helped to discover the role and importance of physiotherapy in every sector of Bangladesh.

1.3 Research question

What are the prevalence of hamstring strain among the young football players at BKSP?

1.4 Aim

To explore the prevalence of hamstring strain among the young football players at BKSP.

1.5 Objectives

General Objective

To find out the prevalence of hamstring strain among the young footballers at BKSP.

Specific Objectives

1. To estimate the prevalence of hamstring strain among the young football players at BKSP.
2. To determine the proportion of injury.
3. To expose the age range for the hamstring strain injury.
4. To explore the co relation between age and the other symptoms related with hamstring strain injury.

1.6 Conceptual Framework

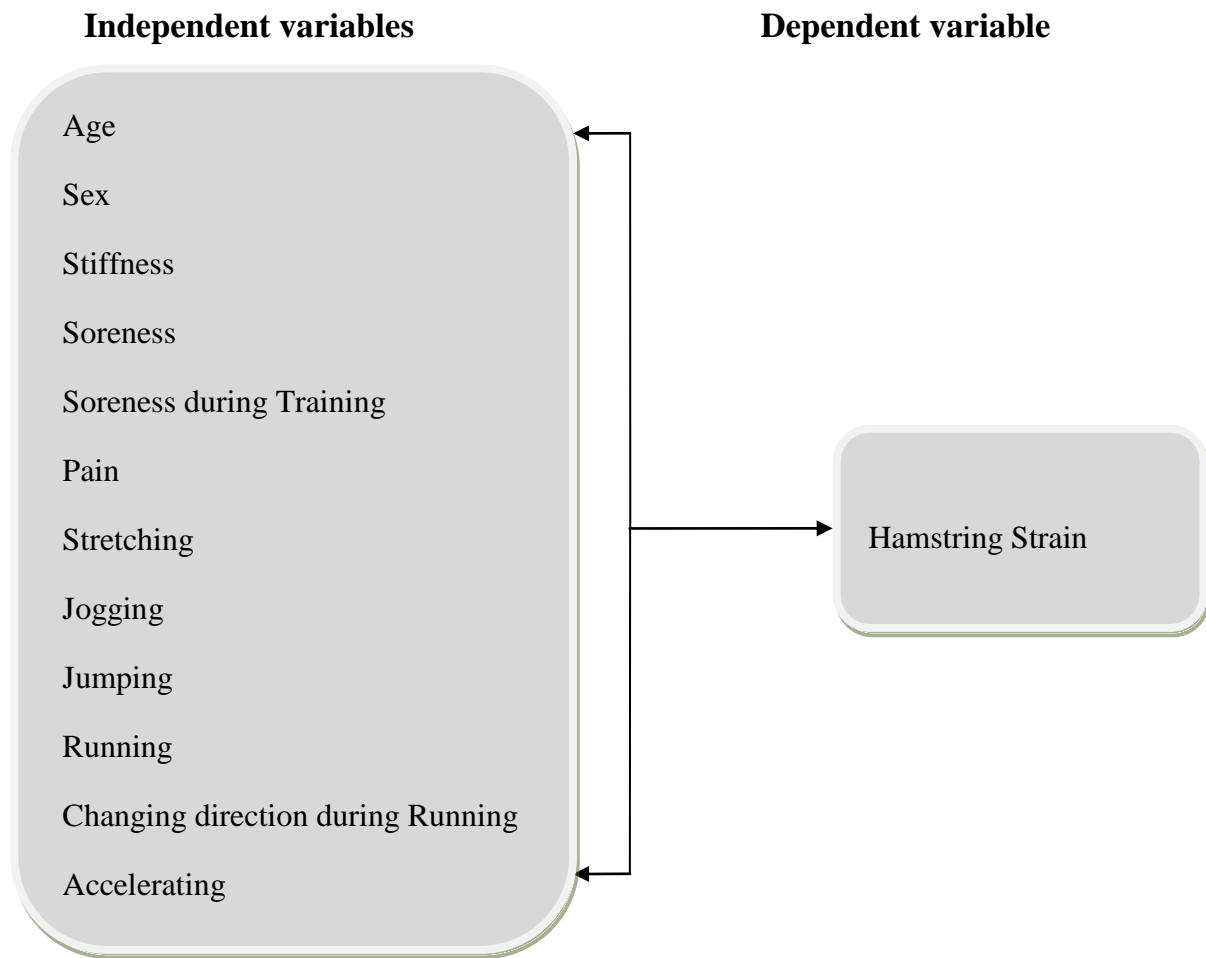


Table 1: List of Variables

1.7 Operational definition

Prevalence

The degree to which something is prevalent, especially the percentage of a population that is affected with a particular disease at a given time.

Injury

Common types of physical injury are broken bones, soft tissue lesion (laceration, abrasion, contusion) poisoning and burns. Injury results from harmful contact between people and objects, substances, or other things in their surroundings .Sports injuries result from acute trauma or repetitive stress associated with athletic activities. Sports injuries can affect bones or soft tissue (ligaments, muscles, tendons).

Sports injury

Sports injuries are injuries that occur in athletic activities. In many cases, these types of injuries are often due to overuse or acute trauma of a part of the body when participating in a certain activity.

Football

Football is a game in which two opposing teams of eleven players defend goals at opposite ends of a field having goal posts at each others end, the object being to gain possession of the ball and advance it by running or passing plays across the opponents goal line or kick it through the opposites goalposts.

BKSP

Bangladesh Krira Shikkha Protisthan is an autonomous organization and its functions are directly under the ministry of youth and sports. Affairs of general direction and administration of the institute rest with ‘The board of governors’ headed by the ministry of youth and sports. The aim of the institute is to find out the promising sports talents among young boys and girls in the country to provide adequate facilities and opportunities for their intensive training on scientific lines along with scope of general

education up to higher secondary level. Long time training programmed provided in the ten sports discipline namely football, basketball, boxing, cricket, gymnastics, hockey, shooting, swimming and tennis.

CHAPTER-II LITERATURE REVIEW

Hamstring Strain injuries (HSIs) are common in both recreational and elite athletes and incidence rates have not declined in recent times. Depending on the severity of the injury, the athlete may require considerable time off from sport (Gabbe, et al., 2006).

Hamstring tears traditionally have been classified as mild (grade I), moderate (grade II), and severe (grade III). Grade I injuries signify a small tear of the muscle or tendon, minor swelling, and pain with no or minimal strength loss and restriction of movements. Grade II strains are more complete partial tears, with definite loss of strength and pain with greater damage of muscle. Grade III tears are complete ruptures of the musculotendinous unit with a complete loss of muscle function, and they typically develop a large hematoma. Rates of hamstring muscle injury vary by differing injury definitions and sporting populations. Prevalence rates range from 8% to 25%, with return to sport occurring from 2 weeks to never, with large variability based on severity. Hamstring injuries alone account for between 6% and 29% of all injuries reported in Australian rules football, rugby union, football, basketball, cricket and track sprinters revealed by epidemiological studies (Mendiguchia, et al., 2012).

Possible additional injury and non-optimal healing of the hamstring muscle-tendinous complex all are included in the term recurrence (Koulouris et al., 2007). Recurrent hamstring injury rates generally are higher than initial injuries. Most studies found rates of reinjuries for the ensuing sporting season higher than 30% and some up to 60%-70% (Prior et al., 2009).

Moreover, 17.1% of all injuries, male compared to female athletes represent higher risk in hamstring injuries (Edouard et al, 2016).

Hamstring muscle strain injury is the most common and prevalent injury in Australian football. At the top level, in a professional football team of 25 players, about 7 hamstring injuries per season can be expected. Due to frequent occurrence of these type muscle

strains there are significant loss of time from competition and have a high recurrence rate (12–43 %) (Petersen, 2005).

Hamstring injuries are also very common in English rugby. Brooks et al. (2006) reported an incidence of 0.27 hamstring muscle strain injuries per 1000 player training hours and 5.6 injuries per 1000 player. A prospective cohort study showed return-to-play (RTP) data for different types of muscle injuries in male elite-level football players in Europe scrutinizing 89 European professional teams were observed over 2001-2013 time period and among them hamstring injuries evidently 83% occurred to the biceps femoris, 12% affected the semimembranosus and 5% the semitendinosus. Recurrence rate was higher among biceps femoris injuries (18%) Hamstring strain injury has a very high recurrence rate. In English professional soccer, hamstring strain injury reoccurred in between 12% and 48% of the players (Ekstrand et al., 2011).

The consequences of a hamstring muscle strain depend on the severity of the injury. There is no standardized classification system for the severity of muscle strain injuries; however, different classification systems share a common categorization. Combining anatomical diagnosis, physical examination, ultrasound, and imaging, the severity of muscle strain injuries is generally categorized as Grade I: mild strain injury with minimum tear of the musculotendinous unit and minor loss of strength, Grade II: moderate strain injury with a partial tear of the musculotendinous unit and a significant loss of strength that results in significant functional limitations, and Grade III: severe strain injury with a complete rupture of the musculotendinous unit and is associated with severe functional disability (Petersen, 2005).

Components of the Musculoskeletal Physical Exam: Inspection – look for deformity, ecchymosis, muscle atrophy, palpation – feels for swelling/effusion, tenderness, warmth. Range of motion (ROM) – test for pain/disability with both active and passive motion. Manual muscle testing (MMT) – evaluate for weakness (and pain) by resisting muscle action. Special tests – check the integrity of a specific structure (ligament, cartilage, tendon, bone) by challenging its function or by “aggravating” the structure and reproducing pain. Neurovascular tests – In acute injury, rule-out nerve and vessel

damage, in overuse injuries, evaluate for associated or contributing neuropathy (Hagen, 2005).

The precise definitions of different grades may vary among specific classification systems. The averaged time losses for different grades of hamstring muscle strain injuries in European professional soccer are 17-10 days for Grade I, 22-11 days for Grade II, and 73-60 days for Grade III (Ekstrand et al., 2012).

Roget's II defines sports as, "Sports, athletic games or tests of skill undertaken primarily for the diversion of those who take part or those who observe them" (Roget's II, 2007). Touny defines sports as, "A sport is an activity requiring physical ability, physical fitness, or technique and strategy in which usually, but not always, involves competition between two or more people" (Hagen, 2005).

Hamstring strain are very common in soccer, representing up to 37% of all time loss injuries at men's professional level. In a recent study in European professional soccer it was shown that a club with a 25 player squad can expect 15 muscle injuries each season and that muscle injuries accounted for more than one-fourth of all lay-off time from injuries. Injuries to four major muscle groups of the lower extremity - hamstrings, quadriceps, and calf - comprise more than 90% of all muscle injuries in professional soccer (Hägglund et al., 2013).

The game of football has realized many benefits in regard to rule changes, improvement of equipment, improved medical care, and improved coaching techniques. The 1976 rule change that made it illegal to make initial contact with the head and face while blocking and tackling was the direct result of this research (Mueller & Cantu ,2011).

Grade III injuries can result in an avulsion fracture of the ischium, an avulsion of the ischialapophysis, or a pure avulsion of the hamstring tendons themselves, depending on the patient's age. The rare incidence of complete rupturing of the hamstring is often misdiagnosed as a simple "hamstring pull", resulting in improper treatment thereby

leading to the development of chronic pain and potential disability (Gidwani & Bircher, 2007).

Understanding risk factors for hamstring strain injury is critical for developing prevention and rehabilitation strategies. Many risk factors for hamstring muscle strain injury have been identified in the literature, however, only a few of these are evidence-based while the majority are theory-based. These risk factors can be categorized as modifiable factors and no modifiable factors (Clark, 2008).

Modifiable risk factors include shortened optimum muscle length, lack of muscle flexibility, strength imbalance, insufficient warm-up, fatigue, low back injury, and increased muscle neural tension. Non-modifiable risk factors include muscle compositions, age, race, and previous injuries. Injuries, as described in the literature, are not associated with TTRTP. For clinical practice, prognosis of the TTRTP in these injuries should better be based on clinical parameters according to (Moen et al., 2014).

A recent study on male professional footballers showed that hamstring strain represent more than 30% of all injuries and cause about one quarter of total injury absence. Over 90% of muscle injuries affected the four major muscle groups of the lower extremity; hamstrings, adductors, quadriceps and gastrocnemius. Injury to the hamstring muscle group is reported to be the most common injury subtype representing 12% of all injuries. This means that a professional male football team with 25 players in the squad suffer about 5 hamstring injuries each season, equivalent to more than 80 lost football days. When an injury has occurred, the medical staff faces pressure to return the player to training and matches as soon as possible. The diagnosis and prognosis of muscular injuries is normally mainly based on clinical findings, but radiological methods such as magnetic resonance imaging (MRI) or ultrasound (US) are commonly used as complementary examinations in order to confirm a diagnosis and provide a prognosis of lay-off times. Recent studies of Australian Rules football players with hamstring injuries have indicated that lay-off could be related to MRI findings such as the longitudinal length or volume of the injury (Ekstrand et al., 2007).

Injuries to the hamstring muscles are common within several sports including the different types of football. The majority of hamstring injuries occur while the athletes are running or sprinting . In elite football (soccer), 12–16% of all injuries are hamstring strains, which make this injury the most prevalent injury type. The incidence in football has been reported to be as high as 4.1 injuries per 1000 match hours (Häggglund et al., 2006). In addition to the high incidence, a common problem concerning this injury is the high risk of recurrence (Petersen et al., 2009).

In order to establish prevention programs it is important to identify risk factors associated with the occurrence of injury, preferably using analysis accounting for the multifactorial etiology of injury. Some, but not all, intrinsic risk factors identified for lower extremity muscle injury include previous injury, older age, poor flexibility, and decreased muscle strength or strength imbalances, but results from different studies are contradictory. Extrinsic risk factors have only been scarcely investigated, but match play has consistently been associated with an increased rate of muscle injury. Fatigue may be a component in the occurrence of muscle injury, since some studies have found that muscle injuries occur more frequently towards the end of matches. Finally, it has been shown that various match factors, such as the type of match, match location (home or away) and match result may influence general injury rates in professional soccer, but sub-analyses of lower extremity muscle injuries have not been reported (Häggglund et al., 2013).

Many young athletes initiate training and specialisation from a young age. The idea that participation in such training and competition may cause growth inhibition effects is still under debate. However, there is no evidence that intensive training in young athletes may affect, either positively or negatively, growth and maturation. Up to 30– 40% of all injuries in children and adolescents occur during football, but the rate of injury is lower in children than in mature adolescents . Nonetheless, given the aggressive over- scheduling of competitive events, some young athletes may be exposed to intense training for over 18 h per week . This training load may have negative psychological effects, resulting in body image distortions and subsequent low caloric intake or abuse of drugs to alter body shape. Overuse sports injuries are increased by training schedules of this magnitude .

Consequently, the beneficial effects of sport at a young age have to be balanced by injury risk (Maffulli et al., 2011).

Possible additional injury and non-optimal healing of the hamstring muscle-tendinous complex all are included in the term recurrence (Koulouris et al., 2007).

Recurrent hamstring injury rates generally are higher than initial injuries. Most studies found rates of reinjuries for the ensuing sporting season higher than 30% and some up to 60%-70% (Prior et al., 2009).

Hamstring muscle strain injury is the most common and prevalent injury in Australian football. At the top level, in a professional football team of 25 players, about 7 hamstring injuries per season can be expected. Due to frequent occurrence of these type muscle strains there are significant loss of time from competition and have a high recurrence rate (12–43 %) (Koulouris et al., 2007).

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The consequences of a hamstring muscle strain depend on the severity of the injury. There is no standardized classification system for the severity of muscle strain injuries; however, different classification systems share a common categorization. Combining anatomical diagnosis, physical examination, ultrasound, and imaging, the severity of muscle strain injuries is generally categorized as Grade I: mild strain injury with minimum tear of the musculotendinous unit and minor loss of strength, Grade II:

moderate strain injury with a partial tear of the musculotendinous unit and a significant loss of strength that results in significant functional limitations, and Grade III: severe strain injury with a complete rupture of the musculotendinous unit and is associated with severe functional disability (Petersen, 2005).

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Grade III injuries can result in an avulsion fracture of the ischium, an avulsion of the ischialapophysis, or a pure avulsion of the hamstring tendons themselves, depending on the patient's age. The rare incidence of complete rupturing of the hamstring is often misdiagnosed as a simple "hamstring pull", resulting in improper treatment thereby leading to the development of chronic pain and potential disability (Gidwani & Bircher, 2007).

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Walking through all the discussion and its result we have come to an end of discussion by now as it should. There are lots of available physiotherapy treatment techniques of hamstring strain based on the intensity, actual site, grade of injury etc. But if the injury is acute PRICE protocol should be the first choice and then subsequent rehabilitation, return to play and prevention of recurrence (Moen et al., 2014).

Askling et al., (2014) conducted a prospective randomized comparison of two rehabilitation protocols compare the effectiveness of two rehabilitation protocols after acute hamstring injury in Swedish elite sprinters and jumpers by evaluating time needed to return to full participation in the training process. Fifty-six Swedish elite sprinters and jumpers with acute hamstring injury, verified by MRI, were randomly assigned to one of two rehabilitation protocols. Twenty-eight athletes were assigned to a protocol emphasizing lengthening exercises, L-protocol, and 28 athletes to a protocol consisting of conventional exercises, C-protocol. The outcome measure was the number of days to return to full training. Re-injuries were registered during a period of 12 months after return. Time to return was significantly shorter for the athletes in the L-protocol, mean 49 days (1SD±26, range 18–107 days), compared with the C-protocol, mean 86 days (1SD±34, range 26–140 days). Irrespective of protocol, hamstring injuries where the proximal free tendon was involved took a significantly longer time to return than injuries that did not involve the free tendon, L-protocol: mean 73 vs. 31 days and C-protocol: mean 116 vs. 63 days, respectively. Two recurrent injuries were registered, both in the C-protocol. A rehabilitation protocol emphasizing lengthening type of exercises is more effective than a protocol containing conventional exercises in promoting time to return in Swedish elite sprinters and jumpers.

CHAPTER-III METHODOLOGY

3.1 Study design

This study aims to find out the most common sports injuries among the young footballers at BKSP. For this reason a quantitative research model in the form of a cross-sectional design will be used. Cross-sectional study design was selected because in this way it is possible to identify a defined population at a particular point in time. Through the cross-sectional study results can be easily compared among those of different ages, gender, or ethnicity. In other hand quantitative research method helps to use a large number of participants and therefore collecting the data objectively through this way data was reduced to numbers for statistical analysis in order to draw conclusion.

3.2 Study settings

As this is a survey of hamstring strain among the young footballers at BKSP, so study site was in BKSP, Savar, Dhaka. Samples were selected according to the inclusion criteria.

3.3 Population

Populations were the young footballers of BKSP of this study. A population refers to the members of a clearly defined set or class of people, objects or events that are the focus of the investigation. The population shares a specific set of characteristics or criteria that have been established by the investigator. The criteria of study population was determined from a literature review and the goals for the study. Selection criteria was established gradually as the assumption and theoretical base of the study unfolded.

3.4 Sample

Eighty samples were selected from the population for this study. Sample should represent the population as closely as possible. For survey research, it is better to get as many subjects as possible with the consideration of the size of the ideal population. Sometimes the sample size may be big and sometimes it may be small, depending on the population

and the characteristics of the study. There is no easy way of establishing the best size of sample since this decision depends very largely on the research which is being undertaken as well as on the investigator's knowledge of the relevant population's characteristics. Samples was selected by convenience sampling procedure, because the football players remain in various tournaments on national and international level throughout the year and in convenience sampling participants are chosen who can be studied most easily, cheaply, quickly and who was willing to participate in this study.

3.4.1 Sample size

Sampling procedure for cross sectional study done by following equation-

$$n = \left\{ \frac{Z \left(1 - \frac{\alpha}{2} \right)}{d} \right\}^2 \times pq$$

Here,

$$Z \left(1 - \frac{\alpha}{2} \right) = 1.96$$

P= 0.34 (Orchard and Seward, 2006)

q=1-p

=1-0.34

=0.66

d=0.05

According to this equation the sample should be more than 344 people but due to lack of accessibility and time the study was conducted with 80 young footballers by convenience sampling.

3.4.2. Inclusion criteria

1. Only male players was selected
2. Age group between 13-19 years
3. People who were regularly playing in BKSP
4. People who were willing to participate in the study
5. People who are injured.

3.4.3. Exclusion criteria

1. No female athletes were included.
2. People who are not willing to participate.
3. Footballers more than 19 years of age was not included.
4. Footballers less than 13 years of age was not included.
5. People who are not injured.

3.5. Data collection

Data collection is one of the most crucial parts of research. For this study data collection includes- method of data collection, materials used for data collection, duration and procedure of data collection.

3.5.1. Method of data collection

Data was collected by using a close ended structured questionnaire. Questionnaire was used because questionnaire is still a very popular and very useful technique of data collection within the health care area. Additionally the aim of the study was to identify the hamstring strain among the young football players of BKSP. So, it is easier to identify these problems by using questionnaires than any other methods. The strength of structured questionnaire is the ability to collect unambiguous and easy to count answer, leading to quantitative data for analysis. So, structured questionnaire is the most suitable way for data collection.

3.5.2. Materials used for the research project

Consent form, questionnaire, pencil and eraser, page, SPSS (Statistical Package for the Social Sciences) software to analyze data, Harvard Referencing (2016) and computer.

3.5.3. Questionnaire

For data collection English questionnaire was used. The samples of the study were the young footballers of BKSP. The questions of the questionnaire was closed ended questions, which was set up sequentially. In the questionnaire there were 17 questions. The questionnaire was set in such a pattern that was available in the field data. Thus it was tried to collect various information about the injuries of the basketball players and to find out and fulfill the objectives of the study. These questions includes: age, gender, stiffness of hamstring muscle, the injuries, soreness, pain, pain during running, accelerating, jogging, changing direction during running, braking speed after sprinting etc.

3.5.4. Duration of data collection

Data was collected within 4 weeks and the duration was 1st August 2016 to 1st September 2016. Data was collected carefully and maintained the confidentiality of the data. Each participant provided particular time to collect data. In general, each questionnaire took approximately 10-15 minutes to complete.

3.5.5. Procedure of data collection

Though there are several ways of collecting data, it was easy and reliable if the questionnaire is completed or filled up in the presence of the researcher.

3.6 Data analysis

The result of this survey was consist of quantitative data. The collected data was illustrated with bar graphs. By this survey a lot of information was collected. All these results will give a basic idea about the hamstring strains among the young footballers of BKSP. The results was calculated in percentages and descriptive statistics was presented, other statistical tests could not be used, as samples are small in number. Data analysis was the process of

systematically arranging and presenting information in order to search for ideas. The aim of the data analysis was to find out the meaning of the collected information. The study using descriptive statistics. Generally descriptive statistics are often uses in conjunction with survey methods. However the three most commonly used form of descriptive are: Measure of central tendency and Measure of dispersion, bar graph, histogram, pie chart and frequency polygon. Bar graphs are typically used to present nominal and ordinal data. It presents data in a series of vertical rectangle, with each rectangle representing the number of scores in a particular category.

3.7 Ethical consideration

For conducting this research, ethics committee have checked the proposal and allowed to carry out the research project. The formal permission was taken from the head of the physiotherapy department and the researcher met with the trainee duly obtained proper permission from the Director of BKSP. Data collection was started and complete within the allocated time frame. All the data was review in strict secure and maintained confidentiality. The appraisal files were strictly secured and it was not open in front others without researcher. All the participants and authority were informed about the purpose of the study, the process of the study and their written consent was obtained. All the interviews were taken in a confidential way to maximize the participant's comfort and feelings of security. The researcher has permission from the research supervisor, physiotherapy Department. The researcher is to ensuring the confidentiality of participants' information, sharing information only with the research supervisor. Proposal was submitted and prepared to the Institutional Review Board (IRB) and Bangladesh Health Professions Institute (BHPI) and approval was obtained from the board. World Health Organization (WHO) and Bangladesh Medical Research Council (BMRC) guideline was also followed to conduct the study.

3.8 Informed Consent

Before conducting research with the respondents, it is necessary to gain consent from the subjects. For this study interested subjects were given consent forms and the purpose of the research and consent forms were explained to the subject verbally. They were told that participation is fully voluntary and they have the right to withdraw at any time. They were also told that confidentiality was maintained. Information might be published in any presentations or writing but they were not being identified. The study results might not have any direct effects on them but the members of Physiotherapy population may be benefited from the study in future. They would not be embarrassed by the study. At any time the researcher was available to answer any additional questions in regard to the study.

CHAPTER-IV RESULTS

The purpose of the study was to find out the prevalence of hamstring strain among the young footballers at BKSP and to achieve this the result need to be calculated and analyze in a systematic way and results or analyzed data represent by bar graph and pie charts.

Prevalence of Hamstring strain

The bar chart shows that among 80 football players, 42.5%(n=34) was affected by Hamstring strain injury and other 57.5%(n=46) was affected by other injuries.

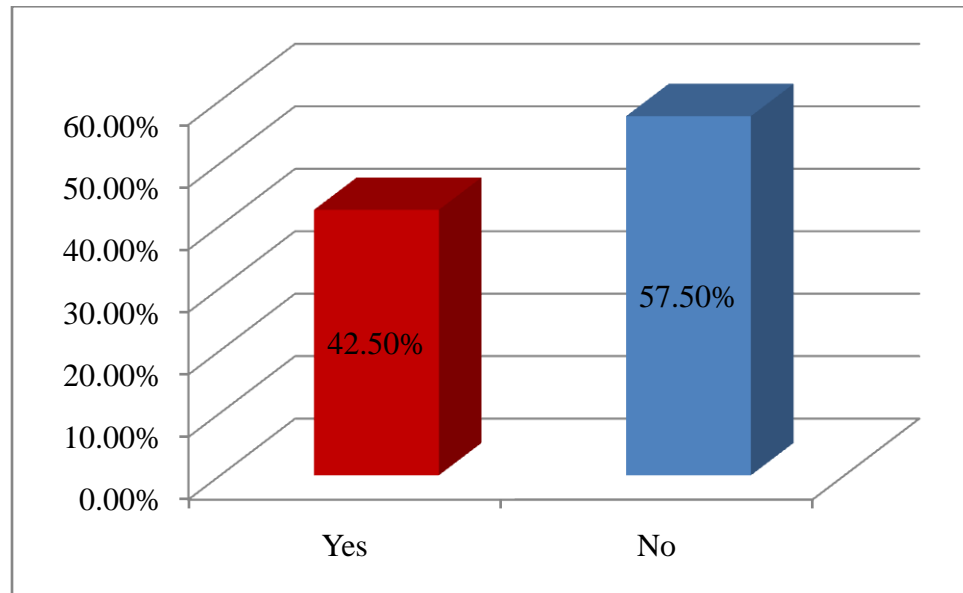


Figure-1: Prevalence of hamstring strain.

Age of the participant

The bar chart shows, among 80 participants the highest number of injured participants was 26.30% (n=21) and the that was found at the age of 18 years. After that 21.30%(n=17) was found at the age of 16 years, 17.50%(n=14) was at the age of 17 years, 15%(n=12) was found at the age of 19 years, 10% (n=8) was found at the age of 14 years and 5% (n=4) was found at the age of 13 and 15 years.

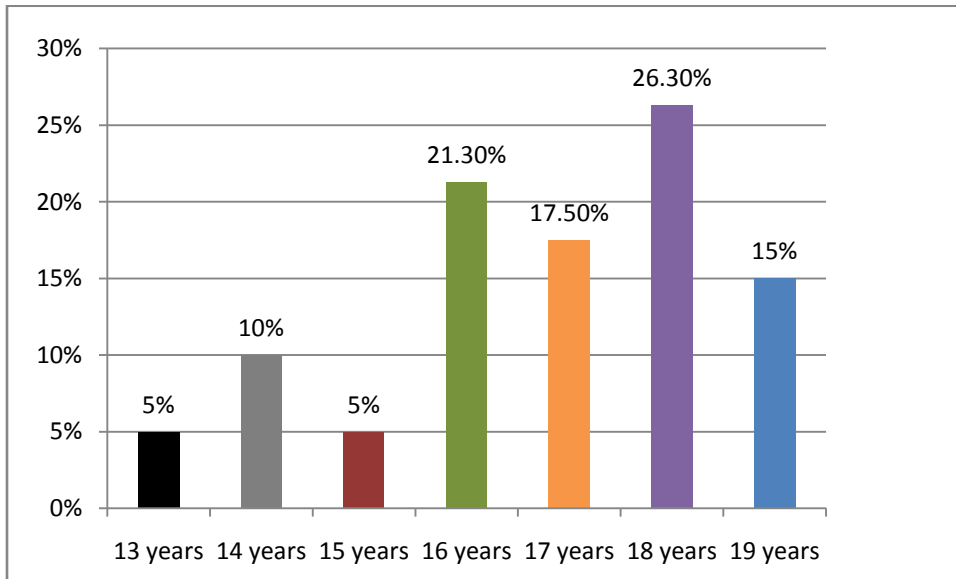


Figure-2: Age of the participants.

Affected limb of the participant

The pie chart shows, among 80 participants 57% (n=46) of participant was not affected by hamstring strain and 24%(n=19) was affected by hamstring strain at their right lower limb and 19% (n=15) was affected by hamstring strain at their left lower limb.

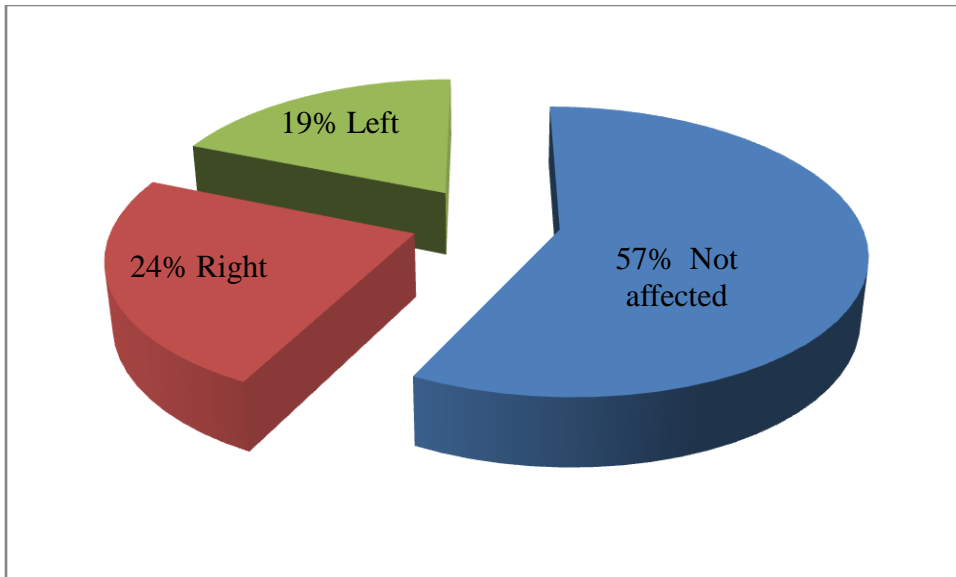


Figure-3: Affected limb of the participant.

Experience of tightness

The pie chart shows, among 80 participants 57% of participants never experienced tightness in their hamstring, 28% of the participants felt tightness often, 9% of the participants felt tightness always, 6% felt tightness sometimes and 0% felt tightness rarely at their hamstring muscle.

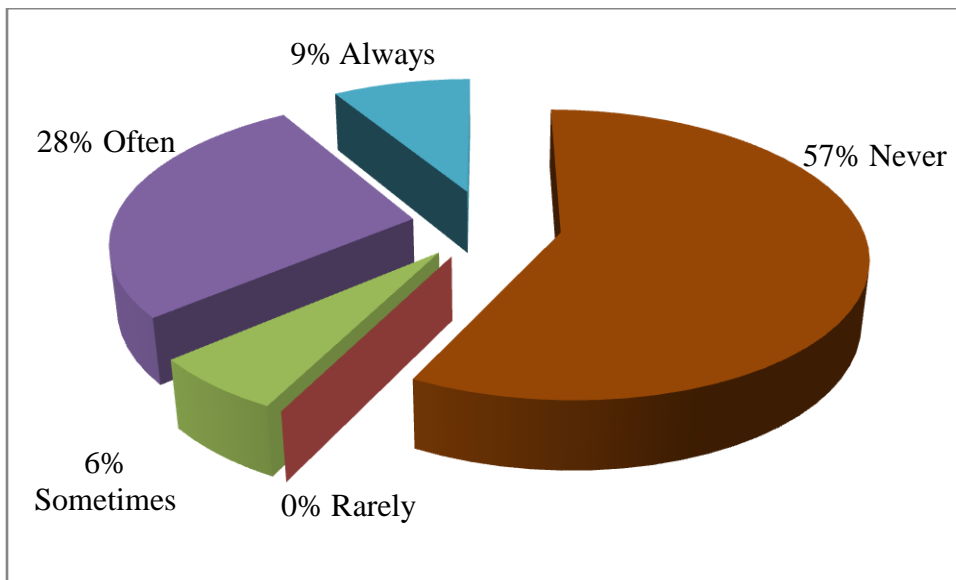


Figure-4: Experience of tightness in the hamstring muscle.

Experience of soreness

The pie chart shows, among 80 participants 60% (n=48) of the participants never experienced soreness in their hamstring, 26% (n=21) of the participants felt soreness often, 9% (n=7) of the participants felt soreness always, 5% (n=4) felt soreness sometimes and 0% felt soreness rarely at their hamstring muscle.

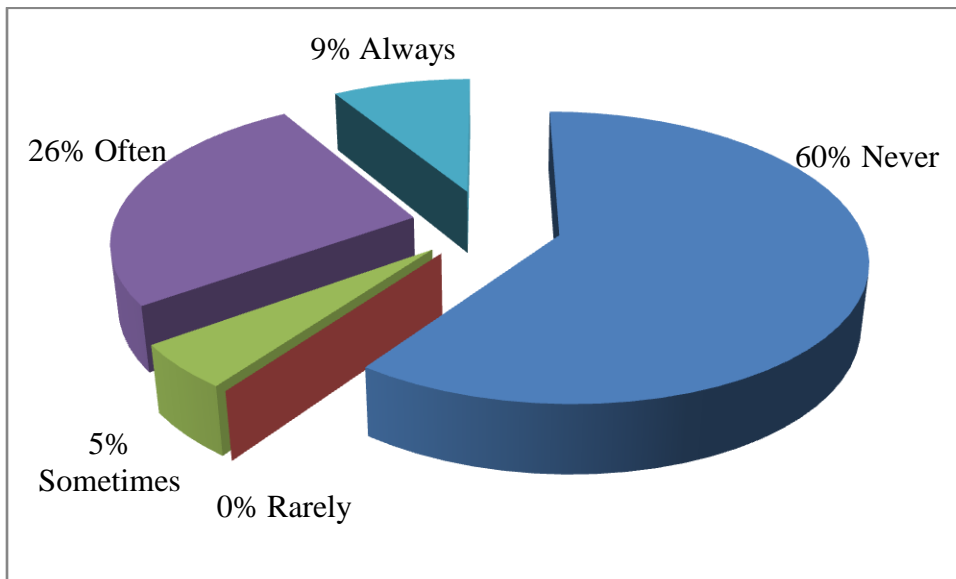


Figure-5: Experience of soreness in the hamstring muscle.

Association between muscle soreness with different ages:

In the association test using chi square(χ^2) it has been found that the value was 0.233 which is above 0.05, so the association is not significant.

	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	21.969	18	0.233

Table 2 : Association between muscle soreness with different age.

Soreness during training

The pie chart shows, among 80 participants 57% (n=46) of the participants never experienced soreness during training in their hamstring muscle, 33% (n=26) of the participants felt soreness often during training, 5% (n=4) of the participants felt soreness sometimes during training, 5% (n=4) felt soreness always and 0% felt soreness rarely at their hamstring muscle during training.

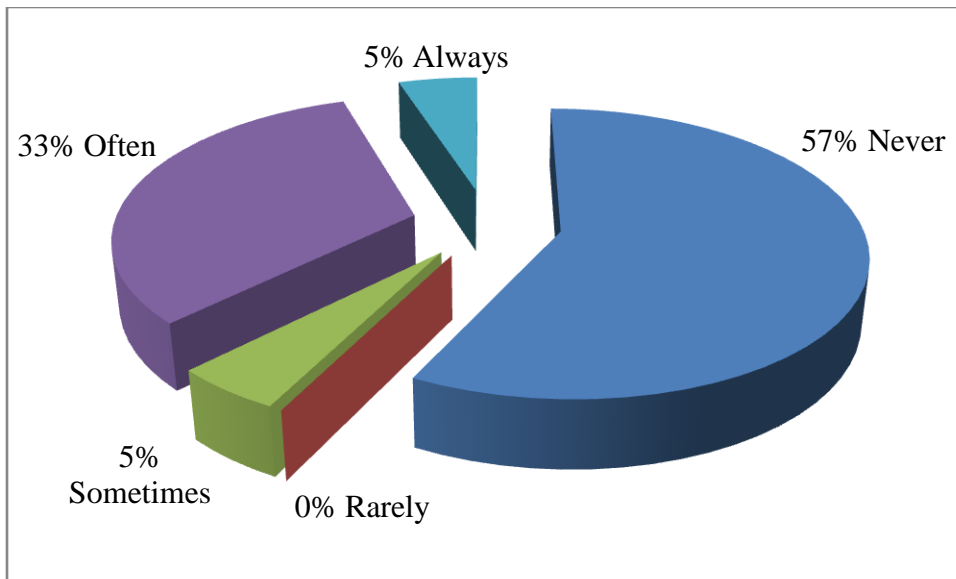


Figure-6: Soreness during training the hamstring muscle.

Soreness in the morning

The pie chart shows, among 80 participants 69% (n=55) of the participants never experienced soreness in the morning at the hamstring muscle, 20% (n=26) of the participants felt soreness sometimes in the morning, 9% (n=4) of the participants felt soreness rarely in the morning, 2% (n=4) felt soreness often in the morning and 0% felt soreness always in their hamstring muscle in the morning.

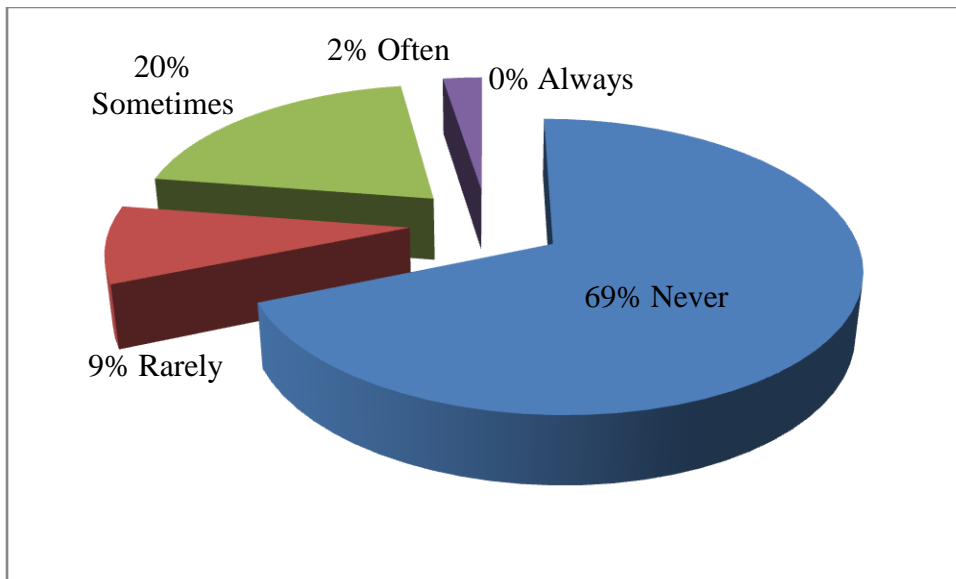


Figure-7: Soreness in the morning in the hamstring muscle.

Association between muscle soreness in the morning and age:

Among 34 hamstring strain patients, the association test using chi square(x²) has been found that the value was 0.039 which was below 0.05, so this association was significant.

	Value	df	Asymp. Sig.(2 sided)
Pearson Chi-square	29.828	18	0.039

Table 3 : Association between muscle soreness in the morning and age.

Feel of pain

The pie chart shows, among 80 participants 62% (n=56) of the participants never felt pain at the hamstring muscle, 25% (n=22) of the participants felt pain often, 10%(n=9) of the participants felt pain sometimes, 3% (n=3) felt pain always in the morning and 0% (n=0) felt soreness rarely in their hamstring muscle.

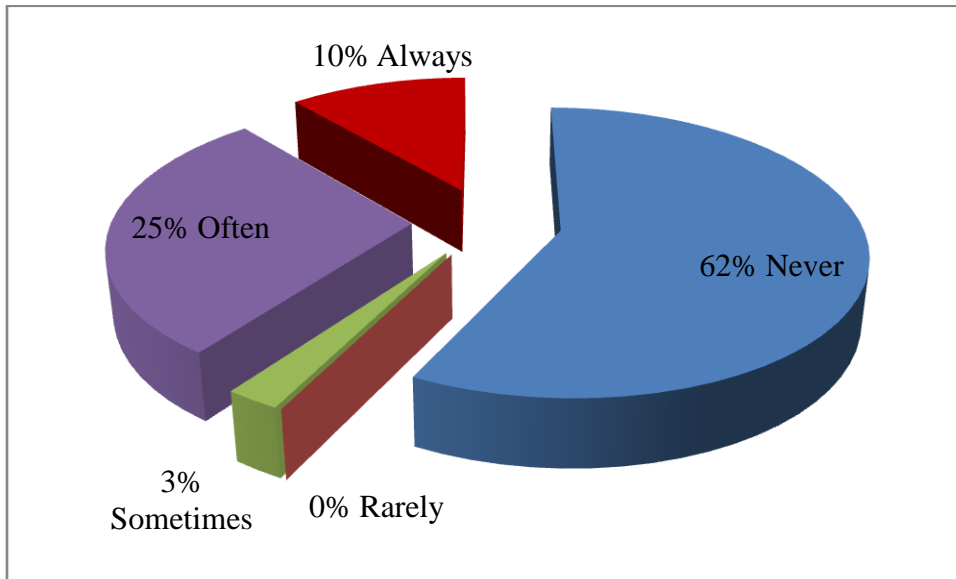


Figure-8: Feel of pain in the hamstring muscle.

Association between age and feel of pain

Among 34 hamstring strain patients, the association test using chi square(x2) it has been found that the value was 0.387 which is above 0.05, so this association was not significant.

		Value	df	Asymp. Sig. (2 sided)
Pearson	Chi-Square	12.756	12	0.387

Table 4 : Association between age and feel of pain.

Sustain small strain

The pie chart shows, among 80 participants 58% (n=46) of the participants never felt sustain small strain at the hamstring muscle, 21% (n=17) of the participants felt sustain small strain often, 11% (n=9) of the participants felt sustain small strain sometimes, 9% (n=7) felt sustain small strain rarely in the morning and 1% (n=1) felt sustain small strain always in their hamstring muscle.

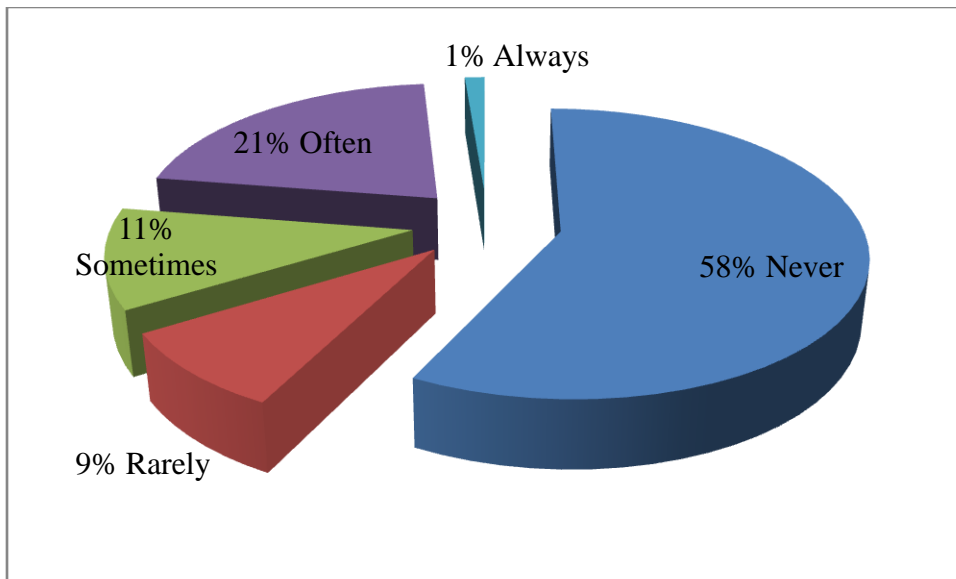


Figure-9: Sustain small strain in the hamstring muscle.

Pain during stretching

The pie chart shows, among 80 participants 57% (n=46) of the participants never felt sustain small strain at the hamstring muscle, 29% (n=23) of the participants felt sustain small strain often, 11%(n=9) of the participants felt sustain small strain always, 3% (n=2) felt sustain small strain sometimes in the morning and 0% (n=0) felt sustain small strain rarely in their hamstring muscle.

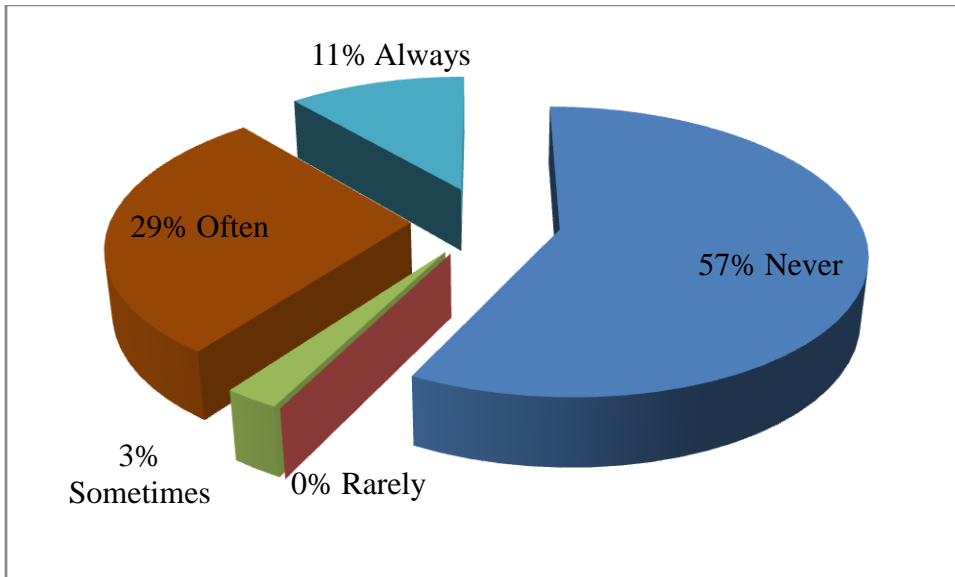


Figure-10: Pain during stretching.

Pain during walking upstairs

The pie chart shows, among 80 participants 58% (n=46) of the participants never felt Pain during walking upstairs at the hamstring muscle, 20% (n=16) of the participants felt Pain during walking upstairs sometimes, 16% (n=13) of the participants felt Pain during walking upstairs often, 5% (n=4) felt Pain during walking upstairs sometimes in the morning and 1% (n=1) always felt pain during walking upstairs in their hamstring muscle.

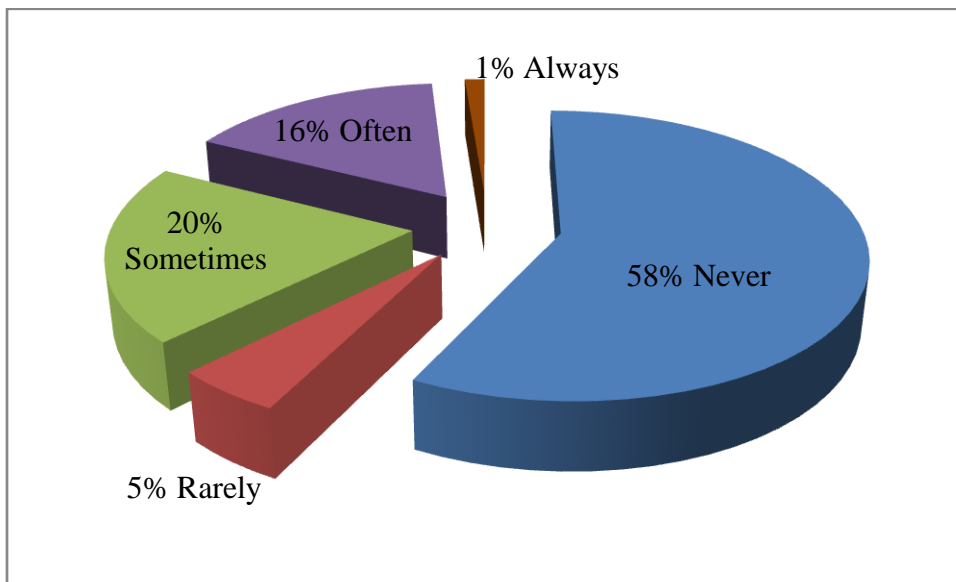


Figure-11: Pain during walking upstairs.

Association between age and pain during walking upstairs

Among 34 hamstring strain patients, the association test using chi square(x²) it has been found that the value was 0.789 which was above 0.05, so this association was not significant.

	Value	df	Asymp. Sig. (2 sided)
Pearson Chi-Square	13.048	18	0.789

Table 5 : Association between age and pain during walking upstairs.

Pain during running

The pie chart shows, among 80 participants 57% (n=46) of the participants never felt pain during running at the hamstring muscle, 29% (n=23) of the participants felt pain during running often, 13% (n=10) of the participants felt pain during running always, 1% (n=1) felt pain during running sometimes in the morning and 0% (n=0) felt pain during running rarely in their hamstring muscle.

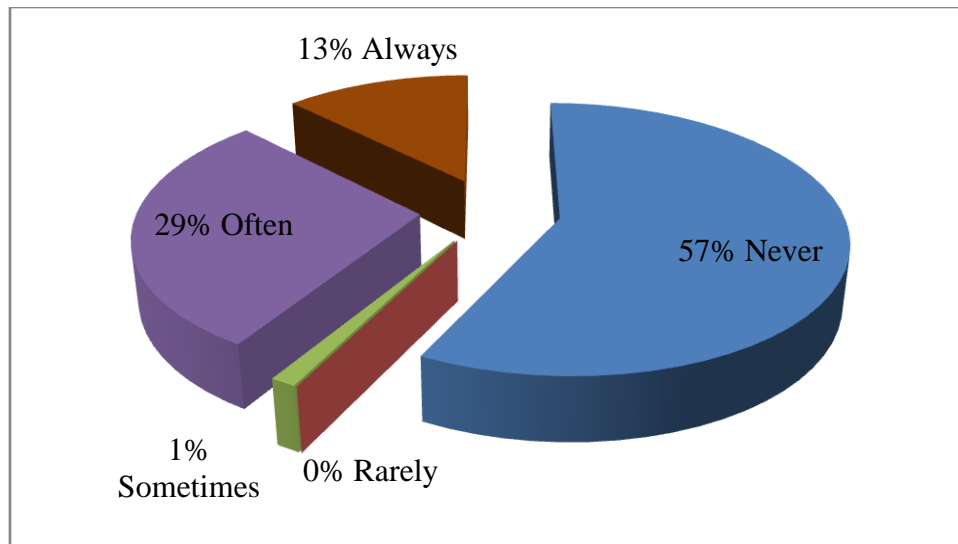


Figure-12: Pain during running.

Association between age and pain during running

Among 34 hamstring strain patients, the association test using chi square(x2) it has been found that the value was 0.558 which was above 0.05, so this association was not significant.

		Value	Df	Asymp. Sig. (2 sided)
Pearson	Chi-Square	10.666	12	0.558

Table 6 : Association between age and pain during running.

This study examined the prevalence of hamstring strain among the young footballers at BKSP. In this study we have found 42.5% athletes got hamstring strain and other 57.5% athletes got other injuries. This result is comparable to Ekstrand et al in 2011 who found 92% of injuries affected the lower extremities. The hamstrings (37%), adductors (23%), quadriceps (19%) and calves (13%) were the most common injury locations. Injury to the hamstring muscle group was the most common single injury subtype, representing 12% of all injuries (Ekstrand et al., 2011).

This study shows that 26.30% Hamstring strain injury occurs at the age of 18 years, 21.30% injury occurs at the age of 16 years, 17.50% injury occurs at the age of 17 years, 15% injury occurs at the age of 19 years, 10% occurs at the age of 14 years and 5% injury occurs at the age of 13 and 15 years. Arnason et al, found age to be a significant risk factor for new hamstring strain injury (Engebresten et al., 2010).

Young footballers of Bangladesh Krira Shikha Protisthan were most commonly affected by hamstring strain injury 42.50 % (n=34) and others were affected by different injuries like ankle sprain, ACL tear, PCL tear etc. 57.50% (n=46). And in all the participants' history of recurrence 51% is higher than non recurrence 48%. Moen et al., 2014 found that in Finland, the majority of footballers got injured by hamstring strain to adolescents with 45% recurrence and about 45% of occurred to girls, but only 9.5% among the older athletes.

This study found that there is no association between age and pain of the participants cause the p value of chi square was found 0.387 which was above 0.05 and thats why this association was not significant. It can be comparable to Gabbe et al., 2006 who also found no significant result between age and feeling of pain. They found the p value of chi square was 0.810 which was more than 0.05 (Gabbe et al., 2006).

This study found that there is no association between age and walking upstairs cause the p value of chi square was found 0.789 which was above 0.05 so it was not significant. A study in 2011 found there is no co relation between age and walking upstairs and they found the p value of chi square 0.387. So there is no co relation between age and walking upstairs (Engebresten, 2011).

MA Sherry found that there is a co relation between age and soreness in the morning. They done the chi square test and found the value 0.021 and it is less than 0.05. So the association between age and morning soreness was found significant.(MA Sherry, 2008) This study shows that among 34 hamstring strain participants the chi square value was 0.039 and it is less than 0.05. So the association between age and morning soreness was found significant.

This study found among 80 young footballers 57% (n=46) never felt pain during running and 29% (n=23) often felt pain during running and 13%(n=10) always felt pain during running. MA Sherry in 2008 found among 11 athletes 6 athlete 54.5% was felt pain at their hamstring muscle so this study is comparable with this (Sherry, 2008).

This study shows, among 80 participants 57%(n=46) of the participants never felt sustain small strain at the hamstring muscle, 29%(n=23) of the participants felt sustain small strain often, 11%(n=9) of the participants felt sustain small strain always, 3%(n=2) felt sustain small strain sometimes in their hamstring muscle. Fuller et al in 2008 found in a study 46% athletes feel sustain small strain during running or sprinting activities(Fuller et al., 2008).

The expected sample size was 344 people, but due to lack of accessibility and time the study was conducted with 80 young footballers by convenience sampling. The study should be considered in light of the following limitations. Researcher can manage only 80 samples which are very small to generalize the result for the wider population of the football players. There are no literatures about the prevalence of hamstring strain among the young footballers in the perspective of Bangladesh so it is difficult to compare the

study with the other research. The researcher able to collect data only from selected area BKSP for a short period of time which will affect the result of the study to generalize for wider population.

6.1 Conclusion

Bangladesh Krira Shikha Protisthan is the largest governmental organization aims to explore talents in sports and train them, also give opportunity to play in different national or international competitions. From the perspective of Bangladesh number of footballers is fewer than abroad. This study shows that in BKSP young footballers are most commonly affected by hamstring strain rather than other injuries. The cause of this injury was in appropriate training, improper knowledge about injury, poor flexibility and other associated problems. In this study we also found that hamstring most commonly occurs at the age of 18 years and there is a co relation between age and soreness in the morning.

6.2 Recommendation

The researcher propose following recommendation for BKSP that there are a very few amount of footballers playing , so it was a limitation for this study for collection of data. Because of this problem the researcher was unable to collect total data of estimated value. So, for the further proposal it is strongly recommendation to increase sample size and use simple random sampling by include more participants. The result of the study demonstrates the frequency of hamstring strain among young footballers. Further studies can be done on the risk factors of hamstring strain among the young footballers at BKSP and the effectiveness of physiotherapy treatment on hamstring strain injury all over the country. Bangladesh Krira Shikha Protisthan were most commonly affected by overuse injury rather than direct injury. Variation in anatomical body structure (height, weight) and fitness (BMI, flexibility) and training duration are the primary factors of their injury, hamstring is the frequent injured site. One area has been identified through the study, the recurrence of injuries in athletes.

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Appendix

Institutional Review Board Approval

**বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)**
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref. CRP-BHPI/IRB/04/17/71 Date: 05/04/17

To
Myeen Uddin Ahmad
B.Sc in Physiotherapy
Session: 2011-12 DU Reg. No : 1715
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal – “Prevalence of hamstring strain among the young footballers at BKSP” by ethics committee.

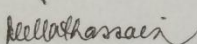
Dear Myeen Uddin Ahmad,

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on February 23, 2016 to conduct the above mentioned thesis, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Thesis Proposal
2	Questionnaire (English and Bengali version)
3	Information sheet & consent form.

Since the study involves answering Oslo Trauma Research Center Questionnaire that takes 10 to 15 minutes and have no likelihood of any harm to the participants and the members of the Ethics committee has approved the study to be conducted in the presented form at the meeting held at 08:30 AM on February 25, 2016 at BHPI.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন : ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স : ৭৭৪৫০৬৯
CRP-Chapain, Savar, Dhaka-1343, Tel : 7745464-5, 7741404, Fax : 7745069, E-mail : contact@crp-bangladesh.org, www.crp-bangladesh.org

Permission Letter (Bangla)



বাংলাদেশ হেল্থ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)
(The Academic Institute of CRP)
CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404, Fax: 7745069
BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

সিআরপি-বিএইচপিআই/০৯/১৬/৬৫১৬

তারিখ : ০৩.০৯.২০১৬

প্রতি
মহাপরিচালক
বাংলাদেশ ক্রীড়া শিক্ষা প্রতিষ্ঠান
জিরানী, সাভার, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট এর জন্য আপনার প্রতিষ্ঠান সফর ও তথ্য সংগ্রহ প্রসঙ্গে।

জনাব,

আপনার সদয় অবগতির জন্য জানাচ্ছি যে, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রে-সিআরপি'র শিক্ষা প্রতিষ্ঠান বাংলাদেশ হেল্থ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই) ঢাকা বিশ্ববিদ্যালয় অনুমোদিত বিএসসি ইন ফিজিওথেরাপি কোর্স পরিচালনা করে আসছে।

উক্ত কোর্সের ছাত্রছাত্রীদের কোর্স কারিকুলামের অংশ হিসাবে বিভিন্ন বিষয়ের উপর রিসার্চ ও কোর্সওয়ার্ক করা বাধ্যতামূলক।

বিএইচপিআই'র ৪র্থ বর্ষ বিএসসি ইন ফিজিওথেরাপি কোর্সের ছাত্র মাইনউদ্দিন আহমেদ তার রিসার্চ সংক্রান্ত কাজের তথ্য সংগ্রহের জন্য আগামী ২০.০৯.২০১৬ থেকে ১৫.১০.২০১৬ তারিখ পর্যন্ত আপনার প্রতিষ্ঠানে সফর করতে অগ্রহী। তার রিসার্চ শিরোনাম

“Prevalence of Hamstring strain among the young footballers at BKSP.”

তাই তাকে আপনার প্রতিষ্ঠান সফর এবং প্রয়োজনীয় তথ্য প্রদান সহ সার্বিক সহযোগীতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ ওবায়দুল হক
অধ্যক্ষ-ভারপ্রাপ্ত
বিএইচপিআই।



Permission Letter From BKSP (Bangla)

বাংলাদেশ ক্রীড়া শিক্ষা প্রতিষ্ঠান

জিরানী, সাতার, ঢাকা

bksp.portal.gov.bd

নং-৩৪.০৪.০২০০.০০৪.০০.০১৩.১৫৫-৫৫০

তারিখ: ১৩ আশ্বিন ১৪২৩ বঙ্গাব্দ

২২ সেপ্টেম্বর ২০১৬ খ্রিস্টাব্দ

বিষয়: রিসার্চ প্রজেক্ট তৈরীর জন্য তথ্য সংগ্রহের অনুমতি।

সূত্র: সিআরপি-বিএইচপিআই/০৯/১৬/৬৫১৬, তারিখ: ০৩/০৯/২০১৬খ্রি।

উপর্যুক্ত বিষয় ও সূত্রের আলোকে নির্দেশক্রমে জানানো যাচ্ছে যে, রিসার্চ প্রজেক্ট তৈরীর নিমিত্ত ফিজিওথেরাপী কোর্সের নিম্নবর্ণিত ছাত্র/ছাত্রীদেরকে ২৭ সেপ্টেম্বর হতে ১৫ অক্টোবর ২০১৬ খ্রি. তারিখ পর্যন্ত বিকেএসপি হতে তথ্য সংগ্রহের বিষয়ে কর্তৃপক্ষের সম্মতি জ্ঞাপন করা হলো।

- ১। ভাসমিয়া ওসমান
- ২। মাইনউদ্দিন আহমেদ
- ৩। পংকজ কান্তি দাস

২৬.০৯.১৬

শামীমা সাতার মিমু
পরিচালক (প্রশিক্ষণ) অ. দা.
বিকেএসপি
ফোন: ৭৭৮৯২১৫-৬ (এক্স-২২৪)।

প্রাপক: জনাব মো: ওবায়দুল হক
ভারপ্রাপ্ত অধ্যক্ষ
বিএইচপিআই
সিআরপি, সাতার, ঢাকা।

অনুলিপি: সদয় জ্ঞাতার্থে ও কার্যার্থে

- ১। মহাপরিচালক, বিকেএসপি
- ২। পরিচালক (প্রশাসন ও অর্থ), বিকেএসপি
- ৩। অধ্যক্ষ, ক্রীড়া কলেজ, বিকেএসপি
- ৪। চিফ কোচ/সিনিয়র কোচ/কোচ.....বিকেএসপি
- ৫। নিরাপত্তা কর্মকর্তা, বিকেএসপি
- ৬। জনসংযোগ কর্মকর্তা, বিকেএসপি
- ৭। সংশ্লিষ্ট নথি।

সম্মতিপত্র

আসসালামুয়ালাইকুম,

আমিমাঈনউদ্দিন আহমেদ ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা অনুষদের অধিভুক্ত বাংলাদেশ হেলথ প্রফেশনস্

ইন্সটিটিউট এর বি.এস.সি ইন ফিজিওথেরাপিকোর্সের চূড়ান্ত বর্ষের একজন শিক্ষার্থী | অধ্যয়নের অংশ হিসেবে

আমাকে একটি গবেষণা সম্পাদন করতে হবে এবং এটা আমার প্রাতিষ্ঠানিক কাজের একটা অংশ | নিম্নোক্ত

তথ্যাদি পাঠ করার পর অংশগ্রহণকারীদের গবেষণায় অংশগ্রহণের জন্য অনুরোধ করা হলো।

আমার গবেষণার বিষয় "বিকেএসপিতে প্রশিক্ষণরত তরুণ ফুটবলারদের মধ্যে হ্যামেস্ট্রিং

ইনজুরীর প্রকটতা" গবেষণাটি সম্পাদনের জন্য, আমার তথ্য সংগ্রহ করা প্রয়োজন হবে। গবেষণার ক্ষেত্র

বিবেচনা করে আপনারমাঝে আমার গবেষণায় অংশগ্রহণ করার জন্য প্রয়োজনীয় বৈশিষ্ট্য লক্ষ্য করা গেছে

এজন্য, আপনি আমার গবেষণার একজন সম্মানিত অংশগ্রহণকারী হতে পারেন এবং আমি আপনাকে আমার

গবেষণায় অংশগ্রহণ করতে অনুরোধ জানাচ্ছি।

আমি প্রতিজ্ঞা করছি যে ,এই গবেষণা আপনার জন্য ঝুঁকিপূর্ণ হবে না অথবা আপনার কোন ক্ষতি করবে না |

গবেষণা চলাকালীন সময়ে কোন রকম দ্বিধা বা ঝুঁকি ছাড়াই যেকোন সময়ে আপনি এটাকে বাদ দিতে পারবেন |

এই গবেষণার প্রাপ্ত তথ্য সম্পূর্ণভাবে গোপনীয় থাকবে এবং অংশগ্রহণকারীর ব্যক্তিগত তথ্য অন্য কোথাও প্রকাশ

করা হবে না।

শুরু করার আগে আপনার কি কোন প্রশ্ন আছে?

আমি কি শুরু করতে পারি?

হ্যাঁনা

অংশগ্রহণকারীর স্বাক্ষরও তারিখ

গবেষকের স্বাক্ষরও তারিখ

সাক্ষীর স্বাক্ষরও তারিখ

Consent Form

Assalamu alaikum,

I am M. Uddin, B.Sc. in Physiotherapy student of Bangladesh Health Professions Institute (BHPI) under the Faculty of Medicine, University of Dhaka.

To obtain my M.D. degree I have to conduct a research project and it is a part of my study. The participants are requested to participate in the study after a brief of the following.

My research title is “**Prevalence of Hamstring Strain Among the Young Footballers at BKSP**”.

To fulfill my research project, I need to collect data. So, you can be a respected participant of this research.

I would like to inform you that this is a purely academic study and will not be used for any other purposes. I assure that all data will be kept confidential. Your participation will be voluntary. You may have the rights to withdraw consent and discontinue participation at any time of the experiment. You also have the rights to answer a particular question that you don't like.

Do you have any questions before I start?

So, may I have your consent to proceed with the interview?

Yes No

Signature of the participant and date

Signature of the researcher and Date.....

Signature of the witness and Date.....

বাংলা প্রশ্নাবলী

অসলোস্পোর্টসট্রাসেনটারপ্রণীতহ্যামেস্ট্রিংইনজুরীরউপরক্ষীনিংপ্রশ্নাবলী

বিষয় : বিকেএসপিতে প্রশিক্ষণরত তরুণ ফুটবলারদের মধ্যে হ্যামেস্ট্রিং ইনজুরীর প্রকটতা

এই প্রশ্নাবলী তৈরী করা হয়েছে বিকেএসপিতে প্রশিক্ষণরত তরুণ ফুটবলারদের মধ্যে হ্যামেস্ট্রিংইনজুরীর প্রকটতা খুঁজে বের করার জন্য এবং এই অংশে অংশগ্রহণকারীকে উদ্দেশ্য করে করা প্রশ্নাবলীর মতামতের পাশে () চিহ্ন দিতে হবে এবং ফিজিওথেরাপিস্টকে কালো বা নীল বলপেন ব্যবহার করার জন্য বিবেচনায় রাখতে হবে।

ব্যক্তিগত তথ্যাবলী

তারিখ :

আইডি নং :

নাম :

বয়স :

লিঙ্গ : ১ পুরুষ

২ মহিলা

ঠিকানা :

মোবাইল নং :

সিরিয়ালনং:

শ্রেণীঃ১

উপসর্গ

প্রশ্ন	ডান নিম্ন পাশ	বাম নিম্ন পাশ	ডান	বাম
১. আপনি কি কখনও আপনার পিছনের উরুতে কষ্টসাধ্যতা অনুভব করেছেন ? (হ্যামেস্ট্রিং)	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		

শ্রেণীঃ২

ক্ষত

প্রশ্ন	ডান নিম্ন পাশ	বাম নিম্ন পাশ	ডান	বাম
২. আপনার পিছনের উরুতে বা হ্যামেস্ট্রিং এ ক্ষত কেমন ?	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		

৩. প্রশিক্ষণ গ্রহণকালীন সময়ে আপনার হ্যামেস্ট্রিং এ ক্ষত কেমন হয়?	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
৪. যখন আপনি সকালে ঘুম থেকে উঠেন তখন আপনার হ্যামেস্ট্রিং এ ক্ষতের অবস্থা কেমন হয়?	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		

শ্রেণীঃ৩

ব্যথা

প্রশ্ন	ডান নিম্ন পাশ	বাম নিম্ন পাশ	ডান	বাম
৫. মাঝে মাঝে আপনি আপনার হ্যামেস্ট্রিং এ কেমন ব্যথা অনুভব করেন ?	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
৬. আপনি কি কখনও আপনার হ্যামেস্ট্রিং এ হঠাৎ হালকা টান অনুভব করেন যা আবার দ্রুত ঠিক হয়ে যায় ?	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই		

		৪-সবসময়		
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গত সপ্তাহে নিম্নোক্ত কাজ গুলো করার সময় আপনার হ্যামেস্টিং কেমন ব্যাথা অনুভব হয়েছে তা বলুন:

প্রশ্ন	ডান নিম্ন পাশ	বাম নিম্ন পাশ	ডান	বাম
৭. হ্যামেস্টিং প্রসারিত করার সময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
৮. সিডি বেয়ে উঠার সময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
৯. জগিং করার সময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
১০. দৌড়ানোর সময় দিক পরিবর্তন করা	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই		

	৪-সবসময়	৪-সবসময়		
১১. বেগ বৃদ্ধির সময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
১২. পূর্ণবেগে দৌড়ানো অবস্থায় হঠাৎ থেমে যাওয়া	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		

শ্রেণীঃ৪

নির্দিষ্ট কার্যাবলী, দৈনন্দিন জীবনযাপন এবং খেলাধুলা

নিম্নোক্ত প্রশ্নাবলী আপনার দৈনন্দিন কার্যক্রমতা সম্বন্ধনীয়। গত সপ্তাহে নিম্নোক্ত প্রতিটি কাজ করার সময় আপনি হ্যামেস্ট্রিং এ ব্যাথার জন্য কেমন ধরনের সমস্যার সম্মুখীন হয়েছিলেন তা বলুন।

প্রশ্ন	ডান নিম্ন পাশ	বাম নিম্ন পাশ	ডান	বাম
১৩. দৌড়ানো	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		

১৪. লাফানো	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
১৫. বেগ বৃদ্ধি	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		
১৬. পূর্ণবেগে দৌড়ানোর পরে থেমে যাওয়া	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়	০- কখনও না ১-হঠাৎ কখনও ২- মাঝে মাঝে ৩-প্রায়ই ৪-সবসময়		

হ্যামেস্ট্রিং এর কার্যক্ষমতা ক্রমানুসারে সাজানোর জন্য কিছু নির্দেশিকা

১. প্রতিটি প্রশ্নের মতামতকে ০(সর্বোচ্চ নম্বর) থেকে ৪(সর্বনিম্ন নম্বর) পর্যন্ত হিসেব করতে হবে।

উদাহরণস্বরূপ, “মাঝে মাঝে আপনি আপনার হ্যামেস্ট্রিং এ কেমন ব্যাথা অনুভব করেন ?” এই প্রশ্নের জন্য নম্বর দিতে হবে এভাবে, ০ হবে “কখনও না”, ১ হবে “হঠাৎ কখনও”, ২ হবে “মাঝে মাঝে”, ৩ হবে “প্রায়ই”, ৪ হবে “সবসময়” ।

Questionnaire

OSLO SPORTS TRAUMA RESEARCH CENTER

HAMSTRING INJURY SCREENING QUESTIONNAIRE

**Title : Prevalence of hamstring strain among the young footballers at
BKSP**

This questionnaire is developed to find out the **prevalence of hamstring strain among the young footballers at BKSP** and this section will be filled by tick (V) mark below the questions of point by patients but in special consideration physiotherapist using a black or blue pen.

Subjective information

Date :

ID no :

Name :

Age :

Sex :

Address :

Mobile no:

Serial no:

Section : 1

Symptoms

Questions	Right lower limb	Left lower limb
1. Do you ever experienced any kind of stiffness in your posterior thigh? (Hamstring)	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always

Section : 2

Soreness

Questions	Right lower limb	Left lower limb
2. How sore is your posterior thigh or Hamstring is?	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
3. How sore is your Hamstring during training?	0- Never 1- Rarely 3- Sometimes	0- Never 1- Rarely 3- Sometimes

	4- Often 5- Always	4- Often 5- Always
4. How sore is your Hamstring when you wake up in the morning?	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always

Section : 3

Pain

Questions	Right lower limb	Left lower limb
6. How often you feel pain at your Hamstring?	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
7. Do you often sustain small strains in your Hamstring which resolves quickly?	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always

Report the degree of pain that you have felt from your Hamstring during the last week during performing the following activities :

Questions	Right lower limb	Left lower limb
8. Stretching of the Hamstrings	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
9. Walking up stairs	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
10. jogging	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
11. Changing direction during running	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always

12. Accelerating	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
13.Braking speed after sprinting	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always

Section : 4

Function, daily living and sports

The following questions concerning about your physical function. For each of the following functions, please indicate the degree of difficulty you have experienced in the last week due to your Hamstring.

Questions	Right lower limb	Left lower limb
14. Running	0- Never 1- Rarely 3- Sometimes 4- Often	0- Never 1- Rarely 3- Sometimes 4- Often

	5- Always	5- Always
15. Jumping	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
16. Accelerating	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always
17. Braking speed after sprinting	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always	0- Never 1- Rarely 3- Sometimes 4- Often 5- Always

Scoring instructions for the Hamstring function scores

1. Each item is scored from 0 (best score) to 4 (worst score). For example, for the item “How often do you experience pain at your Hamstring?” a score of 0 is given for “Never”, 1 for “Rarely”, 2 for “Sometimes”, 3 for “Often”, and 4 for “Always”.