THE IMPACT OF PHYSICAL WELLNESS CHALLENGES FOR UNIVERSITY ATHLETES IN SRI LANKA

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Wellness can be identified as a very important element to the entire human race. There is no health without well-being and no well-being without health. Wellness must be maintained in order to live a life of good physical and mental health. At present, there is less tendency for the whole community to participate in activities that are necessary to maintain physical wellness, such as physical activity and exercise. The purpose of this study was to find out how the challenges to physical wellness confirmed by the previous study affect the athletes of the University of Kelaniya. These challenges determine which challenge was most influential and which was less influential. This study was conducted by presenting a questionnaire to investigate what challenges more or less affect the physical wellness of university athletes. The SPSS factor analysis method was used to analyze the data and it was found that the challenge of 'leisure' had the most effect on the physical wellness of athletes, while the challenge of 'nutrition' had less effect on athletes' physical wellness. Therefore, athletes are advised to pay more attention to their physical wellness and to properly identify the challenges that affect their wellness.

Keywords: *Wellness; physical wellness; physical activities; athletes.*

1. INTRODUCTION

Wellness is a concept that originated in the early days of the twentieth century. Wellness is an industry with a turnover of one trillion dollars a year and it is growing faster than the global economy [1,2]. The word wellness has been around since the 1950s and is widely accepted as a term coined by the physician Halbert L. Dunn. By the 1970s, Dr. Travis, Ardell, Dr. Bill Hettler and the others were considered as the fathers of the wellness movement. Hettler and his associates created the world's first wellness center and upgraded the first university wellness center. A wellness conference has also been set up in the United States (Global Wellness Institute).

Maintaining well-being is an essential part of a healthy life. Everyone wants to live well and maintain well-being. To maintain good health, it is important to pay attention to nutrition, exercise, physical activity, sleep, rest, living without drugs and alcohol, regular medical check-ups and following good health habits [3]. Many diseases can be cured by maintaining good physical and mental well-being. Blood pressure, obesity, depression and the risk of fractures can be reduced. Moreover, the abstinence from physical activity has now become a global menace. Developed and developing countries have observed a gradual decline in the strength of body muscles. Physical activity is any activity that consumes physical energy, be it running, walking, office or homework [4,5].

Physical activity is essential for the physical well-being of athletes as well as the community as a whole. An individual with proper physical wellness is able to carry out his/her day-today activities with ease. Physical activity is important for maintaining physical wellness while leading a refreshing life with a socially active mind.

2. PROBLEM STATEMENT

Wellness is a concept that has been around for a long time and the wellness industry is growing faster than the world economy [1]. University athletes can be identified as the group that has the greatest impact on physical wellness with sports and education. To keep sports and education balanced they need to be a healthy group. Sports performance decreases through the impact on physical wellness. The attraction and the liking for the sport is also lost.

University athletes can be identified as people who face a variety of problems. These problems either physically or mentally challenge them. A decrease in the performance of the game can be seen because of these problems. Depression, loneliness, substance abuse, etc. Apaak & Sarpong, [6] can all affect the well-being of sportsmen and sportswomen. Participating in sports and physical activities produces a group of student-athletes who are at low risk of disease. Furthermore, exercise and physical activity are essential elements for the daily life of the entire community. What most people do not know, is that physical activity can improve physical and mental health. Different people turn to expensive benefits regardless of the importance of sports and physical activity in maintaining physical and mental health [7]. The objectives of the present study are to identify the most and least influential challenges faced by athletes of the University of Kelaniya.

3. OBJECTIVES

1. To identify the most affected challenge of university athletes
2. To identify the least affected challenge of university athletes

4. RESEARCH QUESTIONS

1. What is the most affected challenge of university athletes?
2. What is the least affected challenge of university athletes?

5. RESEARCH METHOD

To achieve the objectives of this research, researchers use a google form, a widely used sociological research tool. The athletics team of the University of Kelaniya will be selected as part of this research and the google form will be distributed among them. The pros and cons of using this google form and how this research is done are discussed below.

A questionnaire was selected for this research because it allows for efficient and timely responses and can be used to achieve a variety of responses. The questionnaire is forwarded via emails to the selected sample as there is no way to fill it manually in the face of the COVID 19 situation. This is the most effective and reliable way to gather information quickly and without interruption. The questionnaire is particularly important for the success of this research, which consists of several objectives, focusing on time as a major obstacle. This study is no exception as it is a quick and effective way for a researcher to respond multiple times within a few days upon submitting the questionnaire.

A common disadvantage of the questionnaires when focusing on this study is their consistent and rigid format. It eliminates the possibility of observing more in-depth or abstract research. The researchers constructed the questionnaire by selecting specific areas focused on the physical wellness challenges faced by athletes. Questionnaire questions are addressed on a Likert scale and also general issues such as age, academic year and gender are included in the questionnaire. The questionnaire provides linear and clear results, but the problem is that many of the elements that this research is expected to reveal are not revealed.

6. DATA ANALYSIS AND DISCUSSION OF RESULTS

The questionnaire aims to identify the challenge that has the greatest impact and the least impact on the physical wellness of athletes. The results are analyzed by "SPSS factor analysis" for further analysis using descriptive statistics, correlation matrix, total variance explained, scree plot, component matrix and rotated component matrix tests. Analyze using significance value, eigenvalue as well as the maximum and minimum value of results and discuss the overall results. The chapter concludes by pointing out the limitations of data analysis.

7.1 Interpretation of Results

7.1.1 Descriptive statistics – Independent Variables

The detailed descriptive statistics provide information about the variables in the datasets and highlight the potential relationships between the variables. It also gives an idea of how many of these factors affect the

analysis of the facts. The mean of the variables used for factor analysis shows that the challenges of alcohol and leisure are most influential, showing a mean between 31.2105 and 31.0526, depending on the sample size used in focusing on the highest value and the lowest value. Additionally, according to the above results, it can be seen that nutrition, which has a minimum mean of 24. 9211, has a minimal effect on the physical well-being of athletes.

7.1.2 Correlation matrix

The correlation matrix is a method of showing correlation. This measurement is more suitable for variables that show a linear relationship between each other [8]. The suitability of the data is visually represented in a scatterplot. The correlation matrix above shows the correlation coefficient between the variables related to physical well-being. The

correlation between sleep and stress is 0.238. This suggests that they have a strongly positive relationship. Spending more time sleeping is closely linked to reducing stress and improving physical wellness. A value of - .023 between sleep and nutrition indicates a negative and weak correlation.

It is also a test of the suitability of the data, which gives an idea of the significance level, which challenges the physical wellness more or less. The significance value is calculated by bartlett's test of sphericity as well as the correlation matrix table above. Values less than 0.05 are useful for factor analysis, while leisure factors are 0.000. That is, leisure is a challenge that greatly affects the physical wellness of athletes. Since the nutrition challenge shows 0. 445, it can be concluded that it is the least affecting challenge.

Table 1. Descriptive statistics – independent variables

	Mean	Std. Deviation	Analysis N
sleep	26.4737	3.59983	38
stress	28.3158	3.69883	38
nutrition	24.9211	3.45145	38
alcohol	31.2105	5.98267	38
leisure	31.0526	4.99701	38

Source: Survey Data, 2020/2021

Table 2. Correlation matrix

		Sleep	Stress	Nutrition	Alcohol	Leisure
Correlation	sleep	1.000	.238	-.023	.045	.084
	stress	.238	1.000	-.102	.198	.403
	nutrition	-.023	-.102	1.000	.255	.102
	alcohol	.045	.198	.255	1.000	.543
	leisure	.084	.403	.102	.543	1.000
Sig. (1-tailed)	sleep		.075	.445	.393	.308
	stress	.075		.272	.116	.006
	nutrition	.445	.272		.061	.271
	alcohol	.393	.116	.061		.000
	leisure	.308	.006	.271	.000	

Source: Survey Data 2020/2021

Table 3. Total Variance Explained

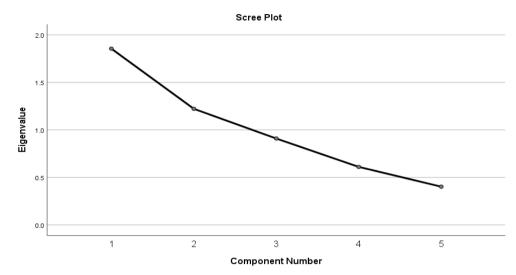| Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of variance	Cumulative %	Total	% of Variance	Cumulative %	Cumulative %
1	1.855	37.101	37.101	1.855	37.101	37.101	34.513
2	1.222	24.441	61.543	1.222	24.441	61.543	61.543
3	.909	18.184	79.727				
4	.611	12.217	91.943				
5	.403	8.057	100.000				

Source: Survey Data 2020/2021

Fig. 1. Scree plot
Source: Survey Data 2020/2021

7.1.3 Total variance explained

The initial solution is to explain the variance through the initial eigenvalue in the first part of the table utilizing the extracted component and the rotating component [9]. The whole column returns the eigenvalue or the magnitude of the variance of the original variables calculated by each component. The ratio expressed as a percentage of the variance bar shows how the ratio is given to the total variance of the variable calculated by each component. The sum of the eigenvalues is equal to the number of components and must be greater than one. The first two parts can therefore be presented as the quoted solution.

7.1.4 Scree plot

The scree plot shows the equivalent values of the y axis the number of factors on the x-axis and the curve always points downwards. Eigenvalue, more than one or equal value, suggests two conspiracy factors by truncation. The analysis also shows that the area where the slope of the curve is flat is two factors that should be generated by the analysis.

7.1.5 Component Matrix

This analysis measures exactly one of the five existing variables. But it can be seen from the table above that this indicates two components. The challenge of 'leisure' can be introduced as one of the most influential factors affecting physical wellness when the eigenvalue of each factor is added. The 'nutrition' factor can be pointed out as the least affecting challenge. However, the following challenges to the analysis of the rotated component matrix

methodology relative to this table show a variety of ways.

Table 4. Component matrix

	Component	
	1	**2**
leisure	.845	.043
alcohol	.772	.354
stress	.629	-.523
nutrition	.248	.722
sleep	.293	-.547

Source: Survey Data 2020/2021
Extraction Method: Principal Component Analysis.

Table 5. Rotated component matrix

	Component	
	1	**2**
alcohol	.849	.033
leisure	.773	.344
nutrition	.548	-.532
stress	.325	.751
sleep	.014	.620

Source: Survey Data 2020/2021
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

7.1.5 Rotated component matrix

The rotating component model is sometimes referred to as loading. According to this analysis, the eigenvalue of each of the factors that contribute to physical wellness adds up to the fact that alcohol is the most important factor in the physical well-being of

athletes. But the least affected challenge sleep, remains the same in the rotated component matrix model.

8. OVERALL RESULTS AND DISCUSSION

The analysis was done based on the data obtained from the questionnaire provided through a google form. The research objectives were based on the descriptive statistics, correlation matrix, total variance explained, scree plot, component matrix and rotated component matrix methods of SPSS factor analysis. The median value, eigenvalue and significant value shows how these challenges affect the athletes.

According to the above analysis, 'leisure' is the most affecting factor for physical wellness of an athlete when focusing on all the results. Accordingly, in the pursuit of education and sports, further attention should be paid to the leisure time of sportsmen and sportswomen. It can be concluded that physical wellness is improved on the regularity of activities that do not interfere with leisure. The results of the analysis showed that 'nutrition' was the challenge that had the least effect on the physical wellness of the athletes. According to the study, nutrition is the factor which has the least affect on the performance of the athlete.

9. LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FUTURE RESEARCH

Findings from current research can also be used to point in new directions for future research. Quantitative methods were used to examine the relationship between physical fitness and performance in this study. The current study reviewed only data collected from track and field athletes at the University of Kelaniya. From this quantitative study, how do the challenges to the physical fitness of university athletes affect them? How does leisure, nutrition, alcohol, sleep and stress affect athletes? Those effects allow us to understand how the decline in athletic performance occurs. Physical fitness is important to the community as a whole and the current study is conducive to future research.

10. CONCLUSION

SPSS factor analysis confirmed that the factor of leisure is more affected and the factor of nutrition is less affected for the athletes of the University of Kelaniya. Athletes are advised to pay close attention to their physical wellness and to properly identify the challenges that affect their wellness. Basically, for a

high level of performance in a sport, the leisure of an athlete must be properly managed. In addition to leisure, other factors identified include sleep, nutrition, stress and alcohol. Looking at the overall study, it can be concluded that the study was able to successfully identify the challenges affecting the physical wellness of the athletes, the challenge that has the most impact and the least impact.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Charika Wickramarathne PDV. Wellness dimensions on the academic performance of undergraduates of the impact of wellness dimensions on the academic performance of undergraduates. European Journal of Public Health Studies The Impact of; 2020. (July). DOI:https://doi.org/10.5281/zenodo.3885025
2. Nawarathna KDN, Wickramarathne PC. Review of physical wellness challenges: for the advancement of the university athletes. Asian Journal of Social Science and Management Technology. ISSN: 2313-7410. 2021;3(2):March-April.
3. Tuso P. Strategies to increase physical activity. The Permanente Journal. 2015;19(4):84–88. DOI:https://doi.org/10.7812/TPP/14-242
4. Silva D. Strength and Conditioning in Sri Lankan sports; Fulfilling a high performance Need. GSJ. 2021;9(3).
5. Kamaruzaman S, Ali S. The importance of physical activities in our life. 2018;3(4):308–310. DOI:https://doi.org/10.15406/ipmrj.2018.03.00121
6. Apaak D, Sarpong EO. Internal challenges affecting academic performance of student-athletes in Ghanaian Public Universities. Journal of Education and Practice. 2015;6(14):18–23. Available:http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1080130&site=ehost-live
7. Muhsen TA, Muhsen MA. The Impact of Physical Activity and Sport on Mental Health. Journal of Physical Education.

2020;32(3):160–165.
DOI:https://doi.org/10.37359/jope.v32(3)2020.
1032

8. Kumari JP. The role of products of microfinance for reducing the poverty of the borrovvers: Exploratory factor analysis. International Journal of Management Excellence. 2020;15(3).

9. Prasansha Kumari JA. Instrument development of microfinance on poverty reduction: pilot study in sri lankan microfinance sector. Hmlyan Jr Eco Bus Mgn. 2021;2(2).

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