EFFECT OF MEDITATION ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS

Abstract

In today's competitive world where the growing competition in almost every field creates its own stress and disturbances, it is important to have good health for better performance. Academic achievement is an attained ability or degree of competence in school task, usually measured by standardized tests and expressed in grades or units based on norms derived from a vide sampling of pupils' performance. The present study was undertaken with the purpose of studying effect of meditation on academic achievement of secondary school students. The study was conducted on a sample of 200 secondary school students of Amritsar District. 100 as control group and 100 as experimental group was selected for the study in two schools. The result indicated that the meditation technique employed by the experimental group helped them to improve their academic achievement. The significant effect of mediation was found on academic achievement of secondary school students.

Meditation is a conscious mental process that induces a set of integrated physiological changes termed the relaxation response. In meditation, a person learns to focus his attention and suspend the stream of thoughts that normally occupy the mind. This practice is believed to result in a state of greater physical relaxation, mental calmness and Psychological balance. The English word 'Meditation' comes from the Latin word 'meditatio' which originally indicated every type of physical or intellectual exercise, then later evolved into the more specific meaning "Contemplation". It means the action of looking thoughtfully at something for a long time. *Contemplation* means "to admire something and think about it". Meditation is a practice of concentrated focus upon a sound, object, visualization, the breath, movement, or attention itself in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth Zucker B.Z.(2016). Meditation cultivates an emotional stability that allows the meditator to experience intense emotions fully while simultaneously maintaining perspective on them Michael J.& Baime,M.J.(1999).

Academic Achievement is the accomplishment or Proficiency of performance in a given skill or body of knowledge. It means the amount of knowledge gained by the student in different subjects of study. Academic Achievement is the act of achieving or furnishing something that has been attained successfully especially by means of skills, perseverance or practice. According to Random House Webster's College Thesaurus (1997) "Academic achievement means those qualities or attributes or characteristics or traits of an individual which

contribute to or have a direct bearing or effect or influence on the accomplishment or proficiency of performance pertaining to any activity scholastic in nature or any scholarly activity." Achievement tests show how well students have mastered the subject matter in a course of instruction. Megargee (2000). Oxford Advanced Learner's Dictionary (2000) defined achievement is a thing that somebody has done successfully; especially using his/her own effort and skill. Thus academic achievement is defined as a measure of knowledge understanding of specific subject or a group of subject. It refers to achievement in a separate subject or total scores of several subject combined. It is concerned with quality and quantity of learning attained in subject or a group of subject offer period of instructing. From the definitions given above, it may be concluded that academic achievement is the core of wider term 'Educational growth' and perhaps none would deny the importance of academic achievement in child's life.

Review of Related Literature

The review of related literature revealed that meditation through any technique is beneficial for children, adolescent and adults. Some studies found significant effects of meditation on some dependent variables and suggested longer treatment of meditation for its significant effects. Nidich, Mjasiri, Rainforth, Grant, Valosek Chang and Zigler (2011) studied academic achievement and transcendental meditation and found greater percentage of meditating students improved at least one performance level in math and English compared to controls (p < 0.01). Ellen, Alexandra and Rebecca (2012) studied on the effects of mindfulness meditation on three individuals with aphasia. The results indicated high performance on the attention of task completion of PWA. There were no observable changes in the performance on the sense of effort or language measures. Fiebert and Mead (2014) investigated meditation and academic performance and found the experimental group performed significantly better on examinations. Jenkins, Lyndsay , Demaray, and Kilpatrick (2015) studies on academic achievement showed positive effect of meditation and indicated that cumulative grade point average of the meditation group were significantly higher than those of non meditation group. Meditation helps the students to close achievement gap.

Hypothesis of the Study

There will be no significant effect of Meditation on Academic Achievement of secondary school students of experimental group and control group.

Design

The present study was experimental in nature. Experimental study provides a logical and systematic method in which the researcher manipulates certain variables and observe how the condition or behavior of subject is affected or changed (Koul, 2009). A Pre test and post test equivalent group design was employed.

Procedure

The experiment was conducted under three phases. In the first phase, Academic Achievement of the students was tested . In the second phase, experimental group was practiced meditation 45 minutes daily for 3 months and control group was participated in routine activities of the school. Third phase was evaluation phase, where the students of both the groups were again tested on the same test. In this way, academic achievement test (prepared by investigator) was administered before the treatment (Phase I) and after the treatment (Phase III).

Sample

In every research project, it is not only difficult but impossible to include the whole population. Thus the researcher tries her best to select such a sample which is representative of the whole population to be studied. The random sampling technique was used. The study was conducted on the sample of 200 students. 100 as control group and 100 as experimental group were. Two schools were selected for the study. 50 students were selected as experimental group and 50 as control group in each school.

Tool used

Academic Achievement test prepared by investigator was used for the study.

Statistical Technique used

The following statistical techniques were used for the interpretation:

Descriptive statistical techniques such as mean, standard deviation, Skewness and kurtosis were used to determine the nature of the distribution of the scores. 't'-test was used to see the significant difference between the variables. Data was represented graphically.

Result and Discussion

Hypothesis

Hypothesis states," There will be no significant effect of Meditation on Academic Achievement of secondary school students of experimental group and control group.

The gain scores of students falling into two groups are subjected to descriptive statistics such as mean, standard deviation, skewness and kurtosis to analyze the effect of subjecting the groups to differ instructional treatment on academic achievement. The obtained mean gain scores of academic achievement for experimental and control group has been given in table 1.

Table 1:	A summary	of descriptive	statistics of gai	n academio	e achievement	scores of	experimen	tal and
control gr	roup							

Variable		Experimental Group				Control Group				
	Ν	Mean	SD	Sk	Ku	Ν	Mean	SD	Sk	Ku
Academic	100	59.62	10.59	0.059	-0.61	100	51.78	10.44	0.09	0.085
Achievement										

Source: Field study 2014

To substantiate the data prescribed in table 1, a bar diagram was drawn to depict the gain academic achievement scores of experimental and control group has been given in fig. 1.



Fig. 1: Bar diagram showing comparison of gain scores of academic achievement of experimental and control group

- (i) *Mean Scores:* The table and figure 1shows that the mean gain academic achievement scores of experimental group is 59.62 and that of control group is 51.78. It shows that the mean of experimental group is more than that of control group.
- (ii) Standard Deviation: From table 1 it is found that the standard deviation of the experimental group is 10.59 and that of control group is 10.44. This indicates that standard deviation of the gain scores for both the groups are well distributed.
- (iii) Skewness: Table 1 indicates that the distribution of scores is negatively skewed for experimental group and positively skewed for control group. The value of skewness of experimental group is 0.059 and that of control group is 0.09. It reveals that the value of skewness lies within the acceptable limits of normality of distribution. Thus, the distribution of measure can be considered as normal.

(iv) *Kurtosis:* From table 1, the value of kurtosis is found to be -0.61 for experimental group and 0.085 for the control group. The value of kurtosis indicates that the curve is ptatycurtic for experimental and leptokurtic for control group.

FREQUENCY POLYGON OF MEAN GAIN SCORES OF ACADEMIC ACHIEVEMENT

The frequency distribution of gain scores of experimental and control group has been given in table 2.

 Table 2: Frequency distribution of gain academic achievement scores of academic achievement of experimental and control group

Mean Gain	Scores	Experiment Group	Control Group
Class Interval	Mid Point	Frequency	Frequency
35-39	37	1	0
30-34	32	4	0
25-29	27	4	0
20-24	22	11	0
15-19	17	12	1
10-14	12	20	6
5-9	7	20	26
0-4	2	28	67
		N=100	N=100

The two frequencies distributions have been depicted through the frequency polygon in fig. 2. The frequency polygon of mean gain scores of experimental group has been drawn by blue line and that of control group by red line.



d control groups

As evident from the table and fig 2 that the frequency polygon of academic achievement scores extend from 2 to 14 for the control group and from 2 to 37 for the experimental group. For the control group, the peak is observed at midpoint score 2 and for the experimental group peak is found as midpoint score 2. The observations of two frequency polygon indicate superiority of experimental group over control group. The data is established to statistical analysis to establish the significance of difference. In order to test this hypothesis, the mean scores of the experimental and control group at pre test post test level on academic achievement is given in table 3

Table 3. Mean and SD of	the pre test	post test scores	of Academic	Achievement
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Variables	Exj	perimer (N=	ntal Grou 100)	ւթ	Control Group (N=100)			
Academic Achievement	Pre-7 Mean	Fest SD	Post-test Mean SD		Pre-Test Mean SD		Post-test Mean SD	
	48.42	10.7	<u>59.</u> 62	10.59	48.21	10.47	51.78	10.44

To substantiate the data prescribed in table 3, a bar diagram was drawn to depict the pre and post-test scores of experimental and control group has been given in fig. 3.



Fig 3:Bar diagram showing comparison of mean scores of experimental and control group

Table 3 showing the mean of scores at pre test post test level of academic achievement between the experimental group and control group. The mean scores of experimental group of academic achievement at pre test level is 48.42 and at post test level of academic achievement is 59.62. The mean scores of control group of academic achievement at pre test level is 48.21 and at post test level of academic achievement is

51.78. The table showing that academic achievement at post test level is more than the pre test level of experimental group. The result showed that the Meditation technique employed by the experimental group helped them to improve over all academic achievement of school students.

The mean gain scores of the experimental and control group on academic achievement have been given in table 4.

Variable Experimental Group		Control	Group	S.E.D	t-ratio			
Academic	Ν	Mean	S.D.	Ν	Mean	S.D.		
Achievement	100	11.2	8.89	100	3.57	3.11	0.94	8.12**

** Significant at 0.01 level

* Significant at 0.05 level

(Critical Value 2.53 at 0.01 and 1.96 at 0.05 level, df 198)

To substantiate the data prescribed in table 4, a bar diagram was drawn to depict the post-test scores of experimental and control group has been given in fig. 4.



Fig 4 Bar diagram showing comparison of mean gain scores of experimental and control group academic achievement

Table and fig. 4 showing the mean gain scores of academic achievement between the experimental group and control group. The mean gain scores of experimental group of is 11.2 and control group of academic achievement is 3.57 The standard deviation of experimental group and control group of academic achievement is 8.89 and 3.11 respectively. The t-ratio for the mean gain scores of experimental and control group on academic achievement is 8.12, which is comparison to the table value was found to be significant at 0.01 level of confidence. Thus, null Hypothesis, there exist no significant effect of meditation on academic achievement of secondary school students is rejected. The result indicates that meditation treatment given to subjects in experimental group was effective in improving their academic achievement

Findings of the study

The meditation group was found significantly higher in academic achievements of secondary school students than that of non meditating group. The results indicated that meditation treatment given to the subjects in experimental group was effective in improving their mental health, adjustment and academic achievement of secondary school students. The students feel better and relaxed after meditation that is why their performance was better in achievement test.

Educational implications

It was found significant results that meditation treatment given to subjects in experimental group was effective in improving their academic achievement. In order to use meditation treatment, school should give chance to the students for meditation in morning assembly or at any other suitable time. Teachers should motivate the students and give knowledge about meditation for the betterment of their health. School should arrange well experienced and well prepared teachers for the practice of meditation. Special meditation camps or meditation programmes should be arranged for the teachers and the students also.

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