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Analysis on perceived stress and depressive disorder of volleyball player's during COVID-19 pandemic

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Abstract

The purpose of the study was to find out the psychological variable depression and stress among college-level volleyball male and female players, who had participated in the college-level volleyball championship during the year [2019-20], aged between 18-25 years. From the total of Hundred (N=100) of participants, the subjects were further delimited to 50 participants in each gender. The Participants were randomly selected and were shortlisted through purposive sampling. The data were collected from the athletes by administering the questionnaire directly. The questionnaire consisted of the Perceived stress scale and Patient Health Questionnaire. The assurance of confidentiality for their responses was given to the players. The data was analysed by computing descriptive statistics, factor analysis, and using analysis of variance. To address the research issues, the hypothesis was tested and discussed. The study concluded that there is a difference found between the means of selected psychological variables such as depression and perceived stress among college-level male and female volleyball players in Kerala.

Keywords: Depression, perceived stress, volleyball

1. Introduction

Since January 2020, all the sports events and recreational activities have been shut down completely by different governments across the world due to the spread of COVID-19 and its variants. All the sportspersons from the grassroots level to elite athletes had to be at home because of the strict lockdowns and other restrictions implemented to stop the spread of the virus. Common people were also not able to carry out their daily plans. Tentative calendars and periodization of sports programs were blocked, several sports programs like intercollegiate matches, state matches, association matches, etc. were also cancelled because of the pandemic. The lack of practice sessions and leisure sessions has caused negative impacts on the daily life of sportspersons. It adversely affected their mental and physical health. Both men and women athletes were equal prey to these physical and mental problems. Many attempts have been taken to study these problems. One such is the paper *Psychological Impact of the COVID-19 Pandemic on Athletes* (2020) published by Clifford C. Uroh and Celina M. Ade Wunmi. In which, they detail the major psychological metamorphosis that happened to the athletes during the COVID pandemic, Jonathan Grix's study titled *the impact of COVID-19 on sport* (2020) discusses the impact of COVID-19 in the field of sports. Selenia di Fronso's co-published paper *The effects of COVID-19 pandemic on perceived stress and psych biosocial states in Italian athletes* (2020) also has revelations on the mental status of athletes in consideration to the Italian Athletes.

Emotions like stress, anxiety, depression, tension, fear, anger, confusion, frustration, etc. have become common among athletes because of the lockdown. The impact of COVID-19 and lockdown has affected their performance, technical capacities, and motor abilities, and increased the tension of their future.

The study aims to study and compare the perceived stress and depressive disorder among male and female volleyball players across Kerala during the COVID-19 pandemic. Perceived Stress Scale developed by Sheldon kohen and The Patient Health Questionnaire 9 (PHQ-9) was used in this study.

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2. Objectives

1. To assess Perceived stress among male and female intercollegiate volleyball players in Kerala.
2. To identify the level of Depressive disorder among male and female intercollegiate volleyball players in Kerala.
3. To compare the perceived stress among male and female intercollegiate volleyball players in Kerala.
4. To compare the Depressive disorder among male and female intercollegiate volleyball players in Kerala.

3. Hypothesis

1. There will be a significant difference in perceived stress among intercollegiate male and female volleyball players
2. There will be a significant difference in depressive disorder among intercollegiate male and female volleyball players.

4. Methodology

The research design corresponding to this study was non-experimental and descriptive, based on surveying the Google Forms web platform. Perceived stress and Depressive disorder are the two variables selected for the study. The tool used to assess perceived stress was the perceived stress scale by Sheldon Cohen. The Perceived stress scale consist of 10 item scale which scores are recorded by numbers starting from 0 - 4 (0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often). The tool used to assess depressive disorder was The PHQ-9 Patient Depression Questionnaire developed by Drs R.L Splitzer, J.B.W Williams, and K. Kroenke developed in 1991. The PHQ-9 Patient Depression Questionnaire consists of 9 item scale in which scores are recorded by numbers starting from 0-3 (0 = not at all, 1 = several days, 2 = more than half a day, 3 = nearly every day). The data of the study were collected from male and female intercollegiate volleyball players from the state of Kerala. The Google form provided the necessary information on how to fill the form. The said Google form was distributed among the subjects through WhatsApp and other social media platforms. The Independent Samples t-Test compares the means of two independent groups thereby determining whether there is statistical evidence that showcases the associated population means are significantly different. The Independent Samples *t-Test* is considered to be a parametric test. The hypotheses were tested at a significant level of 0.05. The data were analysed using an independent samples t-test.

5. Sampling Methods

The participants were selected for the study by the purposive sampling methods among the male and female volleyball players of Kerala.

6. Tools for Data Collection

Perceived stress and Depressive disorder are the two variables selected for the study. The tool used to assess perceived stress was the perceived stress scale by Sheldon Cohen. The tool used to assess depressive disorder was The PHQ-9 Patient Depression Questionnaire developed by Drs R.L Splitzer, J.B.W Williams, and K. Kroenke developed in 1991.

7. Results

The main objective of the study is to find out if there is any significant difference in perceived stress and depressive disorder among male and female volleyball in Kerala during the COVID-19 pandemic. For this purpose, the related data were collected and analyzed. To see the difference between

male and female volleyball player's t-tests were computed. The results are shown in table 1

Table 1: Result of independent sample t-test

Variables	Gender	N	Mean	S.D	t-value	p-value
Perceived Stress	Male	50	17.9000	8.36965	2.691	0.008
	Female	50	21.5800	4.84069		
Depressive Disorder	Male	50	9.9600	6.61773	2.268	0.026
	Female	50	12.6600	5.20051		

*t-ratio is significant at 0.05 level

Table 1, the mean average value of perceived stress for male volleyball players are 17.9000 and the mean average for female are 21.5800, while the mean average of Depressive disorder for male and female volleyball players are 9.9600 and 5.20051 respectively. While considering the t-test, The Perceived Stress p-value is 0.008 which is less than 0.005, which indicates that there was a significant difference between male and female volleyball players. For Depressive disorder p-value is 0.026, less than 0.05 which indicates there was a significant difference between male and female volleyball players.

Based on this result, there was a significant difference between male and female volleyball players on perceived stress and depressive disorder due to the COVID-19 pandemic. The female athlete shows more perceived stress and depressive disorder than their male counterparts during the COVID-19 pandemic.

8. Conclusion

The result of the study shows that there was a significant difference between perceived stress and depressive disorder among male and female volleyball players during the COVID-19 pandemic. Based on the findings we can say, female volleyball players are subject to more stress and depression compared to male volleyball players.

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