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Dietary Habits and Nutritional Knowledge of School Athletes: A Case on Bangladesh Krira Shikkha Protisthan (BKSP), Dhaka, Bangladesh.

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Abstract

The purpose of this research was to examine the eating habits and nutritional literacy of Bangladeshi school athletes participating in the Krira Shikkha Protisthan (BKSP). This survey includes every male and female collegiate athlete at BKSP. A physical education instructor and a sports scientist assessed the translated version of the standard nutrition knowledge and attitudes survey questionnaire. 117 BKSP athlete participants were chosen at random to complete a questionnaire developed by the researchers to measure their nutrition knowledge and habits; the questionnaire was given a Cronbach Alpha value of 0.81, which is the minimum acceptable value for reliability. The data were analyzed using the t-test, one-way MANOVA, and Pearson correlation coefficient ($p.05$). School both gender athletes 78% on the sport nutrition and general nutrition scales has been maintained BKSP authority. In addition, collegiate male and female athletes had considerably higher mean nutrition scores than female athletes. There were statistically significant differences in .513 on dietary and residential athletes have followed nutritional habits. BKSP athlete nutrition knowledge and attitudes need to be addressed, according to our findings. These results suggest that nutrition lecture courses are one way to increase player's knowledge of nutrition.

Key Words: Nutrition, Athletes, Knowledge

Introduction

All too frequently, student athletes have little time to get the nutrients they require. For their supper, these athletes frequently choose the simplest portable options. They are unaware that eating poorly can impair their performance. To maintain the high energy requirements of training, competition, and the rigor of an academic program (Frederick & Hawkins, 1992), student athletes need regular, well-balanced meals and snacks.

The rising competitiveness of the sport raises concerns for the health of the athletes, according to a study by Akhter et al., (2004). For instance, it was discovered that factors like a lack of time (Werner et al., 2022), a busy training program and a greater emphasis on physical characteristics like leanness and body image may have an impact on nutritional consumption (Trakman et al., 2016).

Evaluation of meal patterns can help with the creation of health promotion and preventive strategies as well as offer details about healthy eating habits (Partida et al., 2018). They are then utilized in the evaluation of eating disorders and as a tool for nutritional counseling. It appears that there is a growing need for interest in nutritional knowledge by Partida et al., (2018) but it is not obvious whether athletes are increasingly aware of how nutrition affects athletic performance. Athletes can receive guidance from professionals on how to understand the importance of nutrition in sports and how to select the right



foods and fluids to perform at their best (Parmenter & Wardle, 1999). Athletes can learn about nutrition from a variety of sources including periodicals, their parents, coaches, and teammates. Athletic trainers are medical experts who may provide the player with knowledge. Bakhtiar et al., (2021) study focused athlete must make choices and become conscious of his or her nutritional habits because they have control over what they eat. With the right nutrition education, the right judgments can be made.

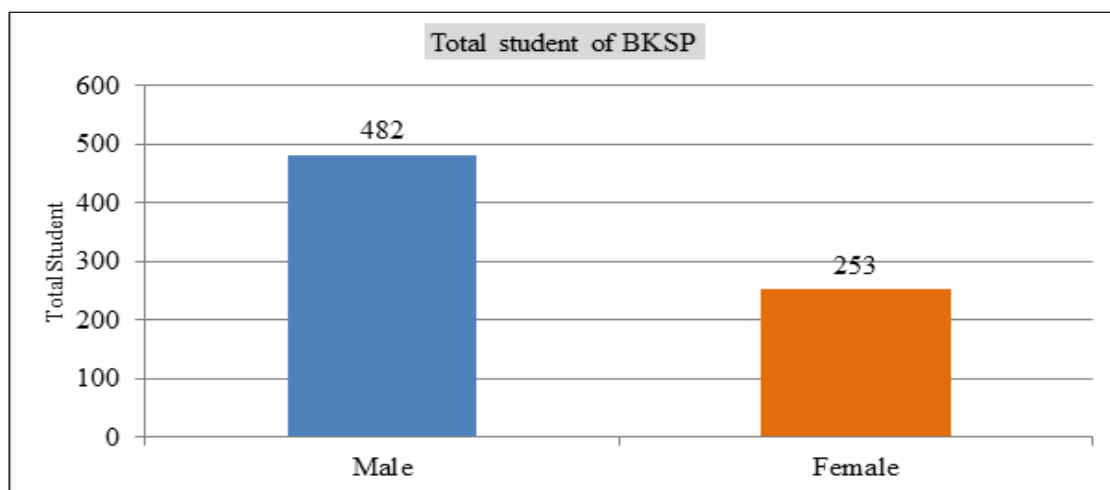
Methods & Study Design

The methodology section describes the procedures utilized to conduct this research investigation. This study employed a descriptive research design. The dependent variables were dietary habits and nutritional knowledge. Gender and respondent ages were the independent variables. A Pilot Study questionnaire draft was provided to 117 of 735 students from Kira Shikkha Protisthan (BKSP) who responded. Validity was assessed using a questionnaire reliability test.

Instruments: A questionnaire about dietary habits and nutritional knowledge was given to trainee athletes. For dietary habits and nutritional knowledge, respectively, the reliability coefficients were 0.6611 and 0.645 for this questionnaire.

Procedures: The survey questionnaire approach by residential student at Kira Shikkha Protisthan (BKSP), Bangladesh before conducting any of the research. The researcher interviewed students in grades I-XII. At a team meeting, the researcher delivered the questionnaire to the allocated teams as a whole. Individuals were invited to freely work independently and answer each question to the best of their ability.

After each participant completed the questionnaire, it was returned to the researcher and enclosed in an envelope.



Source: BKSP (2023)



Data Analysis: To assess the acceptability of the provided hypotheses, a significance threshold of 0.05 was chosen. Using a Pearson Product Moment Correlation, it was determined whether there was a positive link between dietary patterns and nutrition knowledge. A multivariate analysis of variance (MANOVA) test was used to evaluate whether there was a difference between the sexes in terms of dietary practices and nutritional awareness.

Results

Demographic Data: The sample consisted of BKSP-enrolled collegiate players. This sample included 117 athletes, including 74 male and 43 female participants in Table 1. This sample included athletes ranging in age from 11 to 23 years old (20.32 ± 1.69).

Table 1: Frequency table of gender

Gender	Frequency	Percent
Male	74	63.2
Female	43	36.8

Table 2 reveal that the male student playing Cricket 18.80% of 74, women are played Cricket 8.50%, both student Football played 24.8%, Hockey are played 36.80%, Judo are played 7.70% and Swimming are 3.40% of 117 BKSP students.

Table 2: Student based of playing categories

Sport	Frequency	Percent
Men's Cricket	22	18.8
Women's' Cricket	10	8.5
Football	29	24.8
Hockey	43	36.8
Judo	9	7.7
Swimming	4	3.4
Total	117	100

The majority of athletes dietary habits and nutritional knowledge was obtained from magazines and newspapers.

Table 3. Male and female students obtained 18.80% of their dietary habits-related information from their parents, 2.80% of their information came from television, and only 1% of their information came from collected sources of communication, peers, and the internet.



Table 3: Frequency table for information about nutrition

Info	Frequency	Percent
1. Coach	13	11.1
2. Magazine & Newspaper	29	24.9
3. TV	15	12.8
4. Athletic Trainer	3	2.6
5. Parents	22	14.8
6. Myself	2	1.7
7. Class	6	3.1
8. Teacher	3	2
9. Communication	1	.9
10. Peers	1	.9
11. Internet	1	.9
Total	96	100

The alpha level for testing all hypothesis was established at .05. There will be a favorable correlation between dietary practices and nutrition understanding. Using a Pearson Product Moment Correlation, it was determined whether there was a positive link between dietary patterns and nutrition knowledge. The findings of the analysis are shown in .

Table 4 below. Pearson-Product Moment Association of Nutritional Knowledge and Overall Dietary Habits.

Table 4: Pearson-Product Moment Correlation between total dietary habits and nutritional knowledge scores

Variable	n	r	P
Dietary Habits & Nutritional Knowledge	117	.513	.001

*P < .01

The Pearson-Product Moment correlation coefficient between eating patterns and nutritional understanding was computed shows in Table 5. Positive correlation was discovered ($r(115) = 0.513, P .001$), showing a linear link between the two variables. Athletes with superior eating practices have a deeper understanding of nutrition.



Table 5: MANOVA Test between gender for dietary habits and nutritional knowledge

Variable	Sum of Squares	Df	Mean Square	F	P
Total (male)	1332.274	1	1332.274	12.639	.001*
Total (female)	274.981	1	274.981	10.583	.001*

A one-way MANOVA was calculated examining the effect of gender on dietary habits and nutritional knowledge. A significant effect was found ($\Lambda_{2,114} = .86, P < .001$).

Discussion

This study examined the nutritional habits and understanding of college athletes. The researcher explored numerous ways in which factors such as gender, age, Body Mass Index (BMI) etc. can influence the food habits and nutritional awareness of the study's athletes. The hypothesis indicated that there would be a positive correlation between dietary practices and nutrition knowledge. The researcher hypothesized that a greater level of nutritional awareness would have a greater impact on the food habits of athletes..

Table 4. This assertion is also corroborated by previous research that finds ignorance equals poor nutrition. A positive correlation was discovered, showing a linear link between the two variables. Athletes with improved dietary habits have a deeper understanding of nutrition (Table 1). The theory was therefore supported. Yet, a lack of understanding may be indicative of bad nutritional habits. Knowledge on nutrition is crucial for athletes, and it must be an ongoing component of their lives. Education of the athletes is simply a portion of the issue. Coaches, parents, and athletic trainers must have nutrition knowledge since athletes like to question those with whom they are most comfortable (Alaunyte et al., 2015).

Experts can assist athletes in recognizing the importance of nutrition in sports (Gray, 2013) and selecting the optimal nutrients and drinks for top performance.

Athletes have a favorable attitude toward nutrition (Manore et al., 2017), according to research; consequently, appropriate nutrition knowledge can lead to better lifestyles (Wiita & Stombaugh, 1996).

Furthermore, the hypothesis suggested that there would be a considerable difference between the sexes in terms of eating patterns and nutritional understanding (Dunn et al., 2007). Because of all of the weight concerns and eating disorders that



female athletes encounter (Bird & Rushton, 2020), the researcher thought that male athletes would adopt healthier food practices. The researcher also believed that females had a greater understanding of nutrition, but that they did not apply this information to their eating patterns (Corley et al., 1990). Due to the body weight requirements of some sports and the pressure to obtain the appropriate body weight, female athletes become excessively obsessed with their weight and develop eating disorders.

Conclusions

This study evaluated the nutritional intake, nutritional knowledge, and dietary practices of Bangladesh Krira Shikkha Protisthan (BKSP) trainee athletes. There were significant disparities between the primary nutrition information sources utilized by male and female athletes. Male individuals obtained the most of their nutrition information from friends and literature, whereas female subjects depended on family members and television. The nutritional knowledge and dietary habits of male athletes were rated as adequate, whereas those of female athletes were rated as inadequate. The average total daily energy intake as well as the percentage of energy from macronutrients were within the recommended dietary allowance for male athletes. There is a need to develop techniques for counseling and instructing BKSP student athletes to enhance their nutritional awareness, dietary habits, athletic performance, and general health promotion due to their inadequate nutritional knowledge.

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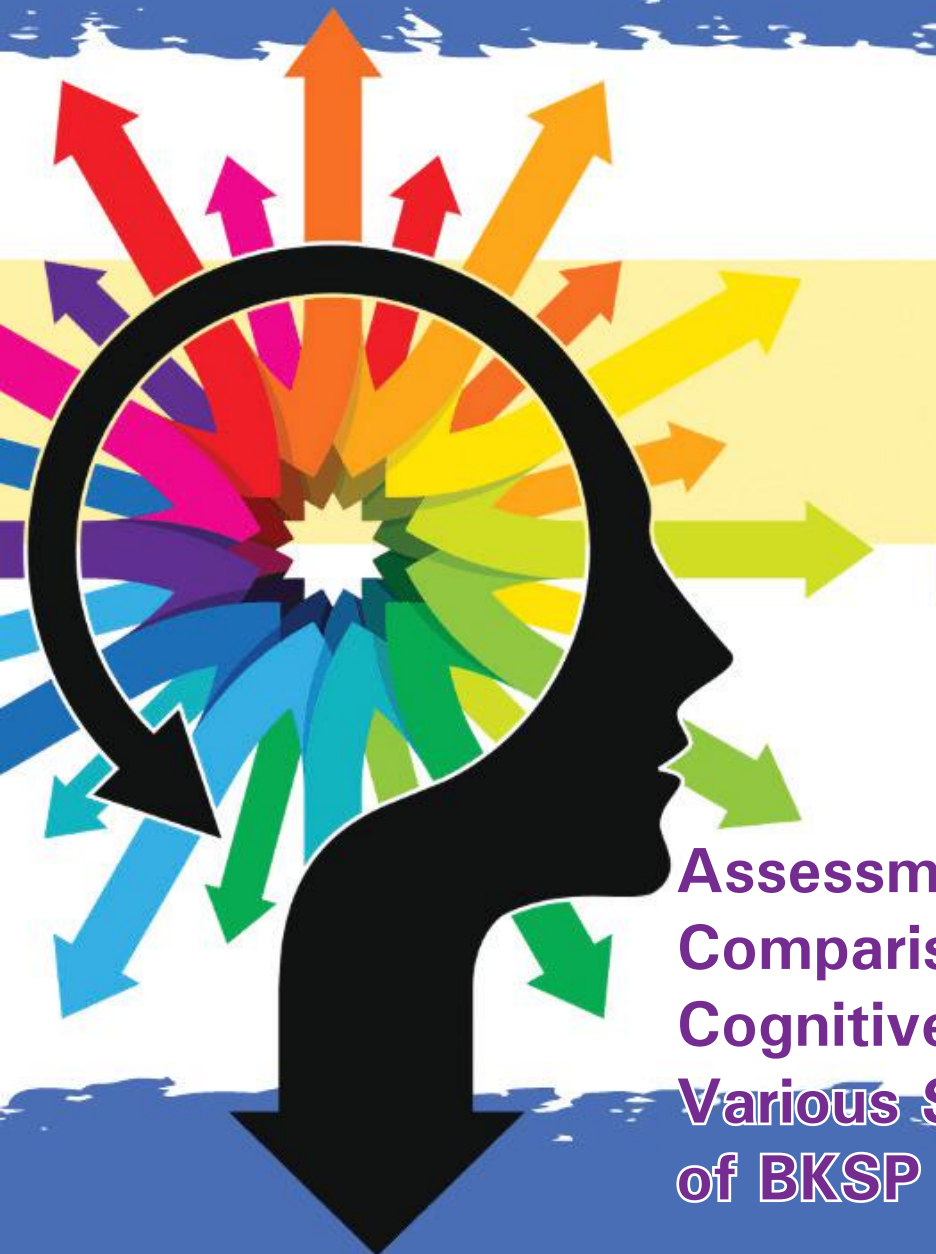
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Assessment and Comparison of the Cognitive Distortion in Various Sportspersons of BKSP

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Abstract

The purpose of the present study was to assessment and comparison of the cognitive distortion in various types sportspersons of BKSP in Basketball (N = 27), Cricket (N= 40), Hockey (N= 21) and Volleyball (N= 14). To conduct this study, quantitative research model in the form of a retrospective type of survey design was used. For this purpose sportsperson was selected as sample at Bangladesh Krira Shikkha Protisthan (BKSP) Dhaka. Purposive of the sampling method was used to select sample. Cognitive distortion scale used for assessing cognitive distortion. F-test was used to compare the mean cognitive distortion score of different group of players at .05 levels. Findings of the present study showed no significant difference on the basis of cognitive distortion among the group. Based on percentage analysis it was observed that 64% are normal, mild 24% moderate 12% and severe 02% out of 102 players of different sports. Small sample size purposive sampling and subjective reporting of the participants were the major limitations of the study. Yet, the findings of the present study can help to step for reduce the bad effect of the negative phenomena in different sports.

Key words: Cognitive distortion, Sportspersons.

Introduction

A cognitive distortion is an exaggerated or irrational thought pattern involved in the onset or perpetuation of psychopathological states, such as depression and anxiety (Helmond, Petra; Overbeek, Geertjan; Brugman, Daniel; Gibbs, John C. (2015).

Cognitive distortions are thoughts that cause individuals to perceive reality inaccurately. According to Aaron Beck's cognitive model, a negative outlook on reality, sometimes called negative schemas (or schemata), is a factor in symptoms of emotional dysfunction and poorer subjective well-being. Specifically, negative thinking patterns reinforce negative emotions and thoughts (Grohol, John, 2009).

During difficult circumstances, these distorted thoughts can contribute to an overall negative outlook on the world and a depressive or anxious mental state.

According to hopelessness theory and Beck's theory, the meaning or interpretation that people give to their experience importantly influences whether they will become depressed and whether they will suffer severe, repeated, or long-duration episodes of depression("APA PsycNet". psycnet.apa.org. Retrieved 2020-06-29) John C. Gibbs and Granville Bud Potter propose four categories for cognitive



distortions: self-centered, blaming others, minimizing-mislabeling and assuming the worst(Barriga, Alvaro Q.; Morrison, Elizabeth M.; Liao, Albert K.; Gibbs, John C. (2001)).The cognitive distortions listed below(Burns, David D.,1980)are categories of automatic thinking, and are to be distinguished from logical fallacies (Burns, David D.,1980) &Tagg, John.,1996). There are certain factors that affect decision making and our emotional reaction to them. They can be classified into Internal and External factor.Internal factors are factors that are subjective. They are inner factors that affect an individual from within. External factors are factors without. Factors outside of our immediate control. These factors are objective and they affect the way we make decisions.

The pressures of competitive sports offer ideal situations for creating irrational or distorted cognitive styles. What athletes say to themselves may not positively contribute to success. It may, in fact, lead to failure. Some athletes and their coaches believe that the best performance comes from No conscious thinking (automatic performance). However, it is unreasonable to expect an athlete to shut off all cognitive activity while in competition or training. Thinking should not be blamed for reduced performance. Instead, inappropriate or misguided thinking should be the focus of concern. This is the focus of this article - the assessment, identification and modifications of cognitive styles that negatively impact performance. Four general irrational beliefs may interfere with athletes reaching their potential. These four beliefs are: I must do well in sport and if I don't I am an incompetent, worthless person; I must do well to gain the love and approval of others and if I don't it is horrible; Everyone must treat me with respect and fairness of all times; and the conditions of my life must be arranged so that I get what I want easily and quickly. These general beliefs can contribute to emotional distress for athletes and contribute to the pressure already present in achievement situations. Distorted thinking styles interfere with performance by providing the athlete with faulty information about the competitive environment, resulting in misdirected attention, emotional distress such as excessive anxiety and lowered self-concept.

The following is a list of distorted thinking styles that have been employed by athletes:

Perfectionism: This unrealistic expectation leads to excessive pressure, unavoidable failure, and undermining of effective coping. Perfectionist desires may lead to successful performance. But, perfectionist demands and commands destroy athletic careers.

It also leads to negative self-concepts and a fear-of-failure syndrome supported by extreme negative consequences tied to less than perfect performance.



Catastrophizing: Exaggerating potential consequences of imagined or real negative events comes along with perfectionism. Those suffering with this distortion expect the worst in every situation - most often worse than reality or previous experience suggest. This can contribute to actual negative outcomes.

Self-worth Depends Upon Achievement: Athletes see their self-worth as directly related to their performance and success. This idea is particularly concerning to the young athlete who look to their parents, coaches and peers for their sense of self. The result is even more stress related to performance, low and unstable self-worth, and interference with fun while participating in sports.

Personalization: When this distortion is employed by an athlete, there is a tendency to overestimate their personal responsibility for every failure and mistake. "If I only made that last free throw, we would have won the game." Repeated usage of this type of thinking can result in low self-esteem, high performance anxiety and decrease in desire to participate and take chances.

Fallacy of Fairness: The concept of fairness often translates into "wanting one's own way versus what someone else thinks is fair or best for the group." Unfairness often results in interpersonal problems, inappropriate focus of attention, and coping with adversity.

Blaming: Some athletes excessively attribute failure externally. They get to not experience any responsibility. This gets in the way of improving performance.

Polarized Thinking: Athletes are tempted to view things in black and white terms. Labels are employed that simplify self and others into unidimensional terms (i.e., losers, cheaters, unbeatable opponents). They provide a weak mental perspective to learn from and improve performance.

One-trial Generalizations: Athletes often use a single event to define expectancies for future performances. After the first few games of this season, a New York Knick basketball player was heard to say, "We are a three quarters basketball team." The result of such thinking can be self-defeating prophecy, lack of focus and preparation for the first three quarters of a game, and lack of attention.

Irrational beliefs are well entrenched in our culture and sports in particular. Examples include "No pain, no gain." And "Practice makes perfect." And "Winning Isn't everything, it's the only thing." Many important figures (coaches, parents, athletes) believe that modifying some of the thinking can lead to less competitiveness or drive to win.



Method

Different groups of BKSP Player participated in this research. They were selected by Purposive sampling technique from BKSP. All participants are currently living BKSP hostel. Their age limit was 15-16 .The Purposive sampling technique sampling method will be applied to select. A survey research design will be used. All participants will be completed the self- report questionnaires and cognitive distortion scale. For data collections following instruments will be used in the present study:

- A) Demographic and personal characteristics questionnaire. This question collected data on sex, age, educational qualification, types of sports, socioeconomic status.
- B) Dhaka University cognitive distortion scale (Siddika US and KUA Chowhury 2013.).

In this survey correlation study design the data will be analyzed by Statistical Package for Social Sciences (SPSS) version 18. Statistical analyses were used to describe the patterns for all variables. Regression and correlation analysis utilized to test the relationship between variables and also cause effect. Tenant subscales. Frequencies and percentages will be computed for categorical scores. Comparison between various groups of player cognitive distortion score as the dependent variable and gender as independent variable. While independent sample F- test will be used to estimate comparison with other predictors.

Hypothesis of the present research

H0: There are no differences among the groups according to the cognitive distortion.

H1: There are differences among the groups according to the cognitive distortion

Results

The F statistic helps to decide whether to accept or reject the null hypothesis. The test results must include an F value and an F critical value. The F value is compared to a particular value known as the F critical value. The value derived from the data is the F statistic, or F value (without the “critical” part). In general, one can reject the null hypothesis if the computed F value for a test is higher than the F critical value.



Table -1**ANOVA: Single Factor****SUMMARY**

Group	Count	Sum	Average	Variance
Basketball	27	1371	50.77	355.71
Cricket	40	1822	45.55	270.35
Hockey	21	1161	55.28	279.21
Volleyball	14	822	58.71	344.68

Table -2**ANOVA**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2401.663	3	800.554	2.627	0.054	2.697
Within Groups	29857.71	98	304.6705			
Total	32259.37	101				

In the example above, F's computed value (2.627) is less than its table value obtained from the F table (2.697). As a result, one can conclude that the null hypothesis is true and that the variance of the two samples is equal.

Cognitive distortion level in respect to different sports**Table -3****Cognitive Distortion of Basketball Sportspersons of BKSP**

Level of Cognitive Distortion	Number of Students	Percentage
Normal	17	62%
Mild	08	29%
Moderate	01	03%
Severe	01	03%

Table -4**Cognitive Distortion of Cricket Sportspersons of BKSP**

Level of Cognitive Distortion	Number of Students	Percentage
Normal	31	77%
Mild	04	10%
Moderate	05	12%
Severe	00	00%



Table -5**Cognitive Distortion of Hockey Sportspersons of BKSP**

Level of Cognitive Distortion	Number of Students	Percentage
Normal	11	52%
Mild	07	33%
Moderate	02	09%
Severe	01	04%

Table -6**Cognitive Distortion of Volleyball Sportspersons of BKSP**

Level of Cognitive Distortion	Number of Students	Percentage
Normal	05	35%
Mild	05	35%
Moderate	04	28%
Severe	00	00%

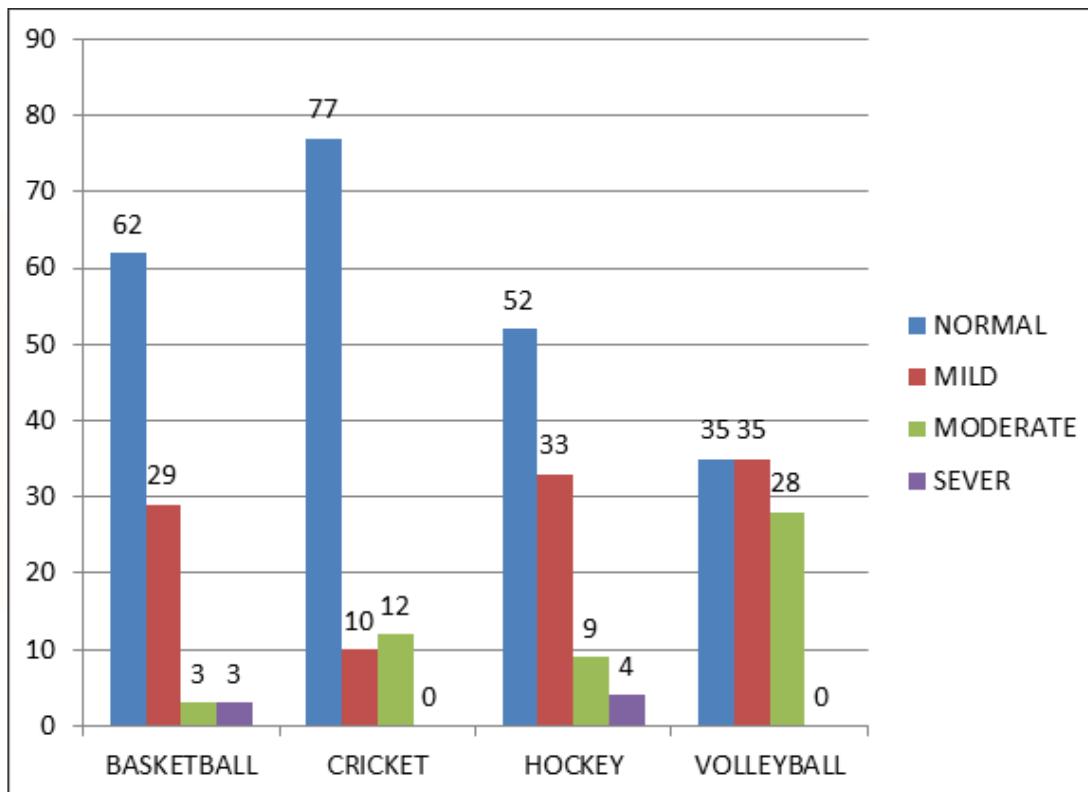
Cognitive Distortion level in respect to all the sports person of BKSP

Level of Cognitive Distortion	Number of Students	Percentage
Normal	64	62.76%
Mild	24	23.63%
Moderate	12	11.76%
Severe	02	1.92%

The above table reveals that the mental health condition was very much satisfactory. It was 62.76% almost 63% was normal that means 63% has no any cognitive distortion. Mild 23.63% moderate 4.11% and severe cognitive distortion was 1.92% was found.



Percentage of Cognitive Distortion of Histogram graph of different Sportspersons in BKSP



DICUSSION

The result indicates that there is statistically significant difference among Basketball, Cricket, Hockey and Volleyball in selected psychological variables of cognitive distortion. According to percentage analysis the present survey, the majority of the sportspersons have been observed to be not having any cognitive distortion.

The level of cognitive distortion of different sport discipline sportsperson like mild, moderate and severe much less. Understandably, the sportspersons joining BKSP, premier sport institute in the country, should be high in the diving force, having clear short term and long term goal that guide the sportsperson into achieving excellence. This result could be due to the fact that all the sportspersons study in the same institution and follow the same program in respect of academic as well sports training. They also reside in the hostel and perhaps enjoy the satisfying personal relationship as well as share each other's emotion and take decisions themselves as and when the need arises. Those who have mild, moderate and severe level of cognitive distortion, they need to go under the supervision of mental health professional.



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Identification of Fast Bowling Action of Selected BKSP Cricketers

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Abstract

The purpose of this study was to analyze the fast bowling action of Bangladesh Krira Shikkha Protisthan (BKSP) cricketers. For the purpose of this study nine (09) cricketers were selected from BKSP. They were under go for long term training program at this institute. Camcorder was used to collect videography. The bowlers were asked to perform three times bowling including run up, load up/ pre delivery stride, delivery stride, ball release, follow through. Their movements were captured in the camcorder and downloaded to personal laptop. The data was analyzed by motion analysis software Kinovea (version 0.8.15). Result found that four bowlers bowling action were side on action, two bowlers bowling action were mixed action and three bowlers bowling action were front on action.

Key words: BKSP Cricket, Biomechanical analysis, Bowling, Kinovea.

Introduction

Recently several types bowling action played in cricket match. Fast bowling is one of the bowling type where bowler approach run speed is too fast and it transfer into bowling speed. The fast bowler role is one of the most important roles in cricket. Starting a cricket match the captain traditionally chooses bowling attack by a fast bowler. Fast bowler can destroy the batting order of opposite team very quickly like Shoaib Akhtar, Brett Lee, Dale Steyn, Lasith Malinga and others.

There are three main bowling actions of fast bowling those are; Side-on, Front-on and Mixed. The side-on bowling action is been described as the 'Correct' and most effective way to bowl. It can be described as when the bowlers back foot lands parallel to the popping crease and where the bowlers shoulder alignment points down the pitch such that the angle between the wickets and the lone joining the shoulders is approximately 180° . Also the side-on bowling action generally has a slower run up (Bartlett et al, 1996).

The front-on bowling action has a faster run up speed and the back foot lands facing towards the batsman. There is a more open chested position at back foot strike with the shoulders at and angle that exceeds 180° (Bartlett et al, 1996). The 'Mixed' bowling actions are still common amongst bowlers of all ages and has been shown to be a predominant factor related to injury; (Elliott et al., 1993, Bartlett et al., 1996, Portus et al., 2004). With the mixed bowling technique, the hip-to-shoulder miss-alignment occurs at BFC. There are two types of mixed bowling technique, both of which have a hip-shoulder separation angle equal to or



greater than 20 degrees at BFC (Hurriion 1997). The mixed bowling technique also requires the spine to adopt a twisted and hyper-extended position during front foot contact. Then to confuse things further, we have a breed of bowlers who sling the ball with a delayed bowling arm. Think of players like Malinga and Jeff Thompson.

Methods and Materials

2.1 Study Design and Area

The study was based on nine male (09) cricket bowlers from BKSP, a renowned sport institute at Zirani, Savar, Dhaka, Bangladesh. The back foot contact (BFC), angle of shoulder at the time of BFC, angle of shoulder at ball release and other metrics of the nine bowlers were analyzed in the practice session. The performance of the subjects was assessed by international standard criteria, rules and regulations enforced by the International Cricket Council (ICC) and the Marylebone Cricket Club (MCC).

2.2 Subjects

The subjects selected for this study were nine male bowlers (cricketers) from BKSP, Bangladesh. All of them were intermediate level cricket players. The age range of the bowler was 18-20 years and all were under-graduate students of BKSP. They had experience in participating in divisional competitions (1st, 2nd & 3rd division), inter club competitions, and inter university competitions and others inside Bangladesh.

The subjects were living inside BKSP, which is a government residential sport institute in Bangladesh; all study participants were getting same facilities and training under the supervision of cricket coaches as well as same diet. These particular nine cricket fast bowlers in BKSP were chosen for their regular practice habit and strong sense of discipline. It is to be noted that the two bowlers were right handed and one bowler was left handed.

2.3 Data Collection

The data for different variables of the bowlers were collected by operational a biomechanical film with the help of a camcorder Sony DV Cam (DCR-HC40 MiniDV, Japan) working with 12 frames per second; two cameras were placed at a distance of ten meters from the middle stump of the cricket pitch at 45 degree and 90 degree angles. Markers were used at their bowling arm.

The international standard cricket field at BKSP was used for data collection. The match wicket was formed and the bowlers were asked to bowl with their best



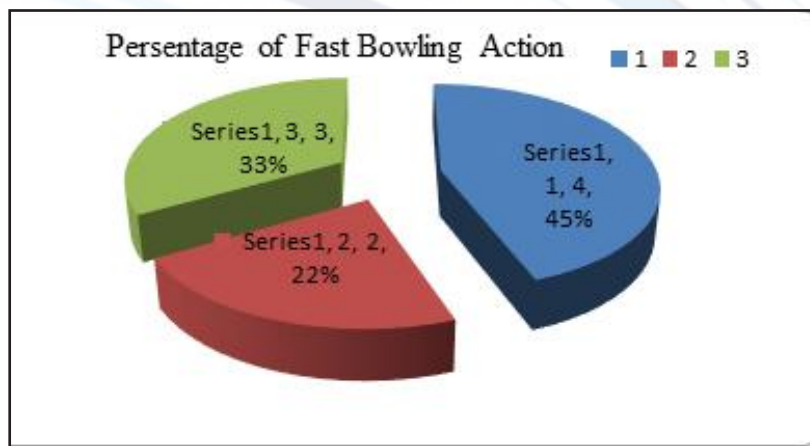
deliveries. After a specific warm-up (stretching, jogging, light running and some warm up exercise were performed before bowling) the subjects were asked to bowl the deliveries. The best three bowling deliveries were recorded. After recording, all the video footage were downloaded into a personal laptop and subjected to biomechanical analysis.

2.4 Data Analysis

The fast bowlers bowling action videos were transferred to a personal laptop (Dell Inspiron series N5110-core i5). The video of each individual bowler was put into motion analysis software Kinovea (<https://www.kinovea.org/>) for visual observation with slow motion as well as frame by frame analysis to find BFC, several angles (shoulder angle at BFC, shoulder angle at ball release, etc.).

Result and Discussion

After analysis of the video footage of the study participants bowling actions by motion analysis software Kinovea, the results obtained were summarized in Table 1 and Figures 3.24. As shown in Table 1, 100% of the participants in the current study were male and 88.89 % of them were right handed. Average shoulder alignment angle at BFC was 186.11 degrees.



1. Side on- 45%
2. Mixed on 22%
3. Front on- 33%

Figure: 1 Percentages of fast bowling action





Figure: 2 Shoulder Alignment Angle at BFC Measured by Kinovea from Current Analysis

Table. Shoulder Alignment Angle at BFC and Identification of Bowling Action among BKSP

Name	Gender	Arm	Shoulder Alignment Angle at BFC(in degree)	Bowling Action
Golam Rahman	Male	Right	175	Side on
Robiul Islam	Male	Right	179	Side on
Jayed Ahmed	Male	Right	172	Mixed
Toukir Islam	Male	Right	185	Side on
Mehedi Hasan Roni	Male	Right	176	Mixed
Rudro	Male	Left	206	Front on
Anowar Hossen	Male	Right	181	Side on
Altaf Hossain	Male	Right	211	Front on
Sakib Hasan	Male	Right	190	Front on





Side on (A)



Front on (B)



Mixed action (C)

Figure 3. Representative Images of Different Types of Fast Bowling Action from Current Study

The bowling action is a series of movements designed to get the cricket ball to the other end of the pitch as fast as possible. The side on action as described by Fred Trueman. He was one of the fastest and most accurate bowlers of his time; possibly ever.

All the classic elements of the side on bowler:

- a. Back foot lands parallel to the crease
- b. Shoulders square on to the batsman as the back foot lands
- c. Head looking over the shoulder as the back foot lands

A bowler's action does not affect the speed at which they bowl. It can limit the style of balls that they can bowl. This is not a fixed rule but side on bowlers generally bowls out-swingers. Australian pace bowler Dennis Lillee used a side on technique to great effect. Golam Rahman, Robiul Islam, Toukir Islam and Anowar Hossen's bowling action were to follow all the classic elements of the side on bowler.

The other extreme of action is front on as typified by Malcolm Marshall, Marshall could bowl very fast and swing the ball. His action was far removed from the one every one had considered to be correct:

- a. Back foot lands pointing down the wicket
- b. Shoulders are open as the back foot lands
- c. Head looking inside the front arm as the back foot lands



West Indies bowler Malcolm Marshall was a classic example of a chest on bowler. Front on bowlers generally bowl in-swingers (www.pitchvision.com). Rudro, Altaf, Sakib's bowling action were similar to front on action and follow the rules and regulations of side on bowlers. A variant on the fast bowler's action is the sling. In this action, the bowler begins his delivery with his or her arm fully extended behind their back. The slinging action generates extra speed, but sacrifices control. Current internationals that employ a slinging action include Fidel Edwards, Shaun Tait, Lasith Malinga and Mitchell Johnson (www.cricvision.com). Mehedi Hasan and Jayed's bowling action were similar to mixed action. They had a large leap into the crease to allow their body to rotate into position (load up). As their back leg lands their feet were pointing back from batsman towards mid-on, so not parallel with the popping crease as a side-on action would and not pointing down the wicket like a front-on action.

A mixed action is an unhealthy combination of front and side on; this cause twisting in the lumbar spine when it is dealing with a lot of force. Twisting that can lead to soreness and stress fractures. The spine needs to be as untwisted as possible so the shoulders and hips need to be lined up in front, side or midway positions (www.pitchvision.com).

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Beep Test of BKSP Female Cricket & Male Basketball Team.

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BEEP TEST

Abstract

The Beep Test is a multi-stage fitness test developed, by Professor Luc A. Leger from the University of Montreal in Canada in the 1970s, as a way to determine a person's aerobic capacity (VO₂max). The beep test is also known by other names, such as: Multi Stage Fitness Test. It is commonly used by coaches and trainers to measure athlete fitness, or used as a pre-requisite for police, emergency and military organizations. Present study was designed to analyse change of motor fitness of BKSP Female Cricket & Male Volleyball Team. Accordingly, the problem was stated "Beep Test of BKSP Female Cricket & Male Basketball Teams". The purpose of this study was to carry out of BEEP Test of 47 (Boys - 30 & Girls - 17) players of BKSP Participants in this test. To conduct this study quantitative research model in the form of deformities is based on percentage analysis. It was observed that male Basketball team 13% subject were excellent, 50% were Very Good, 27% were Good, 10% were average and Female Cricket Team 94% subject were Very Good, 6% were average.

Key words: Beep Test, Fitness, Aerobic capacity, Athlete.

Introduction

In order to enhance sports performance, one has to spend a considerable amount of time in developing different components of physical and motor fitness (Uppal, 2001). The physical and motor fitness of a sports person is the sum total of several motor abilities namely strength, speed, endurance, flexibility, agility and coordination. These motor abilities and their complex forms (e.g. Strength endurance, speed endurance, explosive strength etc.) are the basic prerequisites for human motor actions.

Different Sports require different components (Tandon et al 2001). General fitness of components namely strength, speed, endurance, flexibility and agility and each of these components has an important role to play and contribute to the total fitness of a sportsperson.

In their research studies Shaker (1981), Ellena (1960), Dahl (1977), Atkinson (1973), Lamba (1980), Mishra (1983) and Amusa and Onyewadume (1987) have observed that performance in different games and sports, is generally influenced by the level of fitness of a sportsperson.

Khan and Rahman (2003) tested BKSP basketball players in selected motor fitness components and prepared a profile.



They observed that the basketball players had a very good status of respect for speed, entrance, agility and flexibility. With regard to explosive strength of legs and arms they needed to undertake more training loads to improve.

Uppal and Chib (2001), while working with Volleyball players concluded that explosive strength of the leg and agility were important motor components for predicting performance in the game.

The Beep Test is a multi-stage fitness test developed, by Professor Luc A. Leger from the University of Montreal in Canada in the 1970s, as a way to determine a person's aerobic capacity (VO₂max). The beep test is also known by other names, such as: Multi Stage Fitness Test. It is commonly used by coaches and trainers to measure athlete fitness, or used as a pre-requisite for police, emergency and military organizations.

The beep test is also known by other names, such as:

- Multi Stage Fitness Test
- Bleep Test
- Pacer Test
- Shuttle Run Test
- 20-meter Shuttle Run

Beep Test Instruction

The 20m multistage fitness test (MSFT) is a commonly used maximal running aerobic fitness test. It is also known as the 20meter shuttle run test, beep or bleep test among other names. It is a maximal test involving continuous running between two lines 20m apart in time to recorded beeps.

Equipment required: Flat, non-slip surface, marking cones, 20m measuring tape, beep test audio, audio player, recording sheets.

Procedure: The test procedures to the subject (many beep test audios have an explanation at the start of the recording). Perform screening of health risks and obtain informed consent. Prepare forms and record basic information such as age, height, body weight, and gender, test conditions (particularly the weather and running surface). Measure and mark out the course. Ensure that the participants are adequately warmed-up.

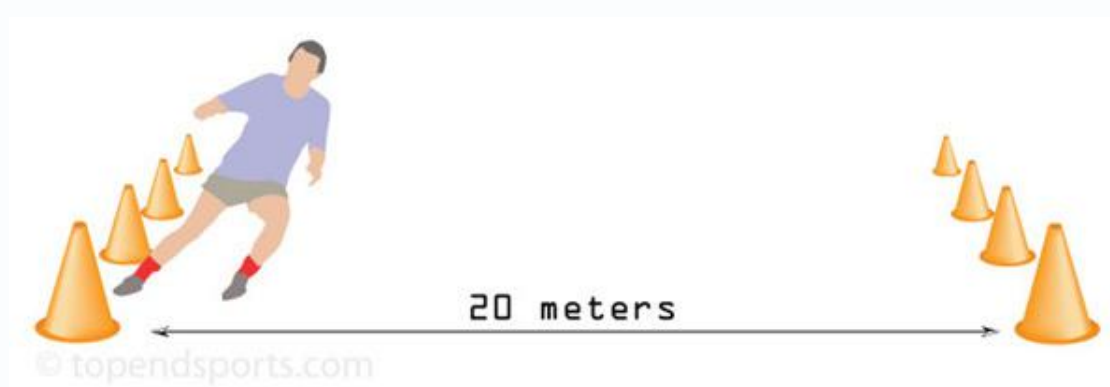


Materials And Method

30 boys and 17 girls were selected from BKSP Basketball and Female Cricket Team for attending Yearly Fitness Test 2022 of BKSP Sports Science Department at BKSP, Zirani, Savar, Dhaka. The age of the subject was 13 to 17 years.

As soon as they reported at the institute there is status in respect of Fitness were assessed using the Beep Test Audio Recording, Markers & Measuring Tap.

The performance of the subject was graded with the help of age wise norms available at the institute. With the help of the score in test item, an individual profile prepared for each subject. The qualitative assessment of performance of subject was done as per the following criteria;



BEEP TEST



Beep Test Norm by Age

BEEP TEST						
MALES	poor	fair	average	good	very good	excellent
12 - 13 yrs	3/4	5/2	6/5	7/6	8/9	10/9
14 - 15 yrs	4/7	6/2	7/5	8/10	9/9	12/2
16 - 17 yrs	5/1	6/9	8/3	9/10	11/4	13/7
18 - 25 yrs	5/2	7/2	8/6	10/2	11/6	13/10
26 - 35 yrs	5/2	6/6	7/10	8/10	10/7	12/9
36 - 45 yrs	3/8	5/4	6/5	7/8	8/10	11/3
46 - 55 yrs	3/6	4/7	5/6	6/7	7/8	9/5
56 - 65 yrs	2/7	3/7	4/9	5/7	6/9	8/4
> 65 yrs	2/2	2/6	3/8	4/9	6/2	7/2

BEEP TEST						
FEMALES	poor	fair	average	good	very good	excellent
12 - 13 yrs	2/6	3/6	5/2	6/2	7/5	9/3
14 - 15 yrs	3/4	5/3	6/5	7/6	8/8	10/7
16 - 17 yrs	4/2	5/7	7/2	8/5	9/8	11/11
18 - 25 yrs	4/5	5/8	7/3	8/7	10/2	12/7
26 - 35 yrs	3/8	5/3	6/6	7/8	9/5	11/5
36 - 45 yrs	2/7-	3/8-	5/4	6/3	7/5	9/5
46 - 55 yrs	2/5	3/6	4/5	5/4	6/3	8/1
56 - 65 yrs	2/2	2/7	3/6	4/5	5/7	7/2
> 65 yrs	1/5	2/2	2/7	3/5	4/4	5/7

Results

The data in Respect of each sport is presented in following the Tables.

Table 1
Beep Test 2022 of Basketball Team of BKSP (N = 30)

Type of Grading	Number	Percentage
Excellent	04	13%
Very Good	15	50%
Good	08	27%
Average	03	10%



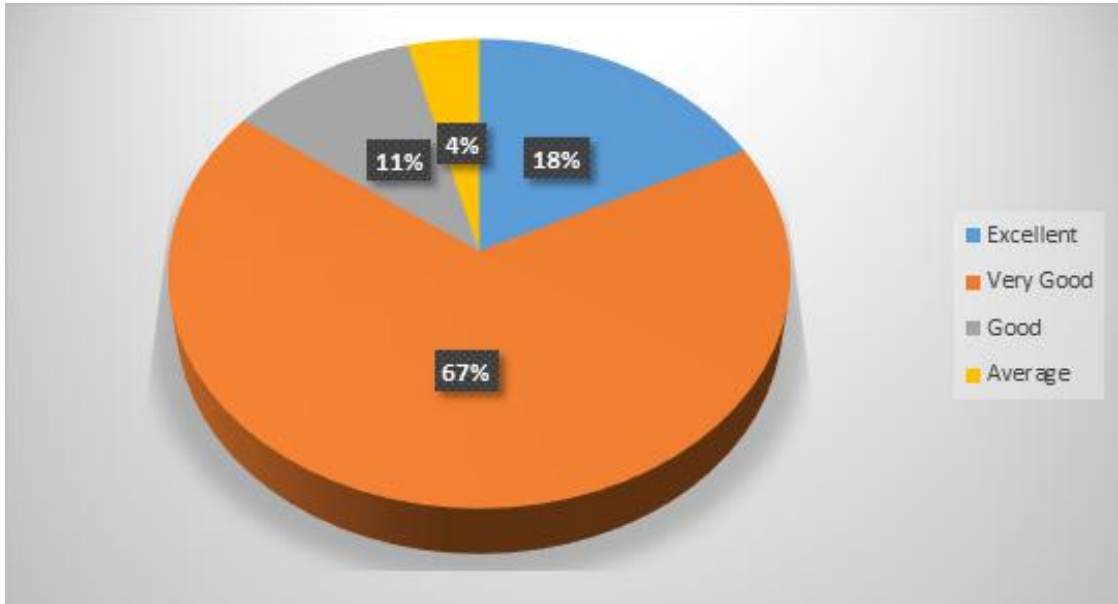


Figure-1: Percentage of Beep test results in Chart (Basketball Team)

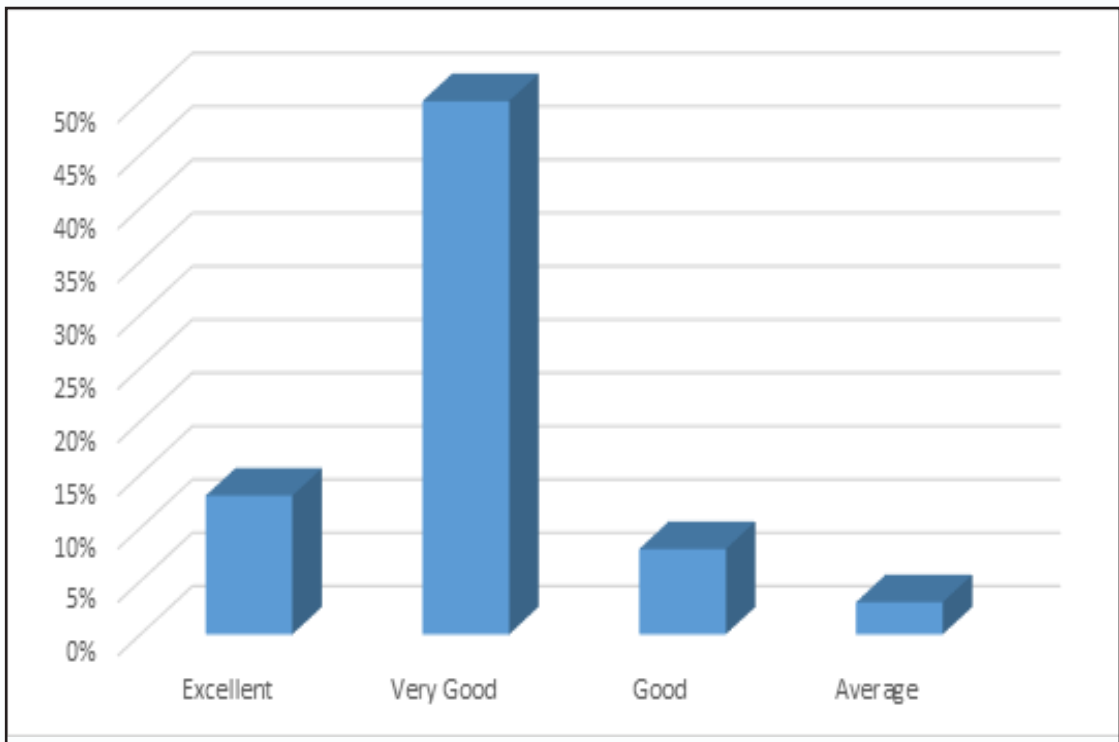


Figure-2: Percentage of Beep test results in Chart (Basketball Team)



Table 2
Beep Test 2022 of Female Cricket Team of BKSP (N = 17)

Type of Grading	Number	Percentage
Excellent	00	00%
Very Good	16	94%
Good	00	00%
Average	01	06%

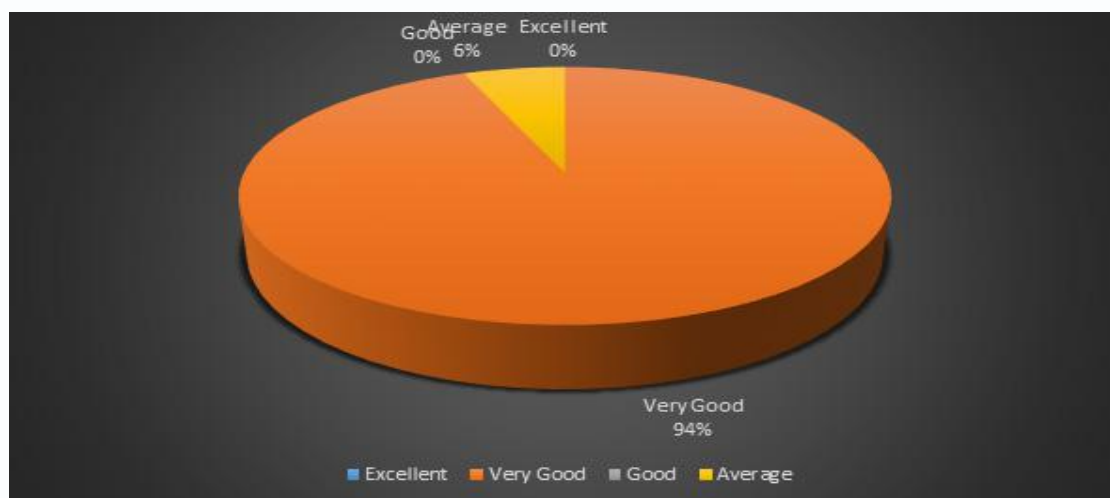


Figure- 3: Percentage of Beep test results in Chart (Female Cricket Team)

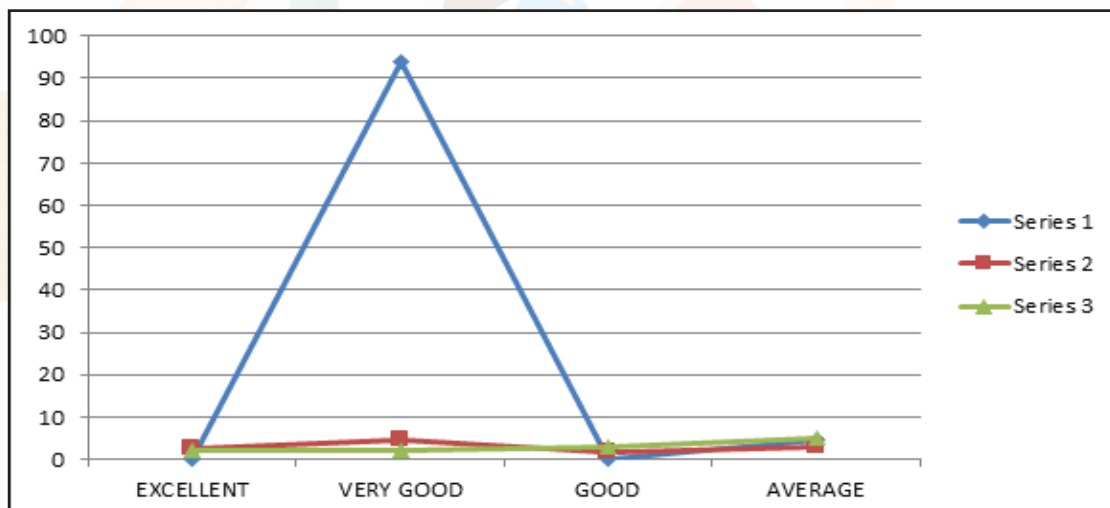


FIGURE-4: Percentage of Beep test results in Chart (Female Cricket Team)



Conclusion

On the basis of the results and within the limitation of the study, following conclusions were drawn.

- The Female Cricket & Male Basketball Teams aerobic capacity (VO₂max) is overall very good.

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C. INTERNET



Common Sports Injuries Among The Injured Cricket Players

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Abstract

The Purpose of this article was to analyze the various common sports injuries sustained by cricket players. The injuries studied include muscle strains, stress fractures, tendonitis, and ligament tears. The study has been provided a baseline of information about the common injuries of the injured cricket players. Among the 50 cricketers n=5, (10.0%) had Shoulder Girdle injuries, n=5, (10.0%) had Elbow, n=7, (14%) had Wrist injuries, n=2, (4.0%) had Hand & Finger injuries, n=13, (26%) had Hip & Thigh injuries, n=5, (10.0%) had Knee & Leg injuries, n=8, (16.0%) had Ankle injuries, n=1, (2.0%) had Foot injuries, n=2, (4.0%) had Spine Back & Trunk injuries and n=2, (4.0%) had Head/neck injuries respectively. The level of severity according to 10.0%, 74.0% and 16.0% of the players belong to age group of mild, moderate and severe.

Introduction

While cricket is not a contact sport, it is still physically demanding and can lead to a variety of injuries (Foster, 2009). Common cricket injuries include hamstring strains, shoulder impingement, ankle sprains, and lower-back pain (Sakshi et al., 2018). These injuries can occur due to repetitive motions, incorrect technique, inadequate warm-ups, and lack of stretching (Gates et al., 2015). Resulting in physical pain and disruption to the player's career. Recent studies have reported that the most common injuries reported among cricket players include hamstring injuries, shoulder problems, ankle sprains and lower back pain (Giles et al., 2017). Cricket is a fast-paced and highly demanding sport, making the players prone to injuries due to the intensity of the sport (Young et al., 2018). The physical demands of the game involve a lot of running, throwing, batting and fielding, putting strain on the body and increasing the risk of injuries. Therefore, it is essential for cricket players to take preventative measures in order to reduce the risk of injuries.

Study design

Cross sectional design.

Study population

Populations were the injured Cricketers of BKSP who had injuries in between last 6 months of playing cricket.



Study site

The place of the study is BKSP

Study period

1st June, 2022 to 31th December, 2022

Sample size

Following formula was used to determine the sample size.

$$n = \frac{z^2 pq}{d^2}$$

Here

n = the desired sample size

z = the standard normal deviate usually set at 1.96 which corresponds to 95% confidence level

p = 15% {Estimated prevalence of sports injury Ashrafuzzaman (2002)}

q = 1-p = 1.00-0.15

q = 0.85

d = degree of accuracy desired, usually set at 0.05%.

Now, required sample size

$$n = \frac{z^2 pq}{d^2}$$
$$n = \frac{(1.96)^2 \times 0.15 \times 0.85}{(0.05)^2}$$
$$= 195.9216$$

So, required sample size is 196.



As there were limitation of time it was very difficult for the researcher to research toward 196, that's why 50 samples were taken by kind permission of Guide.

Inclusion and Exclusion criteria

Inclusion criteria

The subjects were cricket players who had injuries while playing or involving practice in between last one year. The subjects who had available documents in their medical report file.

Exclusion criteria

The cricket players, who had no injuries in between last one year and had no interest or willingness to be participant, were excluded. The subjects who did not have available documents about their conditions in their medical report file, were also excluded.

Sampling technique

Randomized purposive sampling technique was applied to collect the data.

Data collection tools

A pretested, modified and semi-structured questionnaire was used to collect the data.

Data collection technique

From the participant by face-to-face interview.

Data management and analysis

After collection of data of the respondents were organized. Data was entered into the computer by using Statistical package for the social science (SPSS) Version 23.0. Result is presented by frequency, distribution, range, mean, and percentage. All scores and percentages were computed and presented in tabular form, charts, and graphs as appropriate. Finally, the data was interpreted on the basis of study findings.



Results

Total sample size is 50. The Data analysis initiated with descriptive analysis. For descriptive analysis, categorical data were presented as frequencies and percentages. Case study were presented into own language by the researcher himself. The analysis & observations will be made based on primary as well as secondary sources of data. The qualitative data will be analyzed using an inductive data analysis method. Inductive analysis means that, 'the pattern themes and categories of analysis come from data; they emerge out of the data rather than being imposed on them prior to data collection & analyses. In the present study the researcher will transcript the obtained data with necessary correction & develops some theme based on the opinion of the respondents. The researcher will use the matic analysis for processing data.

Table No. 1: Distribution of the players by group age (n = 50)

Group age	Frequency	Valid Percent
13-15	8	16.0
16-18	22	44.0
19-21	18	36.0
22-24	2	4.0
Total	50	100.0

It is found from table no. 1, that 16.0%, 44.0%, 36.0% and 4.0% of the players belong to age group of 13-15, 16-18, 19-21 and 22-24 years respectively.

Table No. 2: Distribution of the players by Sex (n = 50)

Gender	Frequency	Valid Percent
Male	50	100.0

It is found from table no. 2, that 100% of the players are male.

Table No. 3: Distribution of the players by height (n = 50)

Hight of the Player	Frequency	Valid Percent
1.60-1.65m	5	10.0
1.66-1.70m	14	28.0
1.71-1.75m	27	54.0
1.76-1.80m	4	8.0
Total	50	100.0



It is found from table no. 3, that 10.0%, 28.0%, 54.0% and 8.0% of the players belong to age group of 1.60-1.65m, 1.66-1.70m, 1.71-1.75m and 1.76-1.80m respectively.

Table No. 4: Distribution of the players by Major role during playing. (n = 50)

Major role during playing

Major roles	Frequency	Valid Percent
Batting	14	28.0
Bowling	15	30.0
Both Batting & Bowling	14	28.0
Wicket keeping	7	14.0
Total	50	100.0

It is found from table no.4, that 28.0%, 30.0%, 28.0% and 14.0% of the players belong to age group of batting, bowling, both batting & bowling and wicket keeping respectively.

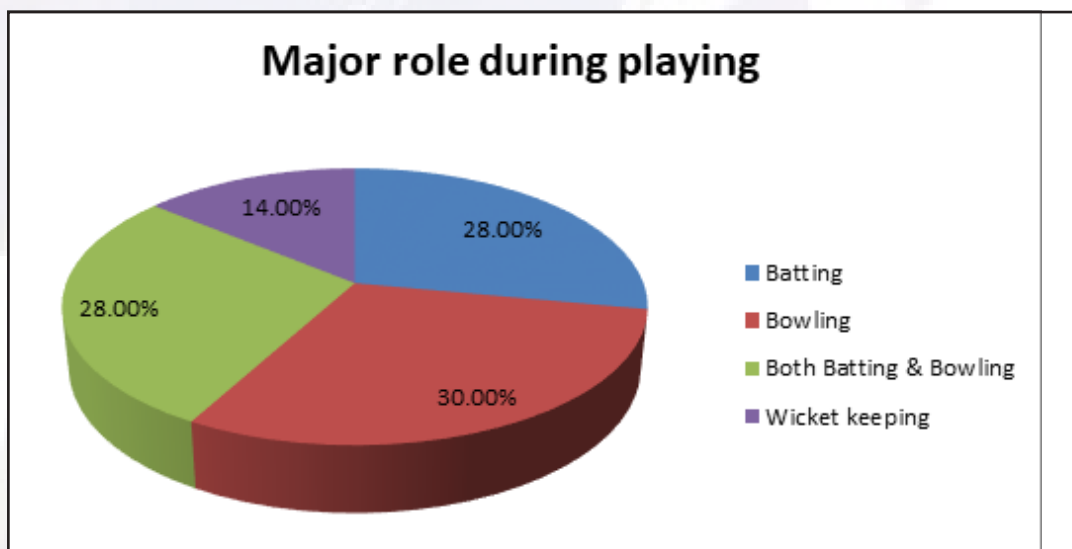


Figure-1

It is found from figure no. 1, that 28.0%, 30.0%, 28.0% and 14.0% of the players belong to age group of batting, bowling, both batting & bowling and wicket keeping respectively.



Table No. 5: Distribution of the players by Type of injury. (n = 50)
Type of injury

Type of injury	Frequency	Valid Percent
Direct injury	11	22.0
Indirect injury	8	16.0
Overuse injury	31	62.0
Total	50	100.0

It is found from table no.5, that 22.0%, 16.0% and 62.0% of the players belong to age group of direct injury, indirect injury and overuse injury respectively.

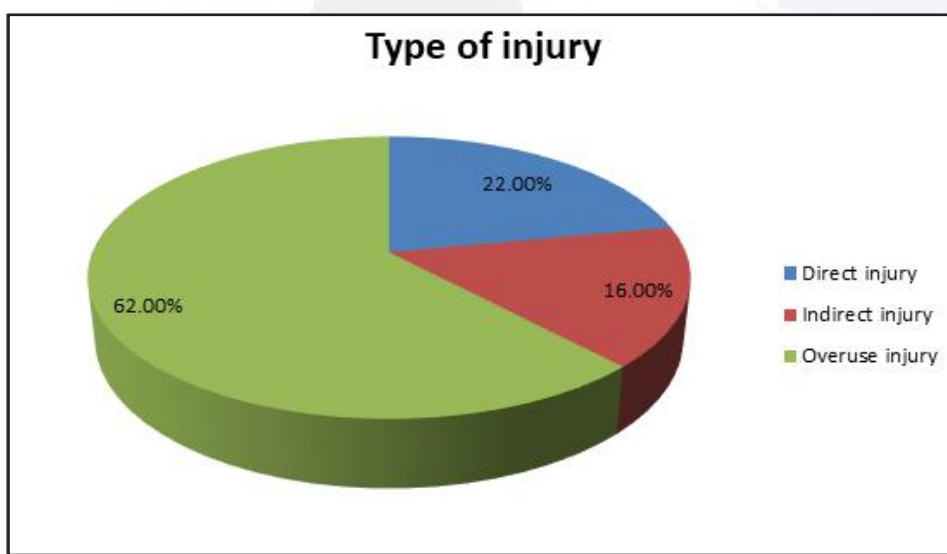


Figure-2

It is found from figure no. 2, that 22.0%, 16.0% and 62.0% of the players belong to age group of direct injury, indirect injury and overuse injury respectively.

Table No. 6: Distribution of the players by Level of severity. (n = 50)
Level of severity

Level of severity	Frequency	Valid Percent
Mild	5	10.0
Moderate	37	74.0
Severe	8	16.0
Total	50	100.0



It is found from table no.6, that 10.0%, 74.0% and 16.0% of the players belong to age group of mild, moderate and severe respectively.

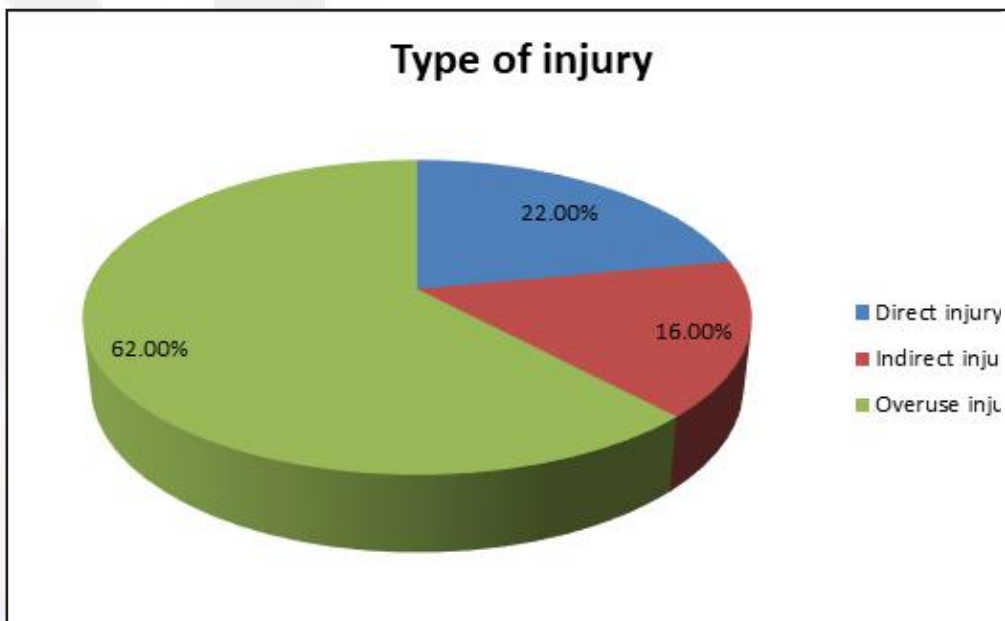


Figure-3

It is found from Figure-3, that 10.0%, 74.0% and 16.0% of the players belong to age group of mild, moderate and severe respectively.

Table No. 7: Distribution of the players by injured area. (n = 50)

Injured area

Injured area	Frequency	Valid Percent
Shoulder Girdle	5	10.0
Elbow	5	10.0
Wrist	7	14.0
Hand & Finger	2	4.0
Hip & Thigh	13	26.0
Knee & Leg	5	10.0
Ankle	8	16.0
Foot	1	2.0
Spine, Back & Trunk	2	4.0
Head/neck	2	4.0
Total	50	100.0



It is found from table no.7, that 10.0%, 10.0%,14.0%, 4.0%, 26.0%, 10.0%, 16.0% 2.0%, 4.0% and 4.0% of the players belong to age group of Shoulder Girdle, Elbow, Wrist, Hand & Finger, Hip & Thigh, Knee & Leg, Ankle, Foot, Spine, Back & Trunk and Head/neck respectively.

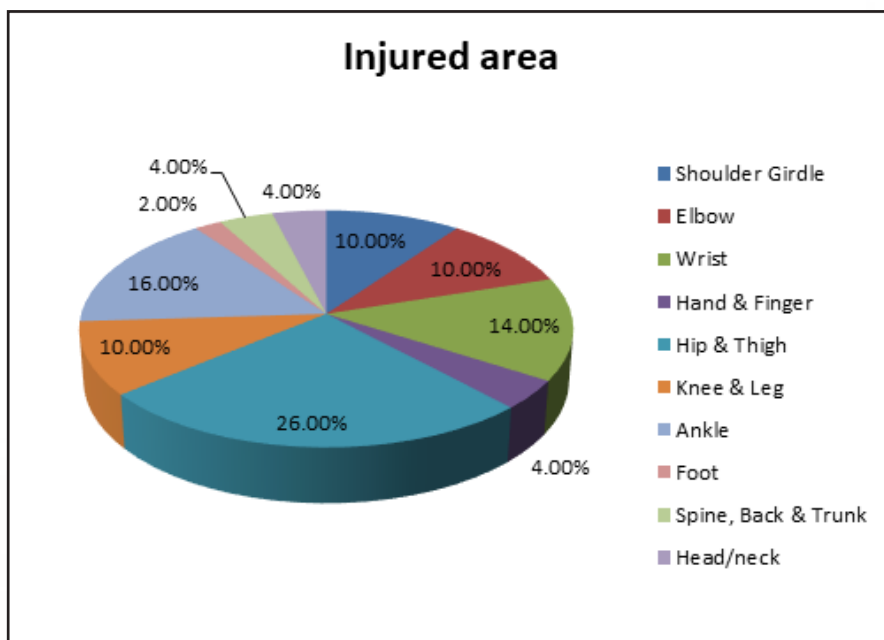


Figure-4

It is found from figure no. 4, that 10.0%, 10.0%, 14.0%, 4.0%, 26.0%, 10.0%, 16.0% 2.0%, 4.0% and 4.0% of the players belong to age group of Shoulder Girdle, Elbow, Wrist, Hand & Finger, Hip & Thigh, Knee & Leg, Ankle, Foot, Spine, Back & Trunk and Head/neck respectively.

Table No. 8: Distribution of the players by Provisional diagnosis. (n = 50)

Provisional diagnosis	Frequency	Valid Percent
Rotator cuff injury	2	4.0
Dislocation	4	8.0
Muscle strain	13	26.0
Tennis elbow	5	10.0
Ligament injury	12	24.0
Fracture	3	6.0
Others	11	22.0
Total	50	100.0



It is found from table no.8, that 4.0%, 8.0%, 26.0%, 10.0%, 24.0%, 6.0%, and 22.0% of the players belong to age group of Rotator cuff injury, Dislocation, Muscle strain, Tennis elbow, Ligament injury, Fracture and Others respectively.

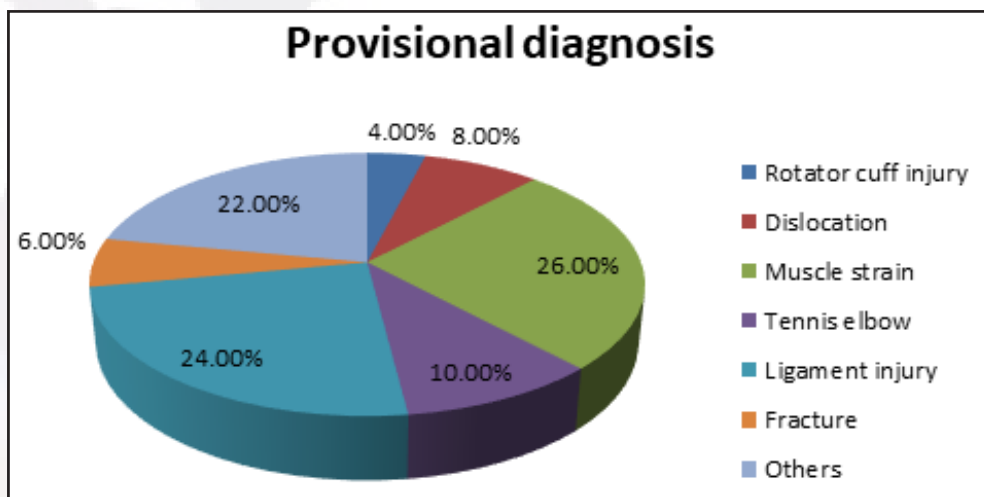


Figure-5

It is found from figure no. 5, that 4.0%, 8.0%, 26.0%, 10.0%, 24.0%, 6.0%, and 22.0% of the players belong to age group of Rotator cuff injury, Dislocation, Muscle strain, Tennis elbow, Ligament injury, Fracture and Others respectively.

Discussion

The most commonly injured joint in cricket is shoulder and most injuries occurs during throwing. He mentioned that injuries to the elbow in cricket are not common. The wrist joint may be affected when a player falls on the ground while fielding the ball. Wicket keepers are also prone to wrist injury. Muscle strain is common as hip and thigh problem. It may be due to lack of conditioning of the muscles. There also can be present adductor strain, stress fracture of pubic rami and groin strain. At knee patellar tendinitis, twisting injuries like ligamentous injury can be present. Back pain is most common to the bowlers. Mainly damage to the lumbar spine especially ligamentous sprain is the main cause of back pain. From the results of the study, it was found that there were three categories of injuries of the cricket players that 10.0%, 74.0% and 16.0% of the players belong to age group of mild, moderate and severe respectively. Shoulder Girdle, Elbow, Wrist, Hand & Finger, Hip & Thigh, Knee & Leg, Ankle, Foot, Spine, Back & Trunk and Head/neck respectively that 10.0%, 10.0%, 14.0%, 4.0%, 26.0%, 10.0%, 16.0% 2.0%, 4.0% and 4.0% of the players belong to age group of Rotator cuff injury, Dislocation, Muscle strain, Tennis elbow, Ligament injury, Fracture and



Others respectively that 4.0%, 8.0%, 26.0%, 10.0%, 24.0%, 6.0%, and 22.0% of the players belong to age group. There is a constant relationship between high bowling workload and injury. So, it can be said that bowlers get more injury and remain out of training and sports more. It may be for high workload than others.

Sports injuries are a common occurrence among cricket players who are exposed to a variety of potential hazards both on and off the field. The most frequent injuries among cricketers include ankle sprains and strains, knee ligament tears, shoulder joint problems, and back injuries. These injuries can occur as a result of overuse or poor technique, or can be caused by sudden contact with another player or object. In addition, cricket players are at risk of contracting diseases such as skin infections, heat exhaustion, and viral illnesses. Prevention is key to reducing the risk of injury, and cricket players should take steps to ensure they are physically fit, use correct technique and follow safety protocols. If an injury does occur, it is important to seek medical attention to ensure that it is properly treated. Proper rehabilitation is also essential for successful recovery.

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Prevalence of Sports Injury Among Adolescent Female Athletes at BKSP in Bangladesh

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Abstract

Adolescent is the most prevalent age for sports participation and these athletes are more sensitive to injury than adults. Because of the numerous aspects, it is necessary to understand the prevalence, nature, and many elements contributing to injuries in sports such as football, hockey, cricket, athletics, and basketball, which are the most commonly played here. Methods: A cross-sectional study was conducted among athletes between the ages of 11 and 19 who participate in competitive sports were recruited from the stadium and athletic training centers over a one-year period. A standardized questionnaire was created and distributed to the players in order to record injuries and their causes. Results: The research involved 461 athletes. 300 Athletes were hurt earlier and recently. 149 athletes (32.3%) had both past and current injuries, 88 (19.1%) only had previous injury, and 63 solely had recent injury. Lower limb injuries were discovered to be more prevalent. Injury was highly connected with psychological difficulties, past injury, ground, and BMI. Conclusion: In this study, the prevalence of sports injuries was 65%. This study discovered injury risk variables such as gender, age, psychological and stress-related difficulties, and past injuries.

INTRODUCTION

Sports are important in representing a country's national pride. Internationally athletes are honored for their great performance in international games (Merlino & Perisa, 2012). Several sporting events are organized each year by FIFA, the International Cricket Council, the Olympic Committee, and other sport organizations. The international media places a high value on sports news and covers it extensively (Junge et al., 2004). We used to think of sports as purely for amusement a few years ago. But in today's world, athletes pursue it as a career.

Parents enroll their children in sports institutes when they are young in order to develop them into future athletes. As a result of the expanding population, the number of sport athletes is also increasing (Yoon et al., 2004). Injuries are the most serious threat to all athletes around the world.

Many outstanding athletes were unable to compete in the major event due to injury, as evidenced by world athlete history. This issue is particularly acute among Bangladeshi athletes (Hawkins & Fullar, 2006). Since the world's population has grown significantly so has the popularity of popular games and as a result, more and more people are becoming interested in athletics and sports. The number of sports institutes is increasing and they are organizing more sporting events.



Before participating in a sporting event, athletes must undergo extensive training; throughout this training and while competing, athletes realize the importance of physiotherapy in order to overcome injury and maintain their bodies fit for the games (Pecina & Bojanic, 2007). Sports injuries are recognized and observed all around the world. Approximately 1 million Americans seek medical attention each year for their two sports-related injuries. This equates to around 26 per 1,000 individuals (Yoo et al., 2010). Injury rates are higher for those who participate in contact sports but those who participate in individual activities face serious harm. Girls were more injured than boys in terms of minor injuries.

Methodology

A cross-sectional study was conducted at Bangladesh Krira Shikkha Protisthan, (BKSP) Savar, Dhaka. Duration of the study was September 2022 to February 2023. The study was done population consisted of female athletes from Bangladesh Krira Shikkha Protisthan, (BKSP) who had bad injuries in the previous two years, age group was 10-19. Those who are not willingly participate and who were not injured were excluded from the study. By adjusting the 10% of non-response rate and after the rounding the sample size was 308.

Convenience sampling technique and face to face interview was used for data collection. A semi-structured questionnaire was used according with consent form, pencil, pen, pages, file, tape, laptop, modem, and SPSS (Statistical Program for the Social Sciences) software-16 version were used in this study to analyze data.

Ascertainment of key variables

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.

Sports Injury

Common types of sports injuries are broken bones, soft tissue lesion (laceration, abrasion, contusion) and burns. Injury results from harmful contact between players 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).



Female athletes

A person trained to complete in sports or exercises involving physical strength, speed, endurance or a person who has natural attitude for physical activities. Those who are female participants involved in athletic activity are called as female athletes.

Results

Data were collected from 461 were involved in the study among them 300 participants got injured according to criteria. Among them 50 participants the highest number of injured that were analyzed.

Table 1
Socio- demographic, BMI & Eating disorder of the respondents, n = 50

Variable	(n)	(%)
Age in year		
≥ 14	30	60
≤ 15	20	40
Education level		
PSC	7	14
JSC	17	34
SSC	19	38
HSC	7	14
BMI		
Under weight	9	18
Normal weight	38	76
Over weight	2	4
Obesity	1	2
Heart rate		
≥ 72	35	70
≤ 73	15	30
Eating disorder		
Yes	9	18
No	41	82



Table 2
Training event related information, n = 50

Variable	(n)	(%)
Training events		
Cricket	13	26
Swimming	8	16
Gymnastic	8	16
Running	8	16
Shooting	7	14
Archery	3	6
Other sports	3	6
Duration of sports		
1-3 years	29	58
4-6 years	21	42
Flexibility		
≤ 36 cm	20	40
≥ 37 cm	30	60

Table 3
Injury related information, n = 50

Variable	(n)	(%)
Site of injury		
Ankle sprain	9	18
Rotator cuff injury	7	14
Wrist injury	7	14
ACL injury	7	14
PCL injury	5	10
Tennis elbow	2	4
Head and neck injury, hip dislocation	7	14
Hamstring strain	3	6
Quadriceps strain	2	4
Others	1	2
Type of injury		
Overuse injury	33	66



Variable	(n)	(%)
Direct injury	17	34
Recurrence of injury		
Yes	28	56
No	22	44
Warmup & cooldown attendance		
Yes	49	98
No	1	2
Duration of warmup & cool down		
≥ 15 min	23	46
≤ 16 min	27	54
Treatment of injury		
Drug	8	16
Physiotherapy	19	38
Both	23	46

Discussion

The age group of injured participants in this study was higher 60% (n = 30) who were 14 years or less than 14 years and 40% (n = 20) who were 15 years or more than 15 years. A similar study were found that athletes who had 15 years or less are more likely to injury sustain (Petrie, 2006).

Cricket trainees had the largest number of injured participants (26% (n = 13), with equal percentages in swimming, gymnastics, and running. There are 16% (n = 8) wounded trainees in shooting, 14% (n = 7) injured trainees in archery, and 6% (n = 3) injured trainees in other sports. According to a research titled "Exertion injury among female athletes," 48.5% of injuries occur in track and field activities such as running, long jump, high jump, and skipping, 12.8% occur in jogging, 3.6% in gymnastics, 3.2% in swimming, and 2.1% occur in shooting (Orava et al., 2011).

In this study, 98% (n = 49) of the wounded individuals undergo training for less than or equal to 5 years, while 2% (n = 1) undergo training for more than 6 years. A study published in the American Journal of Sports Medicine found that among 509 female athletes with fewer than four years of experience, a higher rate of injury (55.9%) occurs. In this study, 65% of individuals spent more than 16 minutes on warp up and cool down, whereas 33.3% spent less than or equal to 15 minutes. Another study found that 9.1% of 76 individuals engaged in warm-up and cool-down activities to avoid sporting injury (Payne et al., 2007). According to this



study, there is a higher rate of injured athletes. 38% (n=19) have a secondary school certificate, 34% (n=17) have a junior school certificate, 14% (n=7) have an upper secondary certificate and 14% (n=7) have a primary school certificate at Bangladesh Krira Shikkha Protisthan (BKSP). According to data from the National Federation of State High School Associations, participation in female high school sports increased between 1988 and 1998 with approximately 40% of female athletes being below the graduation level (Powell & Foss, 2000).

Overuse injury was compared to the study of Orava et al. (2011) that was found near similar in our study. According to the flexibility test was near similar to this study (Mechelen et al., 2006). In this study, 18% of the participants were underweight (n=9), 76% were normal weight (n=38), 4% were overweight (n=2), and 2% were obese (n=1). This study also found that 18% (n=9) of participants had an eating disorder. An experimental investigation study (Arendt et al. Dick, 2006) results supports our study.

The majority of patients (16% (n=8) received pharmacological treatment after injury, 38% (n=19) received physiotherapy, and 23% received both treatments. According to Freddie et al. (2001), 84% of female athletes in the England National Federation of Athletics had physiotherapy following an injury, while 26% received conservative or surgical treatment. Differences in treatment ratios between these two trials are caused by changes in sample size and socio-demographic factors. The study's limitation was that the expected sample size was 308 and the overall number of female athlete trainees in BKSP is quite small. Owing to limited resources, the researcher chose only 50 samples, which is insufficient to generalize the results across Bangladesh. Because there are few literatures on injury among female adolescent athletes in Bangladesh, it is difficult to compare the study to other research.

Conclusion

According to the findings of the study, participants in the Bangladesh Krira Shikkha Protisthan were most usually afflicted by indirect harm rather than direct injury. The key reasons of their damage were variations in anatomical body structure (height, weight), fitness (BMI, flexibility), and training time, with the ankle being the most commonly injured region. The study highlighted one area, the recurrence of injuries in female athletes influenced by eating disorders.

Recommendation

Only prevalence of injury was detected in this study, it might be more specific if implement of physiotherapy treatment over that injury and take necessary step for injury prevention. Further study should be recommended with large sample size and appropriate technology.



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Gender Differences Among Gono Bishwabidyalay Sportspersons in Achievement Motivation

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ABSTRACT

The purpose of the present study was to find out the gender difference in sport achievement motivation of male and female sportspersons of Gono Bishwabidyalay. Total 102 sportspersons were selected to analyze their achievement motivation level status. Sixty nine (69) sportspersons belonging to male and thirty three (33) female. The sportspersons belonging to gymnastics (17 male and 3 female), swimming (22 male and 5 female), basketball (8 male and 7 female), tennis (12 male and 6 female) and track and field (10 male and 12 female). Their age ranged from 20-24 years. A standardized test namely Sports Achievement Motivation Test (SAMT) by Kamlesh (1990) was selected for the study. Mean, Standard Deviation and Independent t- test were used to analysis the data and level of significance was set at 0.05 levels. The analysis of data revealed that males and females belonging to Athletics, Basketball Gymnastics, Shooting and Swimming significantly differed in achievement motivation whereas no significant difference was observed in males and females belonging to Tennis Sportspersons of Gono Bishwabidyalay.

Key word: *Gender difference, Gono Bishwabidyalay and Achievement motivation*

INTRODUCTION

In the games and sports, psychological and physiological factors play an important role in determining the performance level. Numerous studies have demonstrated the impact of psychological factors on sports performance. Achievement motivation and Anxiety have been two of those factors under consideration. Motivation is at the base of a pyramid towards success in sports. Other important factors in this area include 'goal orientation', 'goal setting,' 'motivational climate' and 'burnout'. Players have multiple motives for continued participation, such as competence, friendship skill improvement and competition.

There are many studies conducted in the aspect of achievement motivation and its effect on performance.

Achievement motivation is a person's effort to master a task, `achieve excellence, overcome obstacles, perform better than others and take pride in exercising talent (Murray 1938).



It is a person's orientation to strive for task success, persist in the face of failure and experience pride in accomplishments (Gill, 1986). It also keeps directing and pursuing an individual towards his goals (Franker, 1998).

Achievement motivation in sport is popularly called competitiveness. Incentive motivations defined as goal activity that in turn is the reason for goal directed activity (Birch and Veroff, 1966). Achievement, success, excellence; prestige, recognition, and power are the positive incentive values to motivate sportspersons in sport. Psychological injury, pain, social isolation, inadequate reward and fear of failure may be the negative values. According to Wood (1980), incentive value partially determines one's motivation to participate in competitive sports. Incentive motivation consists of seven major incentive systems, such as, excellence, power, sensation, independence, success, aggression and affiliation.

Several studies have reported higher levels of achievement motivation for female athletes than the general female population (Dairies and Grimm, 1970, Neal 1963, Plummer, 1969). However, while the tendencies are clear, the results are not always statically significant. Other studies have measured the relationship between achievement motivation and success in sports. Best result has been reported when sports-specific measures are used to test achievement motives (Daugherty, 1966) and when both need to achieve and fear of failure are assessed (Roberts, 1975, Yearly, 1971). In these cases, results are in the predicated direction, level of achievement motivation is positively related to success.

According to McClelland there are three kinds of motivation that drive all of us, these are need for achievement, need for power and need for affiliation. Need for achievement (nacho) was one of the first social motives to be studied in detail (McClelland et al. 1953), and research into this motive continues today (Spence, 1983). As a result, we know quite a bit about it. People in whom the need for achievement is strong seek to become accomplished and to improve their task performance. They are task oriented and prefer to work on tasks that are challenging and on which their performance can be evaluated in some way, either by comparing it with other people's performance or in terms of some other standard.

More formally, "achievement is task-oriented behavior that allows the individual's performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standard of excellence" (Smith, 1989, Spence and Helmreich, 1983, p.12) achievement motivation can be seen in many areas of human endeavor- on the school, in home making, or in athletic competition for example.



The Achievement motivation can be distinguished as athlete's susceptibility towards competitive environment. More extensively, it incorporates the concept of desire to excel. It may not like an intrinsic drive, for instance hunger or thirst; but to develop or gain in the competitive sports environment. The Literature showed Achievement motivation is one of significant predictors of performance. Several studies were conducted to investigate the dissimilarity in male & female achievement motivation towards sports. There are many studies conducted in the aspect of achievement motivation and its effect on performance. Studies suggest that achievement motivation is most significant predictor of performance and essential to participate in a competition .Several motivation theories in the academic area have been adopted in the quest for greater understanding of achievement motivation in sport.

MATERIALS AND METHOD

Total 102 sportspersons of Gono Bishwabidyalay were selected as the subjects of the project, out of which sixty nine (69) were male and thirty three (33) were female. The sportspersons belonged to gymnastics (17 male, 3 female), swimming (22 male, 5 female), basketball (8 male, 7 female), tennis (12 male, 6 female) and track and field (10 male, 12 female). Their age ranged from 20-24 years. A standardized test namely Sports Achievement Motivation Test (SAMT) of achievement motivation by Kamlesh (1990) was selected for the Research. It was selected because it is a sports specific test. The inventory consisted of 20 statements and for each statement score was 1, 2, 3, and 4. The obtained data was statistically analyzed using t- test and the level of significance selected was .05.

ANALYSING OF DATA AND RESULT OF THE STUDY

The gender difference in sport achievement motivation of male and female sportspersons of Gono Bishwabidyalay

Table 1

Gender	Mean	Mean Difference	SE	T Ratio
Male	29.65	4.07	17.93	0.23*
Female	25.58			
*Not significant at 0.5 level			t.05(102) = 1.98	

The table clearly indicates that mean difference of sports achievement motivation between male and female sportspersons is statistically not significant at .05 level of confidence. The Obtained t value of 0.23 is less than the required value of 1.98



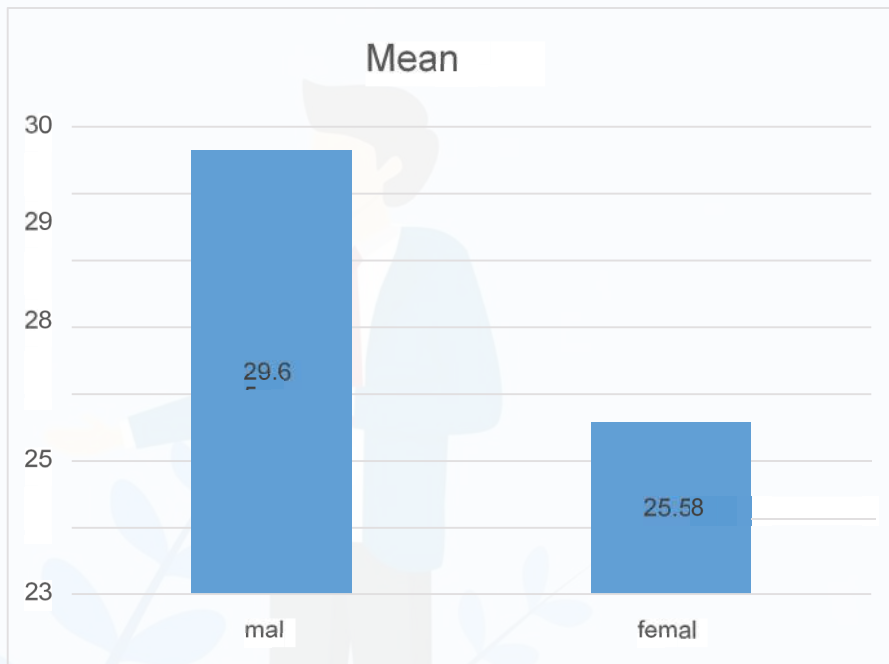


Figure- Represent the mean score of male and female sports persons in sport achievement motivation

The gender difference of male and female Athletics of sports achievement motivation

Table 2

Gender	Mean	Mean Difference	SE	T Ratio
Male	30.4	6.74	3.00	2.25 *
Female	23.66			
* significant at 0.5 level				t.05 (22) = 2.09

The table clearly indicates that the mean difference of sports achievement motivation between male and female athletics is statistically significant at .05 level of confidence. The obtained t value of 2.25 is higher than the required t value of 2.09.



The gender difference of male and female Basketball players of sports achievement motivation

Table 3

Gender	Mean	Mean Difference	SE	T Ratio
Male	32	6.86	2.83	2.42*
Female	25.14			
* significant at 0.5 level			t.05 (25) = 2.16	

The table clearly indicates that the mean difference of sports achievement motivation between male and female shooters is statistically significant at .05 level of confidence. The obtained t value of 2.42 is more than the required t value of 2.16.

The gender difference of male and female gymnasts in sports achievement motivation

Table 4

Gender	Mean	Mean Difference	SE	T Ratio
Male	28.47	1.8	1.22	1.48*
Female	26.67			
* significant at 0.5 level			t.05(20) = 1.48	

The table clearly indicates that the mean difference of sports achievement motivation between male and female gymnasts is statistically significant at .05 level of confidence. The calculated t value is 1.48 whereas the required value is also 1.48 between male and female gymnasts; therefore it is significant at .05 level of confidence.

The gender difference of male and female swimmers of sports achievement motivation

Table 5

Gender	Mean	Mean Difference	SE	T Ratio
Male	29.45	5.05	1.83	2.76*
Female	24.40			
* significant at 0.5 level			t.05 (27) = 2.06	



The table clearly indicates that the mean difference of sports achievement motivation between male and female swimmers is statistically significant at .05 level of confidence. The obtained t value of 2.76 is more than the required t value of 2.06.

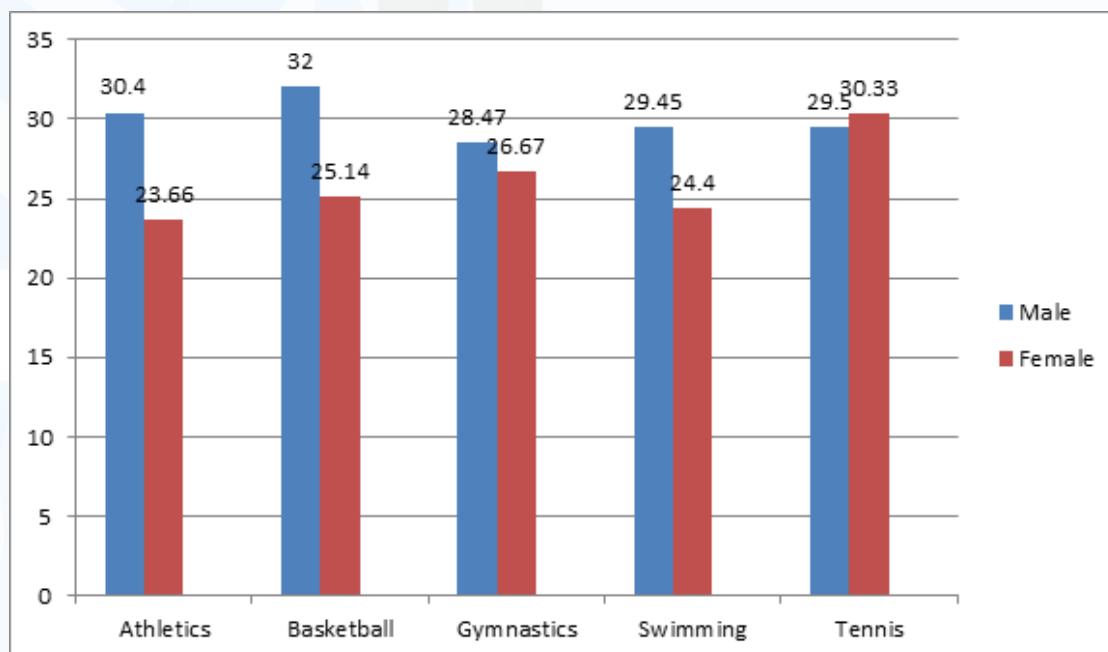
The gender difference of male and female tennis player of sports achievement motivation

Table 6

Gender	Mean	Mean Difference	SE	T Ratio
Male	29.5	-0.83	1.49	-0.56*
Female	30.33			

* not significant at 0.5 level t.05 (18) = 2.12

The table clearly indicates that the mean difference of sports achievement motivation between male and female tennis players is statistically not significant at .05 level of confidence. The obtained t value of 0.56 is lower than the required t value of 2.12.



The gender difference of Sport achievement motivation in difference Sportspersons of GonoBishwabidyalay



DISCUSSION OF FINDINGS

From the findings of the study it is evident that males and females belonging to Athletics, Basketball Gymnastics, Shooting and Swimming significantly differed in achievement motivation whereas no significant difference was observed in males and females belonging to Tennis Sportsperson of Gono Bishwabidyalay. Achievement is task oriented behavior that allows the sportsperson's performance to be evaluated according to internally or externally imposed criterion that involves some standard of excellence in training as well as in competition. Generally the achievement situation is same for male and female sportspersons, hence no significant gender difference has been found. Further no significant gender different has been found among male and female gymnasts and tennis players for similar reasons.

Significant gender differences have been found in sports achievement motivation among male and female athletes, basketball, swimmers and gymnasts players. It may be due to the fact that females are achieving more success in competition than the males because of comparatively less competition among them. Therefore, their sense of accomplishment is higher due to success. Achievement motivation is a sportspersons approach to strive for task success and experience pride in accomplishment.

Achievement motivation is a task oriented behavior that allows the sportspersons performance to be evaluated according to some internally or externally imposed criterion that involves sportspersons to complete with others or that otherwise involves some standard of excellence in training as well as competition. Generally the achievement situation is same for male and female sportspersons in case their achievements are similar. No significant gender differences was found between male and female Tennis players. Significant gender difference has been observed in sports achievement motivation between male and female Athletics, Gymnastics, Shooting and swimming players. It may be due to the fact that the achievement motivation of females is much higher in competition than the males because of sense of success and accomplishment of females is higher.

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Importance of Sports Education in Human Development in the Context of BKSP

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ক্রীড়ায় শ্রেষ্ঠত্ব
Excellence in Sports

Introduction

Human development is a concept about the thriving of human life. Basically, It is an approach focusing on the people themselves and the opportunities they have. It also focuses on the role of the people themselves in bringing human life to a better condition. It is also about providing more freedom and opportunity to the people for living



their lives as they wish. For this, people should be able to improve and use their capabilities. Human development results in a long and healthy life, being knowledgeable, and having a decent standard of living. In another sense, human development means having more alternatives and more opportunities. However, human development aims to provide the necessary conditions to all people individually or collectively for improving their potential and spending a productive and creative life. BKSP provides opportunities to its trainees for human development.



Bangladesh Krira Shiksha Protisthan (BKSP) is a unique and only sports institute in Bangladesh where sports training and general education are provided to all its long-term trainees simultaneously. In 1974, Bangabandhu Sheikh Mujibur Rahman, the father of the Bengali Nation, adopted a plan of establishing the Bangladesh Institute of Sports (BIS) to uphold Bangladesh in

the world sports arena with a view to glorifying Bangladesh as a sports-loving nation. Later on, it started its maiden journey as Bangladesh Institute of Sports (BIS) and became a government institute under the Ministry of Youth Sports. The nomenclature of BIS was modified in Bengali as Bangladesh Krira Shikha Protisthan (BKSP) and was declared an autonomous statutory organization in 1983 through an Ordinance. The then President of Bangladesh declared it open on 14th April 1986. Since then, BKSP is contributing to the human development of Bangladesh.



Youth constitutes about one-third of the country's total population. This large portion of the population is an invaluable asset for the development of the country. As they are the most creative and productive force for the country, they can contribute significantly to the development of the country by using their enthusiasm. National development and advancement largely depend on the proper utilization of young people. It is, therefore, important to engage them prudentially in the national development process. It is also indispensable to transform them into enlightened citizens through systematic guidance. This process assists in human development of the students for BKSP which in turn makes them an effective human resource for the country. To achieve these objectives, BKSP under the guidance of the Ministry of Youth and Sports has been persistently adopting and implementing different activities and programs for human development.

Sports Education

Bangladesh Krira Shikkha Protishthan (BKSP) is a unique Sports Training institute in South Asia. Here the trainees get organized facilities for science based sports training as well as general education. The main objectives of this institution are to hunt promising sports talent from the grass root level and provide them short and long-term

sports training facilities for some particular games along with general education with a view to achieving glory in the sports arena for the country amongst the other nations. Behind these objectives there is also a focus that the institute will produce skilled manpower for the country who can meet up the challenges of the coming decades.

Sports Education Curriculum

The curriculum of BKSP is designed to integrate sports with general education. Sports education has been prioritized along with maintaining the importance of general education. Ensuring all types of general subjective education like literature, history, social science, mathematics, general science, information and communication technology (ict), religious study, art and craft etc. sports education is ensured. Science and technology are properly applied in the field of sports to keep pace with the modern changing world. 100 marks at the secondary level, 200 marks at the higher secondary level and 300 marks at the graduate level are imparted theoretical and practical teaching on sports.

Significance of Sports Training for Human Development

'A sound mind lives in a sound body' goes a saying. Proper science-based sports training ensures the physical well-being of a trainee who ultimately becomes



a human resource for a country. Science based sports training programs are conducted with utmost importance in BKSP which results in developing every trainee as an efficient, modern and all-round athlete who turns themselves into human resources in future. BKSP brings out the latent talent of a youth and turns him or her into an icon for the country.

Sports Training Inculcate Discipline and Patriotic Sense

Science-based intensive sports training is imparted at BKSP in a highly organized environment. As an initial preparation in the hostel, the trainees appear on time in the respective field wearing specific clothes. After completing the national anthem and oath in the assembly, the trainees receive training in their respective fields.



Through BKSP training every trainee masters the discipline of body and mind. Life becomes healthy and strong and collective consciousness emerges among the trainees as well as becomes motivated by team spirit. The individual determination merges into collective determination. In international competitions there rises a feeling among the trainees “To win a match is to uphold a nation” which gives birth to a patriotic feeling among the athletes. Team discipline is taught here which gives birth to a sense of patriotism among them. Through this sense of discipline and sense of patriotism, the trainees play a role in the progress of the nation.

Effectiveness of Sports Training in Character Building

Sport is an eternal celebration of endless joy. The human mind and character are formed through this joy. This character is the main step to success in the war of life.

It is through sports training and participation in the competition of games and sports, a trainee achieves his character development and continuity of success. BKSP trainees have imparted training in character building through sports training since their inception in BKSP. The importance of ethics in sports is taught meticulously here at BKSP. There are punitive measures against the trainees for breaking the existing rules and also if there are any moral or ethical lapses.



Nationalism and Sports Education Program



Sports give birth to a sense of nationalism. Nationalism is an invaluable asset of every country. When a group of athletes competes with a different team from a different country, the aspirational spirit of countless people of that country is intertwined with that team. Irrespective of caste, creed and religion then the players are in one

mind in one soul. Because of having the spirit of nationalism among the players of a team, the team becomes victorious in the strength of their character, inflexible attitude, and their determination to follow the rules and regulations imparted for conducting the game. Keeping these issues in mind, the trainees of BKSP are initially provided with motivation, after which they are provided training in the team and individual sports at different age levels and provide opportunities to participate in age-based team competitions in the national and international arena.

Leadership Development and Capacity Building

Sports training plays a very important role in the development of the personal traits of a trainee. The prefectural system is in operation in BKSP. Trainees are selected as prefects on the basis of integrity, competence, truthfulness, judgment, creativity, sense of responsibility, loyalty, etc. to make them modern smart trainees. Elected prefects are formally conferred with dignity. Accountability of their



work is monitored, Through this, the trainees of BKSP become skilled and smart and the inner qualities of a trainee get revealed. These personal traits give birth to the leadership qualities of a trainee and play a vital role in the capacity building which in the long run results in career building as well as social development.



Acquiring Decision Making Skills

BKSP trainees excel in quick and instant decision making. Comprehensive theoretical and practical training is provided in this regard to all BKSP's trainees. Various levels of sports training are followed repeatedly to acquire skills in sound decision making.

Mentorship

BKSP is a full-fledged residential institution. All the trainees are to live in the BKSP hostels. BKSP has a unique opportunity to exchange their experience with seniors, juniors or teammates. So there remains a large scope of building mentorship. Mentorship is created among the trainees of BKSP through peer review and exchange of experiences.



Building up Capacities to Receive Challenges



There are adequate scopes for a BKSP trainee to receive training on Gym and sports science for developing his physical and mental strength. Every week for three days in the morning and afternoon 2 sessions of games and sports training are arranged in BKSP which is compulsory for all trainees. Physical training for ten and a half hours of a week is compulsory for all trainees in BKSP. Also, there is a special training system ahead of the tournament. Sports Psychology Department of BKSP provides necessary guidelines required for any trainees in any situation.



Becoming an Icon of Inspiration



A Change in Perspective and Attitude Towards Gender Discriminations



Participation in modern education and co-curricular activities as well as participation in national and international sports competitions help to make BKSP's trainees more realistic and development-oriented rather than idealistic. BKSP provides an opportunity to gain practical knowledge to eliminate discrimination between

men and women, which acts as a unique tool to change its perspective and attitude. Coexistence of both male and female trainees in education and training purposes grows among them a sense of equity, brotherhood among themselves and removes narrowness of mind rather broadens his or her outlook and a sense of honour grows for the females among the trainees.



Women Empowerment

The positive impact that sports can have on the emancipation of young girls and women has been acknowledged for decades. Participating in sports can help break-down gender discrimination, improve girls' and women's self-esteem and contribute to the development of leadership and strategic thinking skills. BKSP hunts talents from the grassroots level where the girls in the rural areas get a chance to show her excellence. BKSP picks them up, nurtures them, provides all possible support and these girls become the icon for the nation. Their number is not a few. The girls whose dream might nipped in the bud but owing to facilities in BKSP the girls become the examples among other girls of their area as well as the whole nation. Thereby BKSP has been a powerful hub for human development.



Conclusion

A combined knowledge of general education and sports training have a significant role for human development. The opportunities provided in BKSP make a trainee determined to achieve his/ her goal, show ways to go ahead, improve tolerance and remove selfish mentality. Self-determination, personality, leadership quality, honesty, bravery, pain of defeat and pleasure of victory make a trainee a real human being. After ending the course in BKSP a trainee never looks back, rather he or she goes forward giving inspiration and pleasure to other people. As a whole, it is undeniable that BKSP contributes to the Human Development Index of Bangladesh.

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