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A study on mental skill ability of different age level cricket players

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Abstract

The purpose of this study was to compare the mental-skills ability of the cricket players as per different age level categories. The study sample included 410 cricketers from different division club universities and cricket coaching centers of West Bengal, India. Mental skills ability was assessed by means of the Bull's Mental Skills Questionnaire (Bull *et al.*, 1996). One-way analysis of variance (one-way ANOVA) indicated that there were significant differences between the cricket players of different age level categories. Significant difference also found in regards of their performance on the various mental-skills subscales. A definite psychological-skills status did come to the front, indicating that senior age category players, regardless of other age category, expressed high proficiencies in Self-Confidence, Anxiety and Worry Management, Relaxation Ability and Motivation. The essential conclusion was that there are significant differences in mental-skills ability between the various age category cricket players. Study did reveal the fact that age may be the predictor of mental skill ability of the cricket players.

Keywords: cricket, age level, mental skill

Introduction

Cricket is the second most popular sport in the world, after soccer. It has two billion fans and is played by 120 million people. Cricket is a major sport in at least ten countries, while its governing body has 105 member nations. The game began in England and today is primarily played there and in former British Empire countries. It's also become very much popular in Asian countries.

As per the demand of the sports, in some sports - say hockey, soccer or basketball—the physical aspect of players dominates. Whereas in cricket, especially In Test cricket, the five-day version of the game demand physical as well as mental ability of the cricketers.

The mental game in cricket separates the best players from the rest, whether it is at International, Club or School level. In professional sport it has long been understood that the best players know how to think, strategize and manage their emotions optimally, so that they can express themselves through their physical and technical skills. This is the matter which makes them winners. If we consider world's 30 best cricketers, they will all have reasonably similar physical attributes in speed, co-ordination, strength and mobility. These physical attributes will be similar to the rest of the cricketers in International and First Class Cricket, so where lays the difference? Research answers that this is mental skill or mental ability.

Mental skills in competition have proved to be instrumental in effective sport participation and performance. The research report reveals that mental readiness was a remarkable factor to determine final Olympic performance (Orlick, 1992). It is also noted that mental skills are the most essential prerequisites for peak performance in golf in professional and collegiate levels (Cohn, 1991) [1]. Mental skills are also key antecedents for achieving performance excellence and also to maintain of expert performance in kick boxing (Devonport, 2006) [2]. MacNamara, Button and Collins (2010) propose that psychological factors play a fundamental role in establishing the development capacity of an individual and also facilitate the translation of potential into talent.

Aim of the Study

The aim of the present study is to find out the difference of mental skill ability among the different age level cricket players.

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Method

Selection of Subjects

Data have been collected from various 1st division and 2nd division club who are affiliated by Cricket Association of Bengal to participate in Kolkata cricket League. Data was also collected from various cricket coaching centre and universities of West Bengal. The criteria imposed for the selection of the subjects was:-

1. Age should be 16 years above.
2. Played at least 20 matches in a session

Selection of Test Items and Description of Tools

The test item selected for assesses the psychological parameter for this study was Mental Skills Questionnaire which was developed by Bull, Albison and Shambrook in the year of 1996. Mental Skills questionnaire (MSQ) measures various aspects of mental skills such as imagery ability, mental preparation, self confidence, anxiety & worry management, concentration ability, relaxation ability and motivation. The MSQ contains total 28 items describing seven sport-specific sub variables. Each variable are consist of four questions. For the purpose of the resent research, researcher selected four sub variables which are as follows:

- Self-confidence
- Anxiety and worry management
- Relaxation ability
- Motivation

The Cricketers were required to rate how often they experienced the situations presented in each of the related questions by using a 6-point Likert-type scale. In this scale the responses possibility lays on the option of strongly Disagree, Disagree, Slightly Disagree, Slightly Agree, Agree and Strongly Agree.

Administration of Tests and Collection of Data

Researcher take the appointment from various 1st Division

and 2nd Division club participated in Kolkata league and also from the coaching clubs of Kolkata and different Universities of West Bengal. Researcher has been visited those places and administered the test by providing the set of questionnaire to the subjects. Before attempting the questionnaire researcher described the aim, purpose and necessary details connected with the study. Also the researcher demonstrated the guidelines before filling up the questionnaire and also concern them subject about time limit. The athletes were assured regarding the confidentiality of the answer they give. Also it was intimated that who wish to know their score could collect the same from the investigator either in personally or through email.

The data will collected as per procedure provided in the manual of the questionnaire as in the form of numeric value and will be categorized into different sections.

Reliability of the Questionnaire

To check the reliability of the questionnaire, researcher used the Cronbach’s alpha coefficient method as statistical procedure during his study. The reliability of the questionnaire was .876.

Statistical Techniques

Data were analyzed by the use of the IBM SPSS Statistical analysis package (Version 21). The following statistical procedures were used to analyze the data:

In Descriptive statistics, Mean, Standard deviation, Standard error of mean, Percentage was analyzed and in Inferential Statistics’’ test (ANOVA) were employed for analyze the difference among the cricketers.

Result and Findings

Statistical analysis of mental skill ability of different age level cricket players are reflecting in the figure and table which are given below



Fig 1: Graphical Representation of Mental Skill Ability of different age level Cricket players

Table 1: Descriptive Analysis of Mental Skill Ability of different age level Cricket players

		N	Mean	Std. Deviation	Std. Error	Percentage (%)
Mental Skill Ability	U-17	106	103.59	15.64	1.51	61.66
	U-19	134	104.71	13.06	1.12	62.33
	U- 23	120	103.29	14.35	1.31	61.48
	Senior	50	110.48	15.69	2.21	65.76
	Total	410	104.71	14.58	.72	62.33

Table no 1 shows that Mean and SD of Mental skill ability of U-17, U-19, U-23 and senior players are 103.59±15.64,

104.71±13.06, 103.29±14.35 and 110.48±15.69 respectively. It reveals that senior players possessed higher mental skill ability with a percentage of 65.76%.

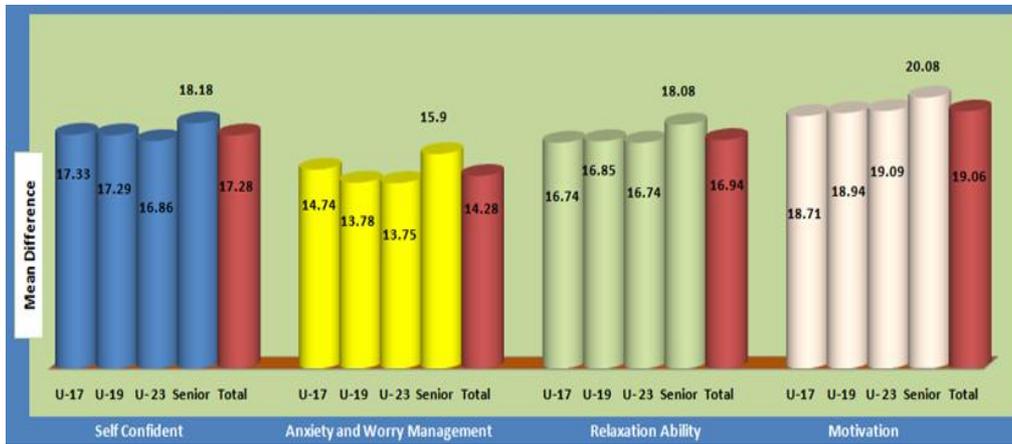


Fig 2: Graphical Representation of Mental Skill Ability of Cricket Players as per Different Psychological Variables and different age Category

Table 2: Descriptive Analysis of Mental Skill Ability of Cricket Players as per Different Psychological Variables and different age Category

		N	Mean	Std. Deviation	Std. Error	Percentage (%)
Self Confident	U-17	106	17.33	3.79	.36	72.25
	U-19	134	17.29	3.31	.28	72.05
	U-23	120	16.86	3.65	.33	70.28
	Senior	50	18.18	3.34	.47	75.75
	Total	410	17.28	3.55	.17	72.03
Anxiety and Worry Management	U-17	106	14.74	4.77	.46	61.44
	U-19	134	13.78	4.18	.36	57.43
	U-23	120	13.75	4.74	.43	57.29
	Senior	50	15.90	4.26	.60	66.25
	Total	410	14.28	4.56	.22	59.50
Relaxation Ability	U-17	106	16.74	3.72	.36	69.77
	U-19	134	16.85	3.73	.32	70.24
	U-23	120	16.74	3.88	.35	69.76
	Senior	50	18.08	4.17	.59	75.33
	Total	410	16.94	3.84	.18	70.60
Motivation	U-17	106	18.71	3.29	.31	77.99
	U-19	134	18.94	3.06	.26	78.95
	U-23	120	19.09	2.70	.24	79.55
	Senior	50	20.08	3.14	.44	83.67
	Total	410	19.06	3.05	.15	79.45

Table no 2 shows Mean and SD of selected psychological variables namely Self Confident, Anxiety and Worry Management, Relaxation Ability, Motivation of cricket players belongs from different age category (U-17, U-19, U-

23and seniors). Table shows that in each sub variable senior players are possessing higher ability with the Mean value of 18.18±3.34, 15.90±4.26, 18.08±4.17, 20.08±3.14 67 respectively.

Table 3: Inferential Statistical Analysis of Mental Skill Ability as per the Age Category of the Cricketers

		Sum of Squares	df	Mean Square	F	Sig.
Mental Skill Ability	Between Groups	2037.987	3	679.329	3.246	.022**
	Within Groups	84974.052	406	209.296		
	Total	87012.039	409			

Table no 3 shows the significance difference in mental skill ability among the cricketers of different age category (U-17, U-19, U-23and seniors) where the df is 3/406, level of confidence set at 0.05 level. The F ratio found from one way

analysis of variance (ANOVA) is 3.246 which is significant at 0.05 level. To know the inter group differences in Mental skill ability, a scheffes post hoc comparison was done and the results are displayed in table no 4.

Table 4: Multiple Comparison between Groups

Dependent Variable	Group	Groups	Mean Difference	Std. Error	Sig.
Mental Skill Ability	Senior	U-17	6.885	2.48202	.054
		U-19	5.763	2.39746	.125
		U-23	7.188*	2.43517	.035**

Table no 4 shows the scheffes post hoc comparison for further analysis of difference of mental skill ability among age categories of U-17, U-19, U-23 and seniors Cricketers. Table reveals that there is significant difference lay between senior

and U-23 categories with Mean difference of 7.188 and significant value of 0.035. Mean value shows (Table no 1) that senior category players possess higher Mental Skill Ability.

Table 5: Inferential Statistical Analysis of Mental Skill Ability of Cricket Players as per Different Psychological Variables and Age Category

		Sum of Squares	DF	Mean Square	F	Sig.
Self Confident	Between Groups	61.37	3	20.457	1.624	.183
	Within Groups	5112.67	406	12.593		
	Total	5174.03	409			
Anxiety and Worry Management	Between Groups	220.89	3	73.632	3.603	.014**
	Within Groups	8297.84	406	20.438		
	Total	8518.74	409			
Relaxation Ability	Between Groups	74.60	3	24.870	1.693	.168
	Within Groups	5965.10	406	14.692		
	Total	6039.71	409			
Motivation	Between Groups	66.27	3	22.091	2.396	.068
	Within Groups	3743.81	406	9.221		
	Total	3810.08	409			

Table no 5 shows the difference among different age level (U-17, U-19, U-23 and senior) cricketers on selected sub variables of mental skill ability namely Self Confident, Anxiety and Worry Management, Relaxation Ability, Motivation. Statistically significant difference found in Anxiety and

Worry Management with the F ratio of 3.603 which is significant at .05 levels. In other sub variables it shows not significant. To know the inter group differences in Anxiety and Worry Management, a scheffes post hoc comparison was done and the results are displayed in table no 6.

Table 6: Multiple Comparison between Groups

Dependent Variable	Group	Groups	Mean Difference	Std. Error	Sig.
Anxiety and Worry Management	Senior	U- 17	1.154	.77561	.529
		U- 19	2.116	.74919	.048**
		U- 23	2.150*	.76097	.048**

Table no 6 shows the scheffes post hoc comparison for further analysis of difference in Anxiety and Worry Management ability among the cricketers belong from the different age categories such as U-17, U-19, U-23 and seniors. It reveals that there is significant difference lays between senior and U-19 categories and same time with U- 23 category with the significant value of 0.48 for both time and Mean difference of .74919 and 0.76097 respectively. As per the Mean value (Table no 2) it shows that senior players are better in Anxiety and worry management ability than the said three groups.

Discussion

Discussion of the findings with regards to an understanding of the psychological profile of Indian cricketers has been presented here.

On the basis of the findings obtain in this study; the analysis indicated that there were statistically significant differences in mental skill ability among the players of different age level categories. In other psychological sub variables of mental skill ability namely Self Confident, Anxiety and Worry Management, Relaxation Ability and Motivation senior players are possess higher ability. Amira Najah and Riadh Ben Rejeb (2016) ^[4] found in their study on soccer players that the age differences in terms of psychological skills is exist. More specifically their statistical evidence suggested that youth soccer players can be differentiated as per the functions of psychological skill and age category on their team. In relation with the obtain results of present study, Gordon's *et al.* (1990) in his study says that more skilled and experienced cricket players are using more variety of mental skills. It is generalized fact that, in maximum extend the experience is generated in connection with the gaining of age.

Conclusion

On the basis of the result it is concluded that senior cricket players possess higher mental skill ability then the junior players. The age can be act as a predictor of mental skill ability of the cricket players.

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