

Effects of Aerobic Exercises for General Anxiety Disorders in Adolescents

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Abstract

Objective : The objective of the study were to determine the effect of aerobic exercises for the patients who were suffering from the general anxiety disorders such as depression, stress, and anxiety in adolescents.

Method : In this experimental study, 46 generally anxiety disorders patients were taken for the study, subjects were from the schools nearby with adolescents age group . Subjects were treated with aerobic exercises.

Result: The total of 46 cases were taken for the study who underwent through aerobic exercises. With statistical analysis of pre and post treatment, the exercises were found extremely significant with a p value of <0.0001.

Conclusion: The study concluded that aerobic exercises are effective in the management of generally anxiety disorders in adolescents.

Key words: Generally anxiety disorder, aerobic exercises, adolescents.

Introduction

Mental illness is a serious public health issue. It is expected to account for 15% of the global burden of disease by 2020, which would make it the leading disease burden.⁷ Suicide, depression, eating disorder, and anxiety are some of the conditions that affect young people in disproportion rate in comparison to many other population groups.⁸

Mental health problems cause huge public health burden in juveniles globally, as evidenced by a 20% prevalence.^{1,2} Research has demonstrated that physical activity (PA) may provide physiological and psychological benefits.^{5,6} Several studies have described an improvement in mood of health of persons after participation in a physical activity programme.^{3,4}

In seeking to understand the beneficial effects of exercise and how they are produced, it is important to consider separately what happens to mood and well-being immediately after an exercise workout and what the longer term benefits are of maintaining an exercise regimen. Two studies support the notion that physical activity improves mood and well-being immediately following an exercise workout. The effect of physical activity on mental health in children and adolescents has received significantly less attention than in adult population.⁹

For teenagers, it is suggested that low SE predicts adolescents' report of mental status and health compromising behaviours, such as depression, anxiety, problem in eating and suicidal ideation. Low level of self-esteem in children and adolescents also predicts poor health, criminal behaviour, and limited economic prospects during adulthood. Thus it is important to determine effective interventions for improving self-esteem and self-concept for juveniles.¹⁶

Medications used to treat severe mood disorders such as quetiapine and lithium, are often associated with weight gain.¹⁰ Thus, alternative augmentation strategies

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that target mental health and physical would be desirable. diagrams and bar diagram.

Exercise represents a cost-effective and easily disseminated intervention that includes the benefits of minimal side-effects and improved physical health and mental health. The data on the efficacy of exercise as an intervention for MDD and Bipolar disorder have yielded effect sizes comparable to medications.¹¹⁻¹⁵

Aims and Objectives

Aim:

The study is to find the effect of group aerobic exercise for psychological disturbed adolescents.

Objectives:

1. To assess the stress by the aerobic exercises in day to day life.
2. To overcome the psychological disturbances in adolescents by group aerobic exercises.

Materials and Methodology

- **Type of study**-Observational Study
- **Study Design**-Survey
- **Place Of Study**-Karad
- **Sample Size**- 46
- **Sampling Method**-Simple Random Sampling
- **Statistical Analysis**-with the help of pie

Inclusion Criteria

- Patients with psychologically disturbed adolescents.
- Those are willing to participate.

Exclusion Criteria

- Patients with cardiovascular conditions.
- Patients with orthopaedic conditions.
- Patients other than depression, anxiety, etc.

Materials

- Assessment chart
- Writing Material
- Computer for online accessing

Outcome Measure:

- 0 = Not at all
- 1 = Just a little
- 2 = Somewhat
- 3 = Moderately
- 4 = Quite a lot
- 5 = Very much

1.	I do things slowly	0 1 2 3 4 5
2.	My future seems hopeless	0 1 2 3 4 5
3.	It is hard for me to concentrate on reading	0 1 2 3 4 5
4.	The pleasure and joy has gone out of my life	0 1 2 3 4 5
5.	I have difficulty making decisions	0 1 2 3 4 5
6.	I have lost interest in aspects of life that used to be important	0 1 2 3 4 5
7.	I feel sad, blue, and unhappy	0 1 2 3 4 5
8.	I am agitated and keep moving around	0 1 2 3 4 5
9.	I feel fatigued	0 1 2 3 4 5
10.	It takes great effort for me to do simple things	0 1 2 3 4 5

11.	I feel that I am a guilty person who deserves to be punished	0 1 2 3 4 5
12.	I feel like a failure	0 1 2 3 4 5
13.	I feel lifeless—more dead than alive	0 1 2 3 4 5
14.	My sleep has been disturbed; too little, too much, or broken sleep	0 1 2 3 4 5
15.	I spend time thinking about HOW I might kill myself	0 1 2 3 4 5
16.	I feel trapped or caught	0 1 2 3 4 5
17.	I feel depressed even when good things happen to me	0 1 2 3 4 5
18.	Without trying to diet, I have lost, or gained, weight	0 1 2 3 4 5

Table no.1.The Goldberg Depression Scale

Procedure:

- An approval for the study was obtained from the protocol committee and institutional ethical committee of Krishna Institute of Medical Science ‘Deemed to be University’.

- Subjects taken for my study was from outdoor.

- On the day of enrolment, subjects were undergone detailed assessment to fulfil inclusion and exclusion criteria.

- As the subject fulfilled the criteria they were explained about the study and detailed information was given to them.

- They were explained about:

1. Pattern of study
2. Need of study
3. Information generated out of the study

4. Importance about the information generated

5. Its effect on general population.

6. Aerobic exercises were explained and performed

- Consent was taken detailed, information was gathered and statistical analysis was then done in order to derive conclusion.

Statistical Analysis and Result

Statistical Analysis: It was done manually and by using the statistics software INSTAT so as to verify the results derived. Un-paired ‘t’ test was used for interpretation of post interventional values. According to standard deviation and the pearsons test we calculated the p value of each question in Goldberg scale for pre and post treatment, and they were extremely significant.

Result : In this study, the statistical analysis for Goldberg depression scale shows the extremely significant in post intervention. There is improvement in reduction of anxiety, depression and stress level after doing aerobic exercises for 6 weeks.

Table no.2. Representation of pre and post values of Goldberg depression scale.

Sr.No.	QUESTIONS	PRE	POST	p value
1.	I do things slowly	4.04	1.89	<0.0001
2.	My future seems hopeless	4.10	1.97	<0.0001

Table no.2. Representation of pre and post values of Goldberg depression scale.

3.	It is hard for me to concentrate on reading	3.93	1.86	<0.0001
4.	The pleasure and joy has gone out of my life	4.02	1.89	<0.0001
5.	I have difficulty making decisions	4.02	1.76	<0.0001
6.	I have lost interest in aspects of life that used to be important	3.97	2.08	<0.0001
7.	I feel sad, blue, and unhappy	3.93	1.93	<0.0001
8.	I am agitated and keep moving around	4.04	1.76	<0.0001
9.	I feel fatigued	3.91	1.82	<0.0001
10.	It takes great effort for me to do simple things	3.71	2	<0.0001
11.	I feel that I am a guilty person who deserves to be punished	3.97	2.06	<0.0001
12.	I feel like a failure	4.23	1.65	<0.0001
13.	I feel lifeless—more dead than alive	4.10	1.76	<0.0001
14.	My sleep has been disturbed; too little, too much, or broken sleep	3.69	1.95	<0.0001
15.	I spend time thinking about HOW I might kill myself	3.97	2	<0.0001
16.	I feel trapped or caught	4.15	1.89	<0.0001
17.	I feel depressed even when good things happen to me	3.95	1.78	<0.0001
18.	Without trying to diet, I have lost, or gained, weight	3.76	1.97	<0.0001

Discussion:

Mental illness is a serious public health issue and mental health problems are causing serious issues in adolescents. This leads to depression, anxiety, stress and which causes the increase in rate of suicide and many more disorders. This project was done in 6 weeks with sample size of 46 patients suffering through generally anxiety disorder. This research was undertaken with the aim to study the effect of aerobic exercises for generally anxiety disorder in adolescents. The study is to see

the effect of aerobic exercises such as jumping jacks, burpees, jump rope, squat jumps, kickboxing, jogging in place on the adolescents to see the effect on generally anxiety disorders. The exercises were perform everyday with 10 repetitions of 3 sets each day with the pre and post examination of Goldberg depression scale. Prior consent was taken from the patients suffering from generally anxiety disorder. The outcome measure for this experimental study was goldberg depression scale and the intervention was aerobic exercises followed by

6 weeks. The results were extremely significant after the intervention and was confirmed by the Goldberg depression scale. The results were compared with pre and post values and the p values were <0.0001 for each question asked in scale. Hence, the exercises were beneficial for the patients suffering from generally anxiety disorder.

Conclusion

From this study, we can conclude that there is an effect of aerobic exercises in generally anxiety disorder for adolescence which shows aerobic exercises are effective to reduce anxiety, depression and stress level in age group of 18-21.

Conflict of Interest: There is no conflict of interest.

Ethical Clearance: An approval for the study was obtained from the protocol committee and institutional ethical committee of Krishna Institute of Medical Science 'Deemed to be University'.

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