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A comparative study of mental toughness and aggression among para-swimmers and para-athletes

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Abstract

The purpose of the present study was to compare the mental toughness and aggression between national level Para-swimmers and Para-Athletes. The study was conducted on selected 30 Para-Swimmers and 30 Para-Athletes. Their age ranging from 20 - 25 years. Questionnaires were used as a tool to find out the mental toughness. Dr. Alan Goldberg's modified questionnaire and sports aggression inventory standardized by Anand Kumar and P.S. Shukla, were selected and used for the study. It was hypothesized that there would be a significant difference between the national level Para-swimmers and Para-Athletes. The., ANOVA was employed to compare the degree of mental toughness and aggression between national level Para-swimmers and Para-Athletes. The level of significance for testing the hypothesis was set at 0.05 level of confidence. There was no significant difference found between Para-swimmers and Para-Athletes.

Keywords: mental toughness, aggression, para-swimmers, para-athletes

Introduction

A sport is as old as human society and it has achieved a universal status in modern society. It now enjoys a popularity which out strips any other form of social activity; it has become an integral part of the educational process. Millions of fans follow different bordering on devotion; many participate in sports activity for the fun of it or for health and fitness. Even today sports have become the prestigious concept of every nation and sports have been subjected to various scientific investigation. Various factors have been isolated which are responsible for the excellence in sports.

Mental toughness is a collection of values, attitudes, Behaviours and emotions, which enable an individual to persevere and overcome any obstacle, adversity or pressure experienced, but also to maintain concentration and motivation when things are going well, to consistently produce high levels of performance. In today's competitive scenario, the all other concerned with sports cannot depend only on physical fitness alone, they have to identify and determine psychological attributes which affects the performance. Research of the last two decades has made considerable progress and contributes to our understanding of the psychological and biological/ physiological components important to individual and team game athletes. Each psychological variable has its unique contribution towards sports performance but some of the variables are preferably and specifically suitable for few games. The psychological parameters such as personality traits, anxiety, self-esteem and mental toughness are among the factors that can be considered to determine psychological predictors (Anizu *et al.*, 2003). The mental toughness is utmost pre-requisite of individual and team athletes. Bull *et al.* 2005 observed on the basis of research that there is also the potential for difference in mental toughness from one sports and event to the other. It is further illustrated that mental aspects affect the athlete's performance in competition gets tense. The mind then is the source of our success or failure. It has long been acknowledged that psychological skills are critical for athletes at the elite level.

Mental toughness is the ability to concentrate on the proceeding of a particular sporting discipline and not let the pressure of the match situation or the sense of occasion to get the better of the players (Fox, 2000; Golby, Sheard, & Lavallee, 2003; Gucciardi, 2011). Basically, sportsmen with mental toughness have the ability to raise their game to the highest level at crucial moments in a match (Crust, & Clough, 2005). This also implies that the mental

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toughness gives them the necessary focus and ability to concentrate on the goal (Gucciardi, Gordon, & Dimmock, 2000; Rani, Malik, & Thapa, 2012).

Success and failure of an athlete depends on the blending of physical conditioning, training mental preparation and ability to perform well in under pressure and cooperation of athlete with others. So all the aspects (physical, psychological and social) are needed for athlete, if one is lacking in an aspect, it is very difficult to get success in competition. That's why the coaches must not only have the knowledge about the skills and strategies of the sports about also should be psychologically skillful.

The word aggression comes from the Latin root *agere*, and (to or toward) and *gradior* (walk), literally. Then the word to walk towards or approach, to move against or to move with intent to hurt or harm. Aggressive behaviour has been associated with destructive acts, sexual attack, prejudice, speech, gentile activity, drug and alcohol addition, sports and exercise, crying, complaining, waging war, and so forth.

Aggression is defined as the infliction of an aversive stimulus either physical verbal or gestural upon one person by another. Aggression is not an attitude but behavior and most critically it is reflected in acts committed with the intent to injure this definition of aggression includes such wide ranging acts engaged in by athletes, coaches and / spectators as physically hitting another individual and verbal abuse.

Factors investigating aggression is athletes may be external (environmental situations) or internal motivational derives) or both, the list includes

1. Environmental temperature.
2. Perception of opponent's intentions to aggress the athlete who perceives that an opponent is trying to inflict harm will respond in the same way.
3. Fear of relation (a victim of aggression will retaliate even more aggressively)
4. Structure of the game (closure the physical contact between the opponents, the greater chance for retaliating aggression.)

The physically challenged children need psychological and a valuable service can be rendered by providing programs for these students. The challenged child has poor motor coordination, lack of physical and organic fitness and has poor posture. Research reports indicate that they have been denied a planned program me in physical education, after they are placed in regular physical education classes without regard to their unique needs

Hypothesis

It was hypothesized that there would be a significant difference in mental toughness and aggression among national level Para-swimmers and Para-Athletes

Purpose of Study

The main purpose of the study was to compare the mental toughness and aggression of the national level Para-swimmers and Para-Athletes.

Methodology

The study attempts to compare the mental toughness between national level Para-swimmers and Para-Athletes. Mental toughness test was conducted on selected 30 each national level Para-swimmers and Para-Athletes, who were represented at nationals. The age group of the subjects was ranged between 20 to 25 years. These samples were tested with the help of Dr. Alan Goldberg's mental toughness

questionnaire to find out Psychological variable and sports aggression, inventory, standardized by Anand Kmar and P.S. Shukla, as utilized for sports aggression. The collected data were tabulated for the purpose of analysis. The ANOVA was used for testing the hypothesis for significance of mean difference in the mental toughness and aggression scores of national level Para-swimmers and Para-Athletes compared by using the statistical formula. All the statistical calculations were carried out with the help of SPSS windows package.

Administration of Questionnaire and Collection of Data the sports Aggression

Inventory was administered to each player. The directions were used by the researcher at a dictation speed to make the subjects understand about what they are exactly required to do after making sure that the subjects had clearly understand the procedure to fill up the questionnaire. They were asked to record the answer for all questions; the subjects were given enough time to answer the questionnaire. The questionnaires were taken back after it has duly completed. Though screening was made to sure that no question was left unanswered.

Purpose

To assess the aggression level among Para-swimmers and Para-Athletes.

Procedure of Administration

To ensure maximum cooperation from the subjects, the researcher had a meeting with the teams of Para-swimmers and Para-Athletes. The subjects were oriented and explained regarding the purpose and procedure of questionnaire.

Scoring

The sports aggression inventory was consist of 25 items in which 13 items are keyed 'yes' and rest of 12 items are keyed No. The statements which are keyed 'yes' are 1, 4, 5, 6, 9, 12, 14, 16, 18, 21, 22, 24 and 25 and the statements which are keyed 'no' are 2, 3, 7, 8,10, 11, 13, 15, 17, 19, 20 and 32.

For each correct items score was one of the maximum score may be 25 and minimum score may be 0 (zero) scores obtained by each subject on each statement was added up which represented one's total score or aggression.

The Sports Mental Toughness

Inventory was administered to each player. The directions were used by the researcher at a dictation speed to make the subjects understand about what they are exactly required to do after making sure that the subjects had clearly understand the procedure to fill up the questionnaire. They were asked to record the answer for all questions; the subjects were given enough time to answer the questionnaire. The questionnaires were taken back after it has duly completed. Though screening was made to sure that no question was left unanswered.

Purpose

To assess the mental toughness level among Para-swimmers and Para-Athletes.

Procedure of Administration

To ensure maximum cooperation from the subjects, the researcher had a meeting with the Para-swimmers and Para-Athletes. Where the subjects were oriented and explained regarding the purpose and procedure of questionnaire.

The mental toughness consists of 30 items in which 1 to 6 items are keyed rebound ability, 7 to 12 items are keyed ability to handle pressure, 13-18 items are keyed concentration ability, 19-24 items are keyed level of confidence and 25-30 items are keyed motivation.

The scoring form 26-30 indicates over all mental toughness, from 23-25 indicates, average to moderate skills in mental toughness and 22 below indicates need to start putting more time into the mental training area.

Statistical Procedure

To compare the level of aggression and mental toughness among Para-swimmers and Para-Athletes

Analysis of variance was used.

The significance of F ratio was stated at 0.05 level

Findings

The result pertaining to significant differences on aggression and mental toughness among Para-Swimmers and Para-Athletes were analyzed with the help of F-ratio. The analysis of data pertaining to this is presented in table 1 and table 2.

Table 1: Aggression, ANOVA

Source of variance	Degree of freedom	Sum of square	Mean sum of square	F-ratio
Between group	1	35.2	35.27	1.91
Within group	58	1069.47	18.43	

Tab: 0.05(58)7.12

The required F ratio for significance at .05 level with degree of freedom 1 and 58 is 7.12.

To obtain —F ratio 1.91 was less than the required valued (7.12). It indicated no significant mean difference of aggression between the Para-Swimmers and Para-Athletes.

Table 2: Mental Toughness, ANOVA

Source of variance	Degree of freedom	Sum of square	Mean sum of square	F-ratio
Between group	1	2.84	2.84	0.14
Within group	58	1108.81	14.116	

Tab: 0.05(58)7.12

The required —F ratio for significance at 0.05 level with degree of freedom 1 and 58 is 7.12. To obtain —F ratio 0.14 was less than the required value (7.12). It indicated no significant mean difference of mental toughness between Para-Swimmers and Para-Athletes.

Discussion on Findings

The finding showed that there is no significant difference exists between the aggression and mental toughness level of Para swimmers and Para Athletes. Unlike earlier studies conducted in this field showed that there was significant difference of aggression and mental toughness level between games this study has brought a complete new concept that the aggression level hardly lays any significant role in water sports. One of the reason can be that now a day's coach emphasis more on tactful strategies which can only be applied with proper concentration of mind without any psychological and physiological disturbances. It is any team either Para Swimmers and Para-Athletes have some characteristics regarding psychological and physiological aspects, because there are example when aggression factor of the player spoils the total outcome of the result, example can be taken from

games where aggression has turned the side of the game). So this can be the reason that there was no significant difference in aggression level of Para-Swimmers and Para-Athletes.

Discussion on Hypothesis

Statistical analysis of that data comprised of ANOVA for finding out the aggression and mental toughness level of Para-Swimmers and Para-Athletes and it shows that there was no significant difference in Para-Swimmers and Para-Athletes. Thus hypothesis is rejected.

Conclusion

The purpose of the study was to compare the aggression and mental toughness level among Para-Swimmers and Para-Athletes were selected as subjects for this study. The age of the subjects ranged between 20-25 years. The aggression level questionnaire by P.S. Shukla and A. Kumar and mental toughness by was distributed to the players and data was collected. Statistical analysis of the data comprised of ANOVA for finding out the aggression and mental toughness level of Para-Swimmers and Para-Athletes and it shows that there was no significant difference of aggression and mental toughness level of Para-Swimmers and Para-Athletes.

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