A Pre-Experimental Study to Assess the Effectiveness of Planned Teaching Programme Regarding Knowledge of Physical Exercise in Reducing Stress Among Middle Adolescent Students in Selected School of Dehradun

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ABSTRACT

Background: Some teens become overloaded with stress. When this happens, it can lead to anxiety, withdrawal, aggression, physical illness, or poor coping skills such as drug and/or alcohol use. When we perceive a situation as difficult or painful, changes occur in our minds and bodies to prepare us to respond to danger. Teens that develop a "relaxation response" and other stress management skills feel less helpless and have more choices when responding to stress.

Objectives:

1.To assess the level of knowledge regarding stress among middle adolescents' students in The Doon Grammar School, Bhaniyawala, Dehradun.

2.To assess the effectiveness of planned teaching programme regarding knowledge of physical exercise in reducing stress among middle adolescent students in The Doon Grammar School, Bhaniyawala, Dehradun.

3.To find out association between the post -test knowledge score with their selected sociodemographic variables.

Material and Methods:

A quantitative research approach was used. The research design used was pre-experimental (one group pre-test post-test). The study was conducted in THE DOON GRAMMAR School, Dehradun. Data collection was done using simple random sampling technique and sample size was 60 adolescent students. The data was collected to assess the effectiveness of planned teaching programme regarding knowledge of physical exercise in reducing stress among adolescents by using self-developed knowledge questionnaire tool.

Results:

In Pre-test only few (11.66%) of middle adolescent students had inadequate knowledge, majority of them (88.33%) had moderate knowledge and no one had adequate knowledge. After giving Structured teaching programme on knowledge regarding physical exercise

in reducing stress the post test was taken. The Post-test revealed that no one had inadequate knowledge, most of them (48.33%) had moderate knowledge and almost half of them (51.66%) had adequate knowledge after the Structured teaching programme.

Conclusion:

The calculated "t" value was 53.34 which was found more than table value (t_{tab}=2) at 0.05 level of significance. Hence, null hypothesis was rejected and the research hypothesis was accepted which that revealed posttest knowledge score was found more than pre-test knowledge score and it was due to the structured teaching programme on knowledge regarding physical exercise in reducing stress.

1.   INTRODUCTION

"Stress should be a powerful driving force, not an obstacle."

—Bill Phillips

Stress is defined as the body's non-specific response to demands made upon it or to disturbing events in the environment. It is not just a stimulus or a response but rather, it is a process by which individuals perceive and cope with environmental threats and challenges. In small amounts, stress is normal and can help individuals to be more active and productive.[1] Adolescence, transitional phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19. Adolescence is narrowly equated with puberty and the cycle of physical changes culminating in reproductive maturity. In other societies adolescence is understood in broader terms that encompass psychological, social, and moral terrain as well as the strictly physical aspects of maturation.[2] Physical activity can occur spontaneously (leisure/work/transport) or organized and be divided according to purpose: Physical exercise is aimed primarily at improving health and physical capacity. Physical training is aimed primarily at increasing the individual's maximum physical capacity and performance.[3]. As begin to regularly shed daily tensions through movement and physical activity, may find that this focus on a single task, and the resulting energy and optimism, can help to stay calm, clear and focused in everything. Regular exercise can increase self-confidence, improve mood, help to relax, and lower symptoms of mild depression and anxiety. Exercise can also improve sleep, which is often disrupted by stress, depression and anxiety. All of these exercise benefits can ease your stress levels and give a sense of command over body and life.[4] Balance plays an important role in everyday activities such as walking, getting up out of a chair or leaning over to pick something up. Balance problems can reduce independence by interfering with activities of daily living. Regular physical activity can improve balance and reduce the risk of falling.[5]

2.   MATERIAL AND METHODS

A Pre-Experimental, Simple Random Sampling technique was used to collect the data from 60 adolescents' students in The Doon Grammar School, Bhaniyawala, Dehradun. The Inclusive Criteria for the study was the middle adolescent students between the age of 14-17 years. The middle adolescent students studying in The Doon Grammar School Bhaniyawala, Dehradun. The sample will be both boys and girls. The Exclusive Criteria used for the study was the middle adolescent students who are not willing to participate in the study. The self-developed questionnaire was used to assess the effectiveness of planned teaching programme regarding knowledge of physical exercise in reducing stress among middle adolescent students in selected school of Dehradun. Pre-test was done first and then the planned teaching program was conducted. The post test was done after 7 days using the same questionnaire and the data collection process was terminated by thanking the subjects for their cooperation. It took an average time of about 20-25 minutes for each subject to fill the questionnaire. Data analysis was done by both descriptive and inferential statistics.

3. INSTRUMENT/TOOL

The tool consists of section A and section B. Section A consists of socio demographic data such as age, gender, religion, family income, parents' level of education, siblings, living situation. Section B consist of a self-developed knowledge questionnaire on physical exercise in reducing stress. The total number of questions in the structure questionnaire was 30.

LEVEL OF KNOWLEDGE	SCORE
Inadequate knowledge	00-10
Moderate knowledge	11-20
Adequate knowledge	21-30

4. STATISTICAL ANALYSIS

In descriptive statistics mean, mean percentage and standard deviation were used for analyzing the distribution of respondents according to their demographic characteristics i.e., age, gender, religion, family income, parents' level of education, siblings, living situation.

Chi-square test was employed to associate demographic characteristics between respondents 'level of knowledge. Paired t-test was employed to compare the pre-test and post-test mean score of knowledge of the respondents.

The result of the study was shown in the form of tables and figures. The level of significance selected for the study was $p<0.05$ level.

TABLE 1 : Frequency and percentage distribution of respondents according to their demographic variables.
N=60

S.NO.	DEMOGRAPHIC VARIABLES	FREQUENCY (f)	PERCENTAGE%
1	**AGE:**		
	17	8	13.33%
	16	25	41.66%
	15	20	33.33%
	14	07	11.66%
2	**GENDER:**		
	Male	39	65%
	Female	21	35%
3	**RELIGION:**		
	Hindu	59	98.33% 1.66%
	Muslim	01	00%
	Sikh	00	00%
	Christian	00	

4	FAMILY INCOME		
	10000-20000	12	20%
	20000-30000	14	23.33%
	30000-40000	11	18.33%
	40000-50000	15	25%
	ABOVE 50000	08	13.33%
5	PARENTS LEVEL OF EDUCATION	21	35%
	Less than high school	15	25%
	High school/diploma	12	20%
	College/associate degree	04	6.66%
	Bachelor degree		
	Master degree or higher	08	13.33%
6	SIBLINGS		
	None	02	3.33%
	One	32	53.33%
	Two	18	30%
	Three or more	08	13.33%
7	LIVING SITUATION		
	I live with both parents	42	70%
	I live with one parent	12	20%
	I live with grandparents or other relatives	05	8.33%
	I live independently		
		01	1.66%

TABLE 2: Frequency and Percentage distribution of pre-test and post-test level of knowledge.

N=60

LEVEL OF KNOWLEDGE REGARDING STRESS	PRE-TEST		POST-TEST	
	FREQUENCY (f)	PERCENTAGE (%)	FREQUENCY (f)	PERCENTAGE (%)
INADEQUATE KNOWLEDGE (0-10)	07	11.66%	00	00%
MODERATE KNOWLEDGE (11-20)	53	88.33%	29	48.33%

ADEQUATE KNOWLEDGE (ABOVE 21)	00	00%	31	51.66%

TABLE 3: MEAN, STANDARD DEVIATION AND PAIRED "T-TEST" VALUE OF THE PRE AND POST TEST:
N=60

TEST	MEAN $\pm$ SD	t-value	P
Pre-test	14.81 ± 3.127	53.34	0.00*
Post-test	20.25 ± 3.149		

Paired t-test   **df= 59, t$_{tab}$=2**   ***p<0.05**

TABLE 4: Association between post-test knowledge regarding physical exercise and their demographic variables.
N=60

S.NO.	DEMOGRAPHIC VARIABLES	POOR	MODERATE	ADEQUATE	X2	TABLE VALUE	df	LEVEL OF ASSOCIATION
1	AGE 14 15 16 17	0 0 0 0	1 8 15 5	6 12 10 3	5.811	12.59	6	Not significant
2	GENDER Male female	0 0	22 7	17 14	2.909	5.99	2	Not significant
3	RELIGION Hindu Muslim Sikh Christian	0 0 0 0	28 1 0 0	31 0 0 0	1.089	12.59	6	Not significant
4	FAMILY INCOME 10 20 30 40 above	0 0 0 0 0	10 4 5 5 5	2 10 6 10 3	10.103	15.51	8	Not significant

5	PARENT LEVEL OF EDUCATION						
	Less than high school	0	14	7			
	High school/diploma	0	6	8	5.171	15.51	8	Not significant
	College/associate degree	0	6	8			
	B.sc degree	0	1	2			
	Master degree/high	0	2	6			
6	SIBLING						
	None	0	2	0			
	One	0	14	21	3.906	12.59	6	Not significant
	Two	0	9	6			
	Three	0	4	4			
7	LIVING STATUS						
	Both parents	0	19	23			
	1 parent	0	7	6	1.394	12.59	6	Not significant
	Grand/relatives	0	2	2			
	Independently	0	1	0			

df : degree of freedom, significant =<0.05%

There is no significant association between any of the demographic variables such as age, gender, religion, family income, parents' level of education, sibling, living situation.

5. DISCUSSION

In this study according to objectives:

Objective 1 • To assess the level of knowledge regarding stress among the school going adolescents' students in The Doon Grammar School, Bhaniyawala of Dehradun.

In Pre-Test few (11.66%) of Middle adolescents had inadequate knowledge, majority of them (88.33%) had moderate knowledge and no one had adequate knowledge.

A similar study conducted by Deepali D. Chaware, Muniyandi. S (2018) also showed that pretest, 98% have poor knowledge, (2%) have average knowledge and (0%) have good knowledge.

Objective 2: To assess the effectiveness of planned teaching program regarding knowledge of physical exercise in reducing stress.

After giving Structured teaching programme on knowledge regarding physical exercise in reducing stress the post test was taken. The Post-Test revealed that no one had inadequate knowledge, most of them (48.33%) had moderate knowledge and almost half of them (51.66%) attained adequate knowledge after the Structured teaching programme.

A similar study was conducted by Deepali D. Chaware, Muniyandi. S (2018) also showed that after giving plan teaching on level of knowledge regarding study related stress and coping ability post-test was taken. The post-test revealed that (26%) have poor knowledge, (24%) have average knowledge, (50%) have good knowledge.

Objective 3: To find out the association between post test score with selected sociodemographic variables.

Analysis of the data showed that there was no association found between post-test with their demographic data such as age, gender, religion, family income, parent level education, siblings, living situation regarding physical exercise among adolescent students at the end significance of

0.05.

6.ETHICAL CONSIDERATION:

The study was accepted and recommended by a research committee and formal permission was obtained from the principal of Shri Guru Ram Rai University, College of Nursing, Patel Nagar, Dehradun. Confidentiality was assured to all subjects to get their cooperation. Informed consent of each subject was obtained before administering research tools to them and subjects were informed that their participation was voluntary and had the freedom to withdraw from the study.

7.CONFLICT OF INTEREST:

Not declared

8. FINANCIAL SUPPORT:

Nil

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