

A Study on, the Impact of Exercise on Mental Well-being

Abdul Haleem

BS-Economics Scholar, Akhuwat College University Kasur, Punjab, Pakistan.

Email: haleem.siapad@gmail.com

Mujdid Rabbani

BS-Economics Scholar, Akhuwat College University Kasur, Punjab, Pakistan.

Email: rabbanishar41@gmail.com

Ashfaq Sabir

BS-IT Scholar, Akhuwat College University Kasur, Punjab, Pakistan.

Email: ashfaqbaloch5451106@gmail.com

Received on: 06-01-2024

Accepted on: 10-02-2024

Abstract

The study was about the impact of exercise on mental well-being. The statement was, that exercise has a positive impact on mental well-being and will contribute to the reduction of stress and anxiety. A quantitative study was conducted and data was extracted through physical survey as well as online. The literature of the study illustrates that there is a positive correlation and this study also indicates the same but unfortunately, this study was declared as insignificant due to some factors that are discussed in the findings including a small sample size and unawareness of the subjects regarding surveys and research projects.

Keywords: Exercise, Mental health, academic achievement

Introduction

Mental-wellbeing means, how we respond to the ups and downs of our lives. It includes the acceptance of and dependency on emotions, feelings, thoughts, and behaviors. A healthy mental well-being is how we face emotional and conscious difficulties with courage and determination in our daily lives. These difficulties include relationship problems, financial, institutional, organizational, breaking up with loved ones, loss in businesses, and other problems that are normally faced by any individual and these difficulties have a great impact and disturbance on our mental well-being. Due to these difficulties, mental illness has surrounded us. Mental illness is a common disease around the globe that is not stoppable due to the negligence and nonseriousness regarding mental well-being by people of this era. Anthony D LA Montagne, in his research titled "Workplace mental health: developing an integrated intervention approach" states that, in the globe, people are emphasizing accepting the need to focus on mental well-being and to prevent mental illness (LaMontagne et al., 2014). Still, most people just think of their physical and biological health, but they don't focus

A Study on, the Impact of Exercise on Mental Well-being

on their mental health which has an integral role in their life. There are many variables and their impacts on mental well-being, for instance; Stress, connection with others, Sleep, exercise, etc. Here we chose one variable (Exercise) and its impact on Mental Well-being. So, we can interpret that, our study aims to determine the impact of exercise on mental wellbeing. In conclusion, we think that exercise has a great and positive impact on healthy mental well-being and is a good treatment to avoid mental illness.

Problem statement

Mental well-being is an integral component of well-being which helps in decision-making and deals with stress, and depression, realizing their abilities, learning well to work and contribute to their community (Mental health, 2022). Currently, people's nonseriousness is a huge problem regarding mental well-being and illnesses. According to the World Health Organization (WHO), "1 in every 8 people in the world live in mental disorder". These disorders include *Anxiety* (In 2019, 301 million people were living with an anxiety disorder including 58 million children and adolescents), *Depression* (In 2019, 280 million people were living with depression, including 23 million children and adolescents), *Bipolar* (In 2019, 40 million people experienced bipolar disorder) and many others (Mental Disorder, 2022). These are very huge numbers but people still don't show any seriousness about it. So, our study is to find out the impact of exercise on mental well-being and its significance.

Research Question of the Study

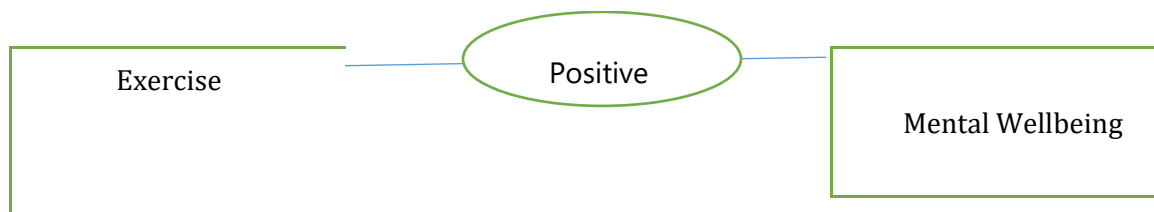
How does regular physical exercise influence the mental well-being of individuals?

Research Objective of the Study

The study aims to find out the impacts of exercise on mental well-being.

Variables of the Study

1. The research study contains two main variables, Mental Well-being (Dependent variable) and Exercise (Independent variable).



Hypothesis of the Study

1. Physical activity has a positive impact on Mental Well-being and it helps to reduce depression and anxiety.

Literature review

World Health Organization defines exercise as physical activities generally termed as it's a movement produced by the body's muscles with the expenditure of energy (WHO, 2013). We can define physical practice as a subpart of physical activities that are planned to improve health and well-being. It is based on some international research that the use of exercise is a medium for health promotion (Edwards, 2006). Physical activity is every human's basic need

A Study on, the Impact of Exercise on Mental Well-being

all over the world it maintains a healthy lifestyle. Healthy people can build a healthy nation and a healthy woman can provide a healthy generation to a nation (Smith, 2000).

Life is a name of struggle to survive and have a basic need to complete health, strange, and well-being which is an unrealizable goal (Pretorius, 1998). Many quantitative and qualitative methods are used to describe the experience of exercise, and what it has significance for people, also measure how changes result from it and what changes result from it (Berger, (1994)). It has been proven that exercise has to benefit the population in terms of mental health and well-being (Stathopoulou et al., 2006). Life quality can be improved by exercise through social interactions, meaningful time usage, and purposeful activities (Alexandratos et al., 2012). Quality of life term was defined as; it's an inclusion of well-being and it is functioning health of the state of anybody. Functioning is also characterized capability of carrying out the daily routine living and physical ability. And well-being is integrated by a healthy body and emotional states self-concept and also global perceptions linked with life satisfaction (Stewart et al., 1991).

It is confirmed through many studies that there is a positive correlation between exercise and mental well-being specifically in university students (Arias-Palencia et al., 2015). Research reveals a link between exercise and improved concentration and mod through physical exercise such as improved blood flow, facilitated the release of healing hormones, and inhibited release of degenerating hormones (Austin, 2014). Based on research we can say that physical activity is a cause of the reduction of depression and anxiety symptoms (Biddle & Asare, 2011). This time it is clear that good health is important for quality of life and ideal performances. People are facilitated to maintain and improve their health and wellness. Exercise also adds a pleasing basis for a healthy lifestyle (Katalin).

Methodology of the study

The purpose of the study is to determine the impact of exercise on mental well-being. The study is conducted with a quantitative research design. Therefore, designed a questionnaire and conducted it through the survey method. The population of the study will be those elements who are engaged with physical activities in different institutions and other common people who are active in physical activity. As we know, it will not be easy to survey a whole population. So, the decision was made to select a sample size for convenience. The minimum sample size consisted of 30 subjects. Furthermore, the following methods and procedures were used in the research project:

Data Collection Methods:

Prefer to use the survey method and the data was collected through a questionnaire.

Sampling Technique:

Convenience sampling technique is used which is a type of non-probability sampling.

Data Analyses Technique:

Data analysis techniques include correlation and regression tools which are used to analyze the data. Moreover, to run these tools, Microsoft Excel and IBM SPSS Statistics software were helpful.

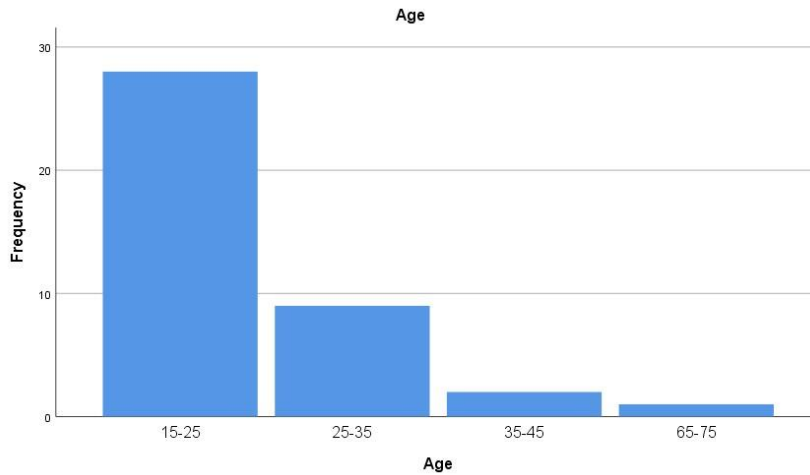
Results

Results are computed through the IBM SPSS software which is bellowed respectively

A Study on, the Impact of Exercise on Mental Well-being

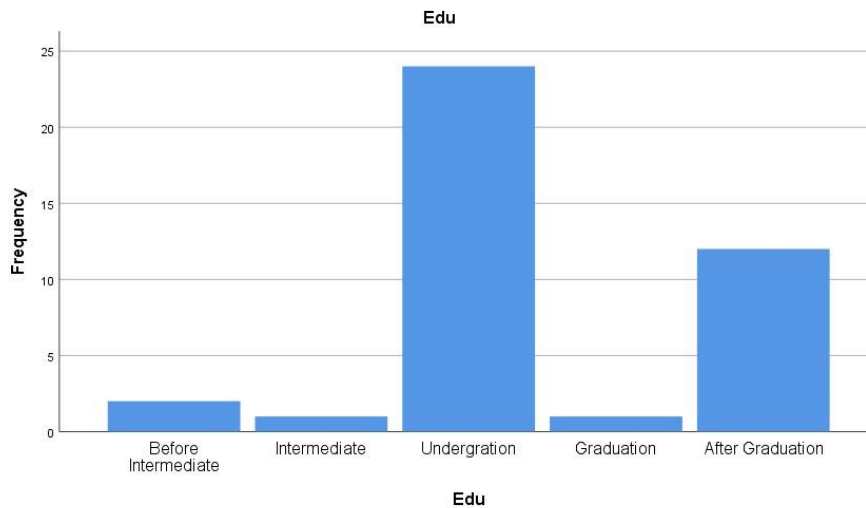
Age

The bar chart displays the numbers for the demographic information of the study. The demographic information of this study includes; age, education qualification the activity a subject is exercising, and their preferences for physical activity. This chart is the exhibition of the age of the observed subjects. It involves a total of 40 subjects and 28 of them are aged 15-25 years. For this, 9 are 25 to 35, 2 are 35-45 and only one is of 65-75 years.



Education Qualification

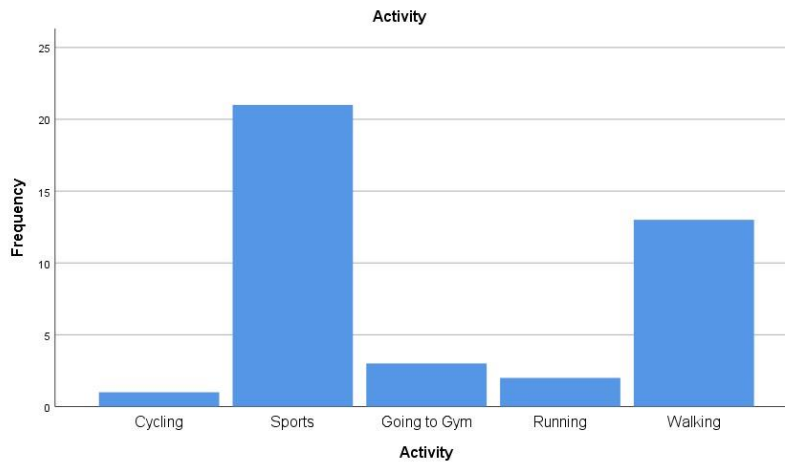
The given bar graph depicts the education qualifications of the subjects who were observed through the research instrument. It has been categorized into 5 ranges, which involves, 24 undergraduate students, 12 are those who have completed their graduation and Masters and others are before intermediate and intermediate students. It involves different disciplines and departments of various universities. It means this research is studying highly educated and literate subjects. There is no illiterate subject in this study.



A Study on, the Impact of Exercise on Mental Well-being

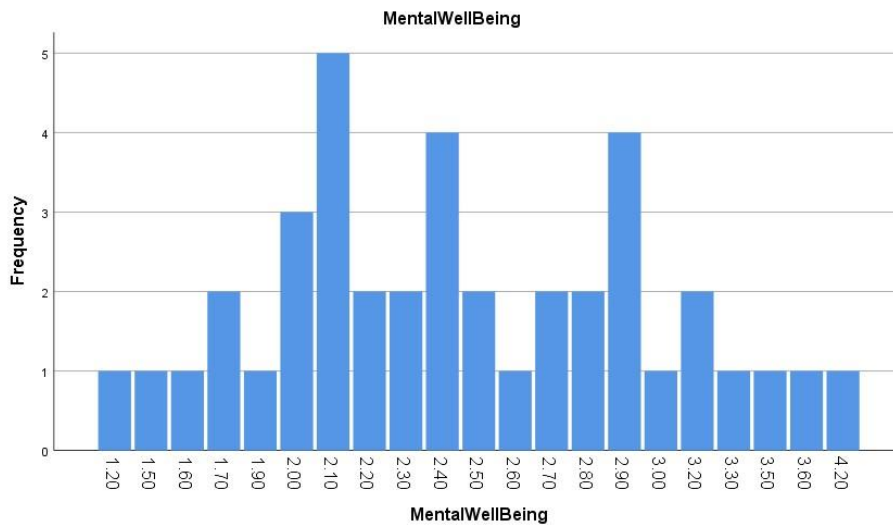
Physical Activity of the Subjects

The research contains demographic information which is regarding, which type of physical activity the subjects are performing. After the computation of the data, it shows that 21 subjects are involved in daily sports and 13 are just focusing on daily walk due to their business in routine work. Besides this, 3 subjects prefer to go gym, 2 are giving time to running and one is cycling.



Mental Well-being (Dependent Variable)

Mental well-being is the dependent variable of the study. There were 10 statements on mental well-being scaled 1-5 in which 1 is strongly agree and 5 is considered as strongly disagree. The determined data displayed in the given figure shows that the data variation is accumulated in the agree side.

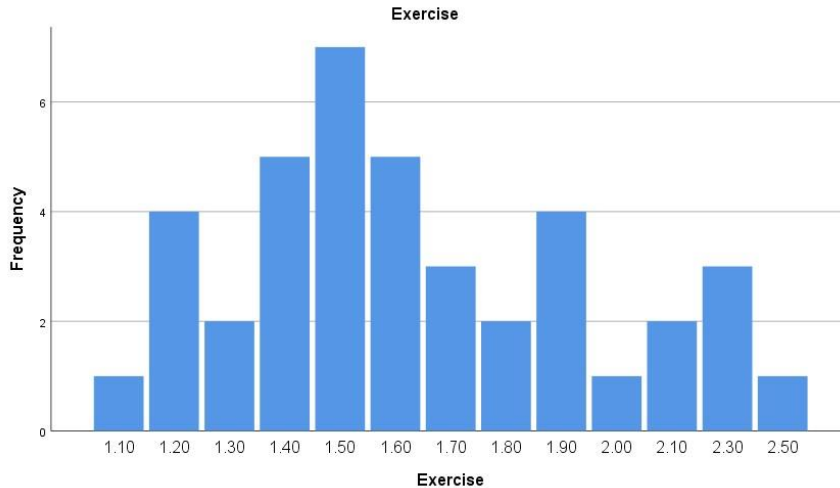


Exercise (Independent Variable)

Exercise is the dependent variable. Like the mental well-being variable, exercise (independent variable) also consisted of 10 statements, and the scaled was as the same as the

A Study on, the Impact of Exercise on Mental Well-being

dependent variable's. After applying the frequency test, it is showing that the data are on the agree scale side. It means subjects agreed with the statements on average.



Correlation

A correlation statistical test was applied to the main variables to check their correlation. The result of the test demonstrates that there is a positive relation between the variables. Furthermore, the Pearson correlation resulted in 0.106, which demonstrates that there is a weak correlation between the variables. The correlation between the variables is not significant because, on 5% significant level, the 0.515 calculated is more than 0.05. The insignificance of the correlation indicates that both variables do not vary together.

Correlations

		Mental Well-Being	Exercise
Mental Well-Being	Pearson Correlation	1	.106
	Sig. (2-tailed)		.515
	N	40	40
Exercise	Pearson Correlation	.106	1
	Sig. (2-tailed)	.515	
	N	40	40

R-Square

R square reveals the proportion of variation in the dependent variable explained by the independent variable square is also known as goodness of fit. In this study, R square is resolves 0.011 which means 1.1% exercise (independent) variable explains the proportion of variation in to mental well-being (dependent) variable.

A Study on, the Impact of Exercise on Mental Well-being

ANOVA (Analysis of Variance)

This insignificant. 14.673 illustrates the unexplained variation between the variables. table of ANOVA shows the F-value 0.433 which is more than 0.05 on a 5% significance level. In addition, the p-value shows as Sig. 0.515 is also > 0.05. Therefore, with the insignificance of F-value and P-value, we conclude that the result is statistically

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.167	1	.167	.433	.515 ^b
	Residual	14.673	38	.386		
	Total	14.840	39			

Coefficients

In this table of Coefficients, B is slope which estimates that 0.189 changes in dependent variables are impacted by change in one unit of independent variable. The standard error of the coefficient measures the variability of the estimates. The consideration of the data is proceeding by the result of P-value. Statistically, if the P-value in the table is less than 0.05, it will be considered significant and vice-versa. In this study, the P-value is given as 0.515 which is higher than 0.05 and it can be comfortably considered insignificant.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.161	.484		4.461	.000
	Exercise	.189	.288	.106	.658	.515

a. Dependent Variable: Mental Well-Being

Findings

The above results are concluded after analyzing and applying statistical tests on 40 subjects. Results contain, demographic information, and correlation between the variables, and regression analysis is applied to check the impact of one variable on another. Demographic information involves the age and education qualification of the subjects. Out of 40 subjects, most of them are aged 15-25 and 35-45 which indicates that data are subtracted from young, rational, and conscious people. Furthermore, education qualification results show that educated and under-education people were preferred. Those people who have concerns over exercise and physical activity. Therefore most of the subjects are on average active in one of the daily physical activities, as depicted in the results. After going through all the results and analysis, the correlation of the study can be concluded as the relationship between the variables (exercise and mental well-being) is positive, which means, there is a relationship

A Study on, the Impact of Exercise on Mental Well-being

but the relationship is weak in strength. Positive correlation means, both the variables vary together with each other. After studying the results of the R-square, ANOVA table, and coefficients of regression, the result indicates that the data are statistically insignificant. Insignificant means, there is not a great impact of exercise on mental well-being. Consequently, there would be other factors and variables which affect mental well-being rather than exercise. Because the study was to check the impact of exercise on mental well-being, the result concluded that mental well-being could not be affected by exercise.

Conclusion

It can be concluded that; there is no significant impact of exercise on mental wellbeing. After the insignificance, the hypothesis of the study (Physical activity has a positive impact on Mental Well-being and it helps to reduce depression and anxiety) can be explained as the relationship is positive but there is no help from exercise to reduce depression and anxiety. So, the hypothesis of the study would be considered as rejected. There can be a list of factors behind the rejection of the study. Firstly, there are other factors that can affect mental well-being rather than exercise and those factors were not controlled in this study including, inherent affected mental well-being, nature, losses in life, and others. Second, the sample size was small and not enough to measure such a big impact. Thirdly, there were contradictions in the statements of the questionnaire and subjects were not aware of the statements. Furthermore, the research was not as focused as it should have been due to limited time.

Limitations of the study

2. Limitations of the study include as:
3. A small and limited sample size is not sufficient to estimate a large population.
4. Most of the subjects were not aware of the surveys and were not aware of how to attempt any questionnaire.
5. Statements were difficult to understand by the subjects.
6. Time was limited and not enough to survey a large population.
7. There was no funding for the research project.

Implication of the Study

The study was not significant but still, it has implications and can contribute to the given implications.

The findings of the research may help in the development of new treatment policies and interventions.

1. The study may contribute to understanding theories and concepts.
2. It may identify further extensions in the future for the researchers.
3. The findings may contribute to the decision-making process in different organizations and institutions.
4. The chief implication is of social and ethical concerns. It will highlight the importance of exercise on mental well-being to build a change in society.

*A Study on, the Impact of Exercise on Mental Well-being***References**

1. (WHO), W. H. ((2013).). Global strategy on diet, physical activity, and health. Available online at:<http://www.who.int/dietphysicalactivity/pa/en/index.html> (Accessed 2 April 2012).
2. Alexandratos, K., Barnett, F., & Thomas, Y. ((2012).). The impact of exercise on the mental health and quality of life of people with severe mental illness. *A critical review. British Journal of Occupational Therapy*, , 75(2), 48-60.
3. Arias-Palencia, N. M., Solera-Martínez, M., Gracia-Marco, L., Silva P., Martínez-Vizcaíno,V., CañeteGarcía-Prieto, J., & Sánchez-López, M. (2015). Levels and patterns of objectively assessed physical activity and compliance with different public health guidelines in university students. *PLOS ONE* 10(11), 1-15. .
4. Arias-Palencia, N. M., Solera-Martínez, M., Gracia-Marco, L., Silva P., Martínez-Vizcaíno,V., Cañete-
5. Austin, D. S. ((2014)). Killing them softly . *Neuroscience reveals how brain cells die from law school stress and how neural self-hacking can optimize cognitive performance*,, *Loyola Law Review*, 59, 791-859. .
6. Berger, B. G. ((1994)). Coping with stress. *The effectiveness of exercise and other techniques*.
7. Biddle, S.J.H., & Asare, M. ((2011)). Physical activity and mental health in children and adolescents : a review of reviews. *British Journal Sports Medicine*, , 45, 886-895.
8. Demers, N. R. ((2013).). The relationship between exercise and mental health in college students (Doctoral dissertation, North Dakota State University).
9. Edwards, S. ((2006)). Physical exercise and psychological well-being. *South African journal of psychology*,, 36(2), 357-373. \García-Prieto, J., & Sánchez-López, M. (n.d.). Levels and patterns of objectively assessed
10. Katalin, L. ((2008)). The relationship between pro-environmental behavior and health behavior http://ganymedes.lib.unideb.hu:8080/dea/bitstream/2437/80889/6/tezis_angol.pdf.
11. LaMontagne, A. D., Martin, A., Page, K. M., Reavley, N. J., Noblet, A. J., Milner, A. J., ... & Smith, P. M. . ((2014)). Workplace mental health. *developing an integrated intervention approach. BMC psychiatry*,, , 14, 1-11.
12. Pretorius, T. B. (1998). Fortitude as stress-resistance. *Development and validation of the Fortitude Questionnaire (FORQ)*.
13. Smith, B. J. ((2000).). Promoting physical activity in general practice: A controlled trial of written advice and information materials. *Br J Sports Med* , 34, 262–267.
14. Stathopoulou G, Powers M, Berry A, Smits J, Otto M. ((2006)). Exercise interventions for mental health:. *a quantitative and qualitative review. Clinical Psychology: Science and Practice*, , 13(2), 179-93.
15. Stewart, A.L., & King, A.C. . ((1991)). Evaluating the efficacy of physical activity for influencing quality-of-life outcomes in older adults. *Annals of Behavioral Medicine*, 13(3), 108-116.