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TREADMILL EXERCISE: EFFECTS ON PSYCHOLOGICAL DISTRESS IN SEDENTARY STUDENTS

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Abstract:

Aims

The primary aim of the study was to examining the effects of Treadmill exercise on psychological distress,

Target population and Sample size

Two groups were targeted as an experimental group and control group. The 34 male participated in the study and their age ranged between 19-28 years. The all students are sedentary and not participation any sporting or physical activities.

Exclusion and inclusion criteria

Exclusion criteria were , CVD, Hypertension Hypotension, asthma, Diabetes, etc. that would put the subjects at risk when performing the experimental tests.

Treadmill exercise

Experimental group participated in Treadmill exercise Training program which was conducted for four-week, four days in a week and 15 minutes in a day. After the pre-test was over, the entire selected subjects were exposed to four-week Treadmill exercise.

Findings and Conclusions

The findings of the show that there were significant differences were found in experimental and control group . significant difference of Psychological distress (t= p<.05) was found between Pre and post test of Experimental group where the score of psychological distress was significantly reduce after treadmill training

Recommendation

The findings of the study will be proposing a new conceptual model that may assist the policy makers in framing new policies and strategies to manage the stress problem

Keywords: Distress, Treadmill, experimental, group

I. INTRODUCTION

The sources of distress for students may include, bad life style habits, insomnia, anxiety, academic stress, enormous syllabus to be covered in a limited time period, sudden change in their style of studying, lack of proper guidance , thought of success /failure in exams, insufficient bed side teaching (Singh 2016; Guthrie et.al., 1998; Vitaliano ;1989, Varo et.al 2003). Sedentary lifestyle is one of the growing health problems among college going students, due to which students can face a variety of problems, they are more likely to be obesity High and low blood pressure diabetes or heart disease, and experience depression and anxiety (Assadi, 2017; Bhui, 2002;Briddle et.al.2008 ;Briddle, et.al 2011).

Treadmill workout help to , promote better sleep, increase energy levels, boost your immune system weight loss, improve strength , control blood sugar, increase HDL (good) cholesterol levels, improve memory and cognition, protect against Alzheimer's, promote healthier skin, strengthen muscles, decrease fatigue, decrease joint stiffness, relieve stress and anxiety, and improve sexual arousal (Singh 2016; Guthrie et.al., 1998; Vitaliano ;1989, Varo et.al 2003). It is important for educators to pay attention and know the prevalence and causes of students' distress, which not only affects their health, but also their academic performance at their study period (Singh 2016; Guthrie et.al., 1998). The students of university and colleges or uses treadmills for enhancing muscular fitness and physique purposes, not for research. There is a lack of research reports on the effects of treadmill running on mental health. The efforts made by the investigator on the present research can prove to be very useful in reducing distress among the students .

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II. METHODS

Sampling method and Sample Size:
The method of sample was purposive –A non-random method of sampling design for students with a specific purpose. The sample size of the study was to 17 experimental group sedentary students and 17 control group . The 34 male sedentary students from SRTM University, participated in the study and their age ranged between 19-28 years. Experimental design for this study involves a cross sectional, comparative pre and post-test experimental design.

Source of Data:
The study depends mainly on primary source of data. The data was collected through respondents in the form of Questionnaires from 17 experimental group sedentary students and 17 control group sedentary group.

Ethical consideration
In this study, the researcher Follow the ethical guidelines, principles, and standards for studies conduct with human beings. The study was including safeguards for protecting humans, which involve three major ethical principles: beneficence, respect for human dignity, and human justice.

Demographic information:
The data was collected through respondents in the form of different descriptive tests. The demographic information was obtained before seeking responses.

Treadmill
The standard treadmills of Aerofit were used to training program. Before exercise pre-test done by departmental fitness centre.

Assessment of mental health:
For measure the mental health of the students, Mental Health Inventory prepared by Davies AR, Sherbourne CD, Peterson JR and Ware JE (1998) was used. All of the 38 MHI items, except two, are scored on a six-point scale (range 1-6). Items 9 and 28 are the exception, each scored on a five-point scale (range 1-5). The pre-coded values of each item are shown on the copy of the instrument on the preceding pages.

The MHI was aggregated into:
Two global scales - Psychological Distress and Psychological Well-being and A global Mental Health Index score and only one global scale included in the study i.e Psychological Distress

Data processing:
The data was checked for accuracy and completeness and was coded and put up into the SPSS Descriptive statistics for all studied variables, percentage , mean, standard deviation and t-ratio, were considered statistically technique throughout the study and the level of significant was set-up at 0.05 level.

Results and discussion
The results concerning of this research are presented in the form of tables and also illustrated with the help of suitable figures wherever necessary. For the sake of convenience and methodical presentation of the results, following order has been adopted**.**

Table – 1
Personal Characteristics of experimental and control group

Sr.No.	*Personal characteristics*	*Students*	
		Experimental group	*Control Group*
1)	***Use of social media***	***64.70%***	***88.23%***
2)	***Use of Internet***	***88.23%***	***82.35%***
3)	***smoking***	***23.52%***	***17.64%***
4)	Use of Facebook	***82.35%***	***94.11%***
5)	Use of WhatsApp	***94.11%***	***64.70%***

The Table -1 Shows the *Personal Characteristics of experimental and control group.* The results of the study shows that, 64.70% experimental group Use social media; 88.23% experimental group Use internet ; 23.52% experimental group

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they smoked; 82.35% experimental group Use Facebook and 94.11 % experimental group Use WhatsApp. Whereas , 88.23% experimental group Use social media; 82.35% control group Use internet ; 17.64% Control group they smoked; 94.11% Control group Use Facebook and 64.70% control group Use WhatsApp

Figure-1 shows the Personal Characteristics of experimental and control group

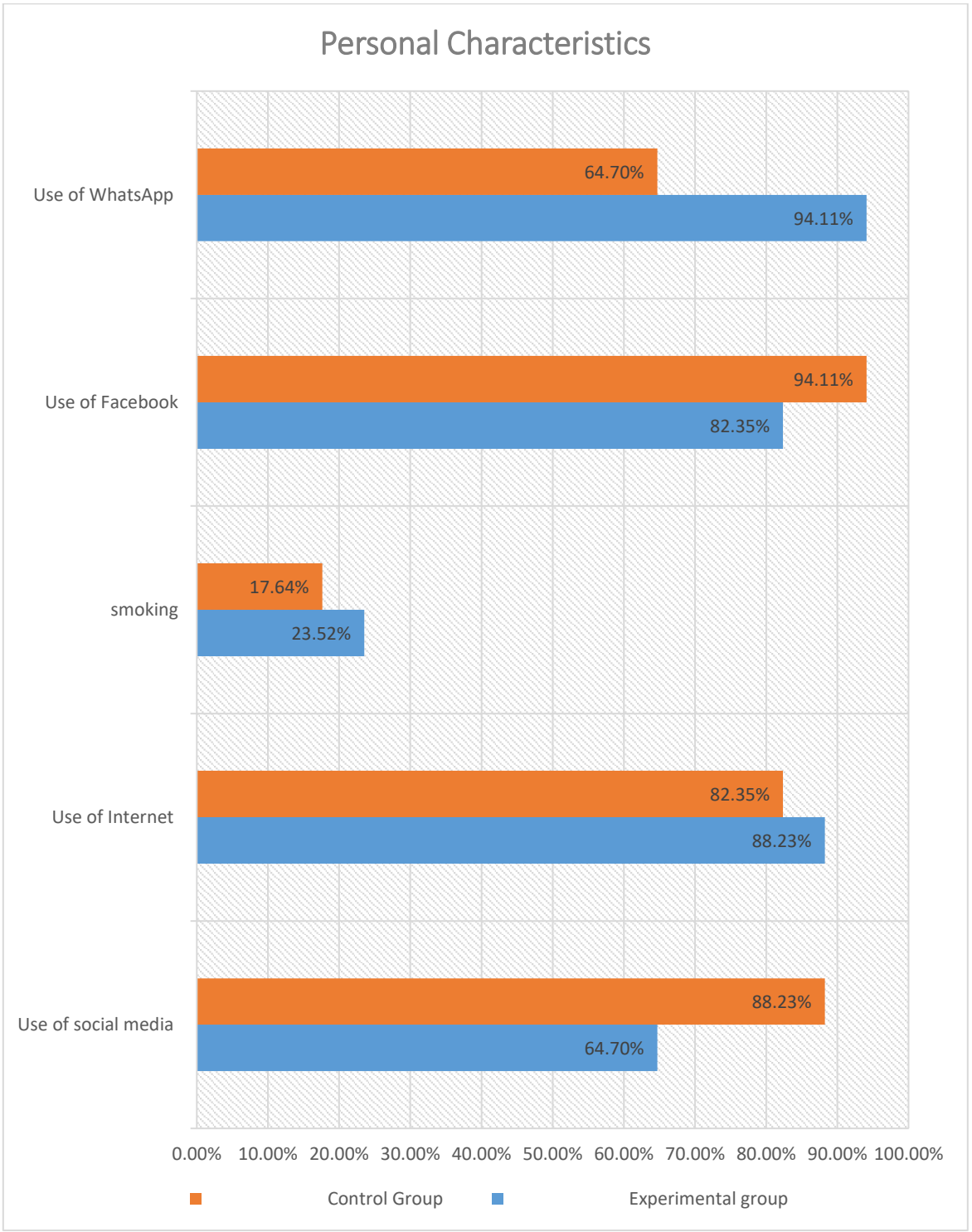

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Table-2 Mean Scores, Standard Deviation and t-ratio of Psychological distress among the control group

Dimension	Students	Number	Mean	S.Ds.	t-ratio
Psychological distress	Pre-test	17	40.34	5.43	1.35NS
	Post-test	17	40.56	5.34	

Table -2 shows the Mean Scores, Standard Deviation and t-ratio of Psychological distress between Pre and post test of control group.

Figure-2 Mean Scores and Standard Deviation of Psychological distress among the control group

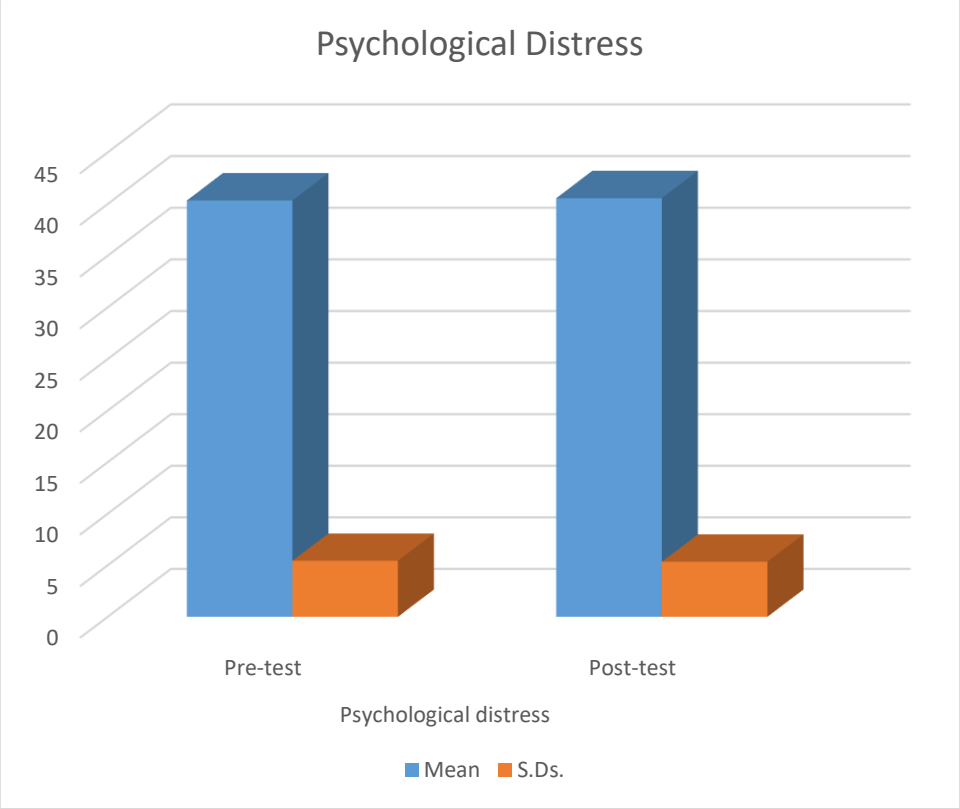

Table-3 shows the Mean Scores, Standard Deviation and t-ratio of Psychological distress between pre and post test of experimental group

Dimension	***Students***	***Number***	***Mean***	***S.Ds.***	***t-ratio***
Psychological distress	***Pre-test***	***17***	***44.20***	***6.10***	***6.33****
	Post-test	***17***	***41.52***	***5.66***	

Table -3 shows the Mean Scores, Standard Deviation and t-ratio of Psychological distress between Pre and post test of Experimental group.

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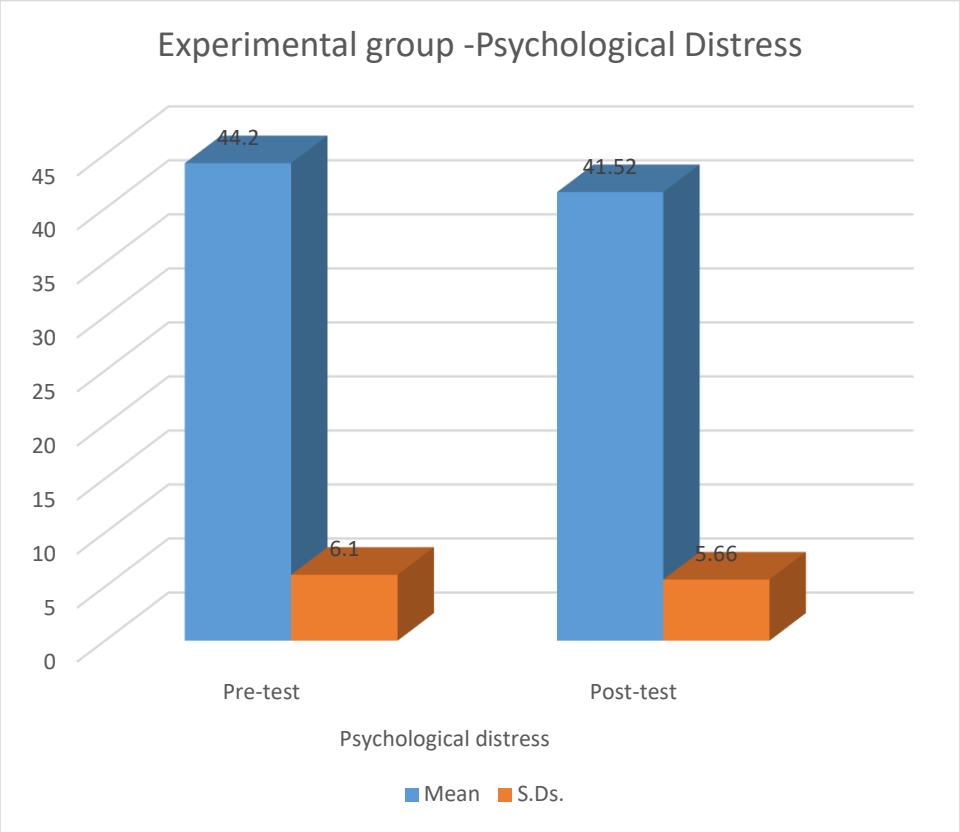

III. DISCUSSION

The relatively high psychological distress of students may be due to the unhealthy life-styles such as lack of exercise, smoking, use of Facebook, WhatsApp and social media (Table-1), could contribute to the lack of sleep and poor self-health care, high pressure of studies and limited time to acquire vast knowledge may prevent student's healthy life-style. Psychological distress is more common in students . With regards to Psychological distress between Pre and post-test of control group they have obtained mean values (SDs) were 40.34 (5.43) and 40.56 (5.34) respectively, the result reveals no significant difference of Psychological distress was found between Pre and post-test of control group. With regards to Psychological distress between Pre and post-test of Experimental group they have obtained mean values (SDs) were 44.20 (6.10) and 41.52 (5.66) respectively, the result reveals significant difference of Psychological distress (t= p<.05) was found between Pre and post-test of Experimental group where the score of psychological distress was significantly reduce after treadmill training .

The relatively high psychological distress of Student athletes may be due to the unhealthy life-styles ,smoking could contribute to the lack of sleep and poor self-health care, high pressure of studies and limited time to acquire vast knowledge may prevent medical Student healthy life-style. The findings of the study indicate that, the psychological distress were decrease after four weeks of Treadmill Workouts. Preliminary evidence suggests that physically active people have lower rates of stress and anxiety. Economos, Hildebrant, & Hyatt, (2008), found that Engaging in more physical activity decreases stress and improve psychological health .

The several research has also shown that physical activity is an effective means of reducing stress among adults (Bhui, 2002; Dunn, Trivedi, & O'Neal, 2001). Exercise and other physical activity produce endorphins—chemicals in the brain that act as natural painkillers—and also improve the ability to sleep, which in turn reduces psychological distress (Anxiety and depression association of America) . Finally , this research not only to contribute to reduction of psychological distress and enhance the mental health , but also to demonstrate the tremendous potential of research to reduce psychological disorders of students by changing their life style through exercise and participation in sports and games

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Imitations of the research

1.Results of this study are limited by a relatively small preliminary experimental group rather than a study of actual behaviour, which would be very difficult to achieve.

2. Future research is warranted on estimating the level of stress by psychometric instruments and large number of sample.

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E - Resources

https://adaa.org/understanding-anxiety/related-illnesses/other-related-conditions/stress/physical-activity-reduces-st
https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=1&ContentID=2151
Web site: http://www.mayoclinic.com/health/cholesterol-test/my00500