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THE EFFECT OF AEROBICS ON RESILIENCE

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ABSTRACT

The study attempts to find out the effect of Aerobics on resilience. The variables included in the study were emotional regulation, impulse control, causal analysis, self-efficacy, realistic optimism, empathy, reaching out and overall resilience. Samples of 195 adolescent people within the age range of 12 – 18 years were select using the characteristics of stratified random sampling method. According to the scores in resilience scales 24 participants (12 in control group and 12 in experimental group) were selected (from the low score group) to study the effect of aerobics on resilience. The participants were match in the case of gender, age and education. The participants were practiced aerobics continuously for 30 days. Statistical techniques used in this study were Wilcoxon Signed Rank Test. The results revealed that there were significant correlations among the study variables and the aerobics has significant positive effect on resilience.

KEY WORDS: Resilience, Aerobics, Adolescence

INTRODUCTION

Adolescence is an important period than other because of their immediate effects on attitudes and behaviour, where as others are significant because of their long-term effects. It is a transitional period, it does not mean a break with or a change from what has gone before but rather a passage from one stage of development to another. The rate of change in attitudes and behaviour during adolescence parallels the rate of physical change. Different factors are influence positively or negatively to the adolescent. Among them resilience is the most prominent factor that influence adolescents.

Many views of resilience include metaphors associated with adaptability despite adverse circumstances or obstacles (Klarreich, 1998). The components of the resilience are; ***emotional regulation***, ***Impulse control***, ***Causal analysis***, ***Self-efficacy***, ***Realistic optimism***, ***Empathy*** and ***Reaching out***. Now there is a wide understanding about the mind – body relationship and people have started giving importance to a healthy mind for a healthy adolescence. It is not more than twenty years that people began to develop a humanistic attitude towards psychiatric patients especially with respect to their dealings with them. The present study also attempts to suggest an alternative (*Aerobics*) to improve resilience of the adolescence people.

LITERATURE REVIEW:

Theories of resilience has been evolving over the past 70-80 years, has enjoyed a renaissance in the past two or three decades. What started as an enquiry into the childhood roots of resilience has grown into a broad, dynamic and exciting field of study. Resilience theory currently addresses individuals (both children and adults), families, communities, workplaces and policies. The emergence of resilience theory is associated with a reduction in emphasis on pathology and an increase in emphasis on strengths (Rak & Patterson, 1996). His review begins at micro level and historically with the individual. Resilience theory has its roots in the study of children who proved resilient despite adverse childhood environments.

Resilience is the capacity to maintain competent functioning in the face of major life stressors. (Kaplan, Turner, Norman, & Stillson, 1996, p. 158) resilience was "both the capacity to be bent without breaking and the capacity, once bent, to spring back" (Goldstein, 1997, p. 30). Resilience means the skills, abilities, knowledge, and insight that accumulate over time as people struggle to adversity and meet challenges. It is an on-going and developing fund of energy and skill that can be used in current struggles. Resilience is primarily defined in terms of the "presence of protective factors (personal, social, familial, and institutional safety nets)" which enables individuals to resist life stress (Kaplan et al., 1996, p. 158). An individual's resilience at any moment is calculated by the ratio between the presence of protective factors and the presence of hazardous circumstances.

'A model of resilience in response to psycho-logical trauma', developed by Wilson (2001, 2004)**,** the reaction to a traumatic life event is explained. Starting with the event and the characteristics of the event, its influence is described in turn on personality, 'self-structure' and ego processes. This determines activation of the allostatic stress response, which influences the continuum of adaptation and resilience. Connor (2006) defines resilience as a way of measuring the ability to cope with stress. Here, resilience describes the personal qualities that make it possible for individuals and communities to grow and even to make headway in unfavourable circumstances. Friborg et al. (2003) regards resilience as a construct comprising various dimensions. The concept refers not only to psychological skills, but also to the possibilities for the individual to take advantage of family, social and external support systems in order to cope better with stress.

METHODOLOGY

Design: Mixed design used for the study in which the data were collected from a sample selected with the characteristic of simple random sampling and the scales were scored in order to get the total score. For the intervention study, two group pre – post matched design was used was used, in which people who scored low in the tools administered and randomly divided into 12 participants each.

Inclusion-exclusion criteria: Participants should have a low score in overall resilience, should be males and aged between 12-18 years.

TOOLS

1. Resilience Scale: (Sripriya & Ajilal, 2009) was designed to measure the resilience of individuals. This scale consisted of seven subscales (Emotional regulation Impulse control, Causal analysis, Self-efficacy, Realistic optimism, Empathy and Reaching out.) each having 12 items. It has good reliability and validity.

2. Personal information schedule: The personal information schedule helped the investigator to collect information regarding relevant variables such as name, age, gender, religion, domicile and number of siblings.

INTERVENTION: Every session will include 5 to 10 minutes warm up and 5 to 10 minutes cool-down exercise. The program will include the aerobic dance workout with

music. The duration of exercise series will be 60 minutes. In addition, the intensity of the training will increase gradually. Recommended music were Mirror man; the human League.

PROCEDURE: The investigator met the participants individually and received their consent to participate in the study; tools were given to the participants in the following order Personal Data sheet and Resilience scale. From 195 scored data collected the low-scored group of 24 participants who were willing to participate in intervention. 24 participants had divided randomly into two equal halves, via, a study group and a control group. After this pre-assessment, *Aerobics* was administered to the experimental group and was asked to continue the practice 30 days under adequate supervision. The follow up assessments of both groups were taken after the specified period of 30 days with the same tools. Statistical technique Wilcoxon Signed Rank Test was used.

RESULTS AND DISCUSSIONS

Table 1: Comparison of Control group and Experimental group at pre and post assessment scores on Resilience: Results of Wilcoxon Signed Rank Test

Sl. No	Variable	Assessment	Z score	Significance level.
1	Emotional	Pre con-Pre exp	-1.06	ns
		Post exp-Pre exp	-2.31	.01
		Post con-Pre con	-.82	ns
		Post con-Post exp	-2.84	.05
2	Impulse control	Pre con-Pre exp	-1.37	ns
		Post exp-Pre exp	-1.10	ns
		Post con-Pre con	-1.65	ns
		Post con-Post exp	-.04	ns
3	Causal analysis	Pre con-Pre exp	-1.29	ns
		Post exp-Pre exp	-1.31	ns
		Post con-Pre con	-.53	ns
		Post con-Post exp	-1.82	ns
4	Self efficacy	Pre con-Pre exp	-.58	ns
		Post exp-Pre exp	-1.33	ns
		Post con-Pre con	-.15	ns
		Post con-Post exp	-78	ns
5	Realistic optimis	Pre con-Pre exp	-.39	ns
		Post exp-Pre exp	-.07	ns
		Post con-Pre con	-1.07	ns
		Post con-Post exp	-.11	ns
6	Empathy	Pre con-Pre exp	-.03	ns
		Post exp-Pre exp	-.62	ns
		Post con-Pre con	-.31	ns
		Post con-Post exp	.53	ns
7	Reaching out	Pre con-Pre exp	-.23	ns
		Post exp-Pre exp	-2.97	.05
		Post con-Pre con	-.089	ns
		Post con-Post exp	-2.59	.05
8	Overall resilienc	Pre con-Pre exp	-.83	ns
		Post exp-Pre exp	-2.87	.05
		Post con-pre con	-.589	ns
		Post con-Post exp	-2.27	.01

Among the 8 variables, emotional regulation, reaching out and overall resilience showed statistically significant difference between the pre-test and post-test of experimental groups, and post- tests of control group and experimental group. In overall resilience, experimental group obtained a mean of 267 and a standard deviation of 20.01 in the pre test. In addition, a mean of 284.91 and a standard deviation of 20.93 respectively in the post test, while the control group obtained a mean of 274.16 and 272.41 and a standard deviation of 25.60 and 26.84 in the pre -test and the post test. The Z score obtained in post control- post experimental assessment was -2.27 which was significant at 0.01 levels. Moreover, the Z score obtained in post experimental- pre experimental assessment was -2.87 which was significant at 0.05 levels. In emotional regulation, experimental group obtained a mean of 28.58 and a standard deviation of 7.26 in the pre test and a mean of 39.75 and a standard deviation of 6.84 in the post test, while the control group obtained a mean of 32.66 and 35.16 and a standard deviation of 8.90 and 6.65 respectively in the pre -test and the post test. The Z score obtained in post control- post experimental assessment was -2.84 which was significant at 0.05 level. And the Z score obtained in post experimental- pre experimental assessment was -2.31 which was significant at 0.01 level. The above result indicates that, the Aerobics effectively increased the emotional regulation of the participant after its practice for 30 days which is evident from the increase in the mean values of experimental group. Also the one who practiced *Aerobics* had a better emotional regulation after training than the ones who did not practice it. It develops the ability to manage our internal world in order to stay effective under pressure than the person who did not practice Aerobics.

In reaching out, the experimental group obtained a mean of 39.50 and a standard deviation of 4.14 in the pre test and a mean of 44.83 and a standard deviation of 5.68 in the post test, while the control group obtained a mean of 39.91 and 40.08 and a standard deviation of 6.12 and 6.58 respectively in the pre -test and the post test. The Z score obtained in post control- post experimental assessment was -2.59 which was significant at 0.05 level. The Z score obtained in post experimental- pre experimental assessment was -2.97which was significant at 0.05 level. The above result indicates that, the Aerobics effectively increased the reaching out of the participant after its practice for 30 days which is evident from the steep increase in the mean scores of experimental group. Also those who practiced *Aerobics* had a better ability to enhance the positive aspects of life and take new challenge and opportunity after training than the ones who did not practice it. The remaining variables: impulse control, causal analysis, self efficacy, realistic optimism and empathy did not show any significant differences in any of the assessment phases.

Previous research has demonstrated that engaging in exercise and physical activity significantly enhances mental health. Participating in an exercise program has a positive impact on elevating mood and improving self-concept and self-esteem (King, Taylor, Haskell, & DeBusk, 1989). Resilience, emotional regulation and reaching out showed remarkable positive effect after the short term practice of *Aerobics*. Aerobics can invigorate the mind since it supplies plenty of oxygen to the body. This would in turn provide a large amount of oxygen to the increases their resilience, emotional competence, emotional regulation and reaching out capacity.

CONCLUSION

The findings of the study give promises to various fields. It showed positive effect of *Aerobics* on resilience. The main purpose of the study was to explore the positive outcome that related to resilience and to find out the effective solution for stress related problem among the adolescent population. The result gives a positive outcome for the future. In career development one of the main reasons of poor performances of people is their low level of resilience. So, if a person has low level of resilience; it will negatively affect his or her career. The study says that in the field of education, it is important to note that people who are low in resilience would be low in their self and they suffer performance anxiety. In the personal and interpersonal level it is important to keep in mind that only a person with healthy self can function properly in a society. Study shows that aerobics positively influence the development of

resilience. The implementation of aerobics in educational sector helps the adolescent people to improve their capacity of resilience. It helps them to improve their physiological as well as psychological wellbeing.

The limitations of the present study are; the lack of time, relatively small sample, Aerobics that gives a great effect after practicing 6 months was practiced only for 30 days in this study, the study and control groups contained only males, the sample size used to study the effect of *Aerobics* was 12 in each case. This lessens the scope of confirming and generalizing the results derived from this intervention program. For further research, one can include more number of variety variables under consideration with a greater sample size. Stratification of sampling can also be improved.

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