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**Dr. Rahul D Kalode**  
Dharampeth M.P. Deo Memorial  
Science College, Nagpur,  
Maharashtra, India

**Dr. Keshao P Bhagat**  
Ishwar Deshmukh College of  
Physical Education, Nagpur,  
Maharashtra, India

**Dr. Sandeep B Satao**  
Gramgeeta Mahavidyalaya Arts,  
Commerce and Science College,  
Chimur, Maharashtra, India

**Brijmohan Singh Rawat**  
Saraswati School, Nagpur,  
Maharashtra, India

## The role of physical education in developing a healthy mind: A comparative study among hockey game sports students and non hockey game sports students with suicidal ideation

**Dr. Rahul D Kalode, Dr. Keshao P Bhagat, Dr. Sandeep B Satao and Brijmohan Singh Rawat**

### Abstract

Suicide is one of the ten leading causes of death in the world, accounting for more than a million deaths annually. The purpose of the study was to identify the risk groups. In the four-year period from January 2011 to December 2015, 288 suicide victims were autopsied in Wardha District. Information was obtained by news papers. All the cases were analyzed as to sex, age, and methods of suicide, seasonal variation, diurnal variation and other sociological aspects. Male and female were almost equally the sufferers. The largest number of victims was found in the age group of 20–30 years. Hanging and poisoning constituted the two major modes of suicides. Suicidal note was detected in 5% of cases. Suicidal tendency and alcohol intake could not be encountered in most of the cases. Indoor incidence was almost double of the outdoor incidence, mostly seen in rainy season (43%) and occurred almost equally during day and night. Financial burden (37%) and marital disharmony (35%) were the principal reasons for the suicide.

The purpose of the study is to compare the stress and anxiety level of sports students and non sports students with suicidal ideation. In this study total 400 Students (200 sports students and 200 non-sports students) were selected in the Wardha. The age group selected for the study was 20 to 30 yrs. For data collection, survey method is used. The data characteristics (descriptive statistics) such as frequency, mode, mean, standard deviation etc. determined 'Z' test of two means were used to analyze the data. The significance level was chosen to be 0.05 (or equivalently 5%). Whereas, the stress and anxiety of Hockey sports students and non Hockey sports students has been found to be significantly different.

**Keywords:** Suicide, hockey, students (Hockey game sports students and non Hockey game sports), guilt proneness, suspiciousness, tension

### 1. Introduction

Stress is the feeling of being under too much mental or emotional pressure. Pressure turns into stress when one feel unable to cope. Students have different ways of reacting to stress, so a situation that feels stressful to one person may be motivating to someone else. Many of life's demands can cause stress, particularly work, relationships and money problems. And, when someone feels stressed, it can get in the way of sorting out these demands, or can even affect everything. Stress can affect how one feels, think, behaves and how his body works. In fact, common signs of stress include sleeping problems, sweating, loss of appetite and difficulty concentrating. Stress is simply a fact of nature, forces from the inside or outside world affecting the individual. The individual responds to stress and anxiety in ways that affect the individual as well as their environment. Because of the overabundance of stress in our modern lives, we usually think of stress and anxiety as a negative experience, but from a biological point of view, stress and anxiety can be a neutral, negative, or positive experience.

In general, stress and anxiety is related to both external and internal factors. External factors include the physical environment, including job, relationships with others, home, and all the situations, challenges, difficulties, and expectations confronted with on a daily basis. Internal factors determine body's ability to respond to, and deal with, the external stress-inducing factors.

**Correspondence**  
**Dr. Rahul D Kalode**  
Dharampeth M.P. Deo Memorial  
Science College, Nagpur,  
Maharashtra, India

Internal factors which influence ability of individual to handle stress and anxiety include nutritional status, overall health and fitness levels, emotional well-being, and the amount of sleep and rest him/her get.

There has been a lot of research on the negative effects of stress and anxiety on students in general and students in particular. This is because students life is one of the top rated days for stress and anxiety. Every human being has to deal with stress, anxiety and there is considerable evidence suggesting that law enforcement students are killed by more job-related stress and anxiety than they are by criminals.

This constant exposure of students to physical danger puts them in a state of continual conflict between their instinctual tendency to avoid hazard and their obligation to face up to the risk. Students typically suffer a variety of physiological, psychological and behavioral stress and anxiety effects. It has been suggested that particular attention should be given to occupational stress and anxiety in students, as its potential negative consequences affect society in more direct and critical ways than those stressed in most other occupations. Moreover, the background of the Hockey player such as sports background and non-sports background also plays a role in their coping strategies vis-à-vis stress sources. In the back drop of above information this study was carried out to know the stress and anxiety levels of Hockey game sports students and non Hockey game sports students with suicidal ideation.

The reason of suicidal ideation are i) depression, ii) frustration, iii) rejection iv) scolding v) continuously failure vi) mentally misbalance vii) social inactive viii) ragging ix) revenge x) not gain the aim xi) emotion fools xii) overpressure xiii) dispute from family xiv) argument xv) drinking and smoking xvi) nervousness xvii) lack of confidence.

## 1.1 Hypothesis

It is hypothesized that the stress and anxiety of Hockey game sports students and non Hockey game sports students with suicidal ideation will be significantly different.

## 2. Methodology

### 2.1 Universe, Population, Sample Selection and sample size

In the present study, Wardha District formed the universe of the study while all students studding in this Wardha District formed the population of this study. In this study, data was collected from 400 Hockey game sports students and non Hockey game sports students of Wardha District. Of these 400 students 200 had sports students while other 200 were non-sport students. The age of the students varied between 20 and 30 yrs.

### 2.2 Data collection

In the present study, data was collected by following survey method. Survey questionnaires are typically used for feedback research to determine the current status or "situation," or to estimate the distribution of characteristics in a population. The standard questionnaires were used for the purpose of data collection. The data for this study was collected from four districts Wardha by using the questionnaire made by Singh *et al.*, Singh personal Stress Source Inventory.

### 2.3 Statistical Analysis and Significance Level

The data characteristics (descriptive statistics) such as Frequency, Mode, Mean, Standard deviation etc. were determined. 'Z' test of two means was used to analyze the data. The significance level was chosen to be 0.05 (or equivalently, 5%).

## 3. Analysis and Interpretation of the Data

### 3.1 Sources of Stress and Anxiety– Guilt Proneness

**Table 1:** Comparative assessment of the guilt proneness of students (sport students and non sport students)

Students	N	Mean	SD	Min	Max	MD	Z Value	P Value
Hockey Sport students	200	10.1	±1.2	8	13	-4.2	-2.967	<0.05
Non Hockey Sport students	200	14.3	±1.6	9	16			

N= Sample Size; SD: Standard Deviation; Min: Minimum; Max: Maximum; Z: Z Statistic; P: Probability

Above Table 1 presents results regarding the guilt proneness of the students. It was evident from the results that the mean for students with background as a Hockey game sport students was 10.1±1.2 (varying between 8 and 13), while that of students with background as non Hockey game sport students was 14.3±1.6 (varying between 9 and 16). The comparative assessment showed that there is significant

difference ( $P<0.05$ ) in the level of guilt proneness amongst students having different background (sport students and non-sport students). Specifically, it is clear from the data that the Hockey game with background as a non Hockey game sport students have higher level of guilt proneness.

### 3.2 Suspiciousness

**Table 2:** Comparative assessment of the Suspiciousness of students (sport Hockey game students and non Hockey game sport students)

Students	N	Mean	SD	Min	Max	MD	Z Value	P Value
Hockey game Sport students	200	4.6	±1.1	3	6	-1.6	-2.007	<0.05
Non Hockey game Sport students	200	6.2	±1.3	4	8			

N= Sample Size; SD: Standard Deviation; Min: Minimum; Max: Maximum; Z: Z Statistic; P: Probability

Table 2 presents results regarding the suspiciousness level of the students. It was evident from the results that the mean for students with background as Hockey game sport students was 4.6±1.1 (varying between 3 and 6), while that of students with background as non Hockey game sport students were 6.2±1.3 (varying between 4 and 8). The comparative assessment showed that there is significant difference ( $P<0.05$ ) in the

level of Suspiciousness amongst students having different background (Hockey game sport students and non Hockey game sport students). Specifically, it is clear from the data that the Hockey game sport students with background as a non Hockey game sport students have higher level of Suspiciousness.

### 3.3 Tension

**Table 3:** Comparative assessment of the Tension of students (Hockey game sport students and non Hockey game sport students)

Students	N	Mean	SD	Min	Max	MD	Z Value	P Value
Hockey game Sport students	200	9.8	±1.8	7	13	-3.6	-2.219	<0.05
Non Hockey game Sport students	200	13.4	±1.9	10	16			

N= Sample Size; SD: Standard Deviation; Min: Minimum; Max: Maximum; Z: Z Statistic; P: Probability

Above Table 3 presents results regarding the tension level of the policemen. It was evident from the results that the mean for students with background as Hockey game sport students was  $4.6 \pm 1.1$  (varying between 7 and 13), while that of students with background as non Hockey game sport students were  $6.2 \pm 1.3$  (varying between 10 and 16). The comparative assessment showed that there is significant difference ( $P < 0.05$ ) in the level of Suspiciousness amongst students

having different background (Hockey game sport students and non Hockey game sport students). Specifically, it is clear from the data that the Hockey game sport students with background as a non Hockey game sport students have higher level of Suspiciousness.

### 3.4 Level of Stress and Anxiety

**Table 4:** Comparative assessment of Stress and Anxiety level in students

Level of Stress and Anxiety	Students				Chi Square
	Hockey game sport students		Non Hockey game Sport students		
	No.	Per.	No.	Per.	
High Level of Stress and Anxiety	34	17	63	31.5	Chi Square = 19.75, $P < 0.01$
Moderate Level of Stress and Anxiety	68	34	79	39.5	
Low Level of Stress and Anxiety	98	49	58	29.0	
Total	200	100	200	100	

Above Table 4 presents results regarding the stress and anxiety level among students. It was evident from the results that 49% of players and 29% of non-players had low level of stress and anxiety respectively. 34% and 39.5% of Hockey game sport students with background had moderate level of stress and anxiety and 17% and 31.5% players and non Hockey game sport students had high level of stress and anxiety respectively. The comparative assessment showed that there is significant difference ( $P < 0.05$ ) in the stress and anxiety level of students having different background (Hockey game sport students and non Hockey game sport students). Specifically, it is clear from the data that the students with background as a non Hockey game sport students have higher level of stress and anxiety.

### 4. Hypothesis Testing

- It is hypothesized that the stress and anxiety of Hockey game sport students & non Hockey game sport students with suicidal ideation will be significantly different.
- On the basis of the statistical analysis of the information received during the research study, it is observed that there is significant difference in the level of stress and anxiety of sport students & non- sport students, hence, the hypothesis, which states that "It is hypothesized that the stress and anxiety of Hockey game sport students & non Hockey game sport students with suicidal ideation will be significantly different", is accepted.

### 5. Conclusion

On the basis of the study results, it is concluded that the students having background as non Hockey game sport students have remarkably higher level of guilt proneness, suspiciousness and tension. Moreover, with suicidal ideation, the stress and anxiety levels are also significantly ( $P < 0.05$ ) high in the students with no sports background. Hence, in broader sense it is evident that the sports participation can help the students in coping with the pressures of their studying and jobs in more appropriate way.

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