

A Study to Assess the Effectiveness of Structured-Teaching Programme on Stress-Reduction Techniques among Adolescent Girls Aged 15-18 Years Staying in a Selected Hostel at Chidambaram

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Abstract

Introduction: Stress and anxiety in children and teenagers are just as prevalent as in adults. Stressed out and negligent parents, high expectations in academic or other performances, abused or deprived childhood, growing up tensions and demand for domestic responsibility are the main causes of childhood and teen stress. Parents, who are not emotionally available for their children or lack of positive coping mechanisms themselves often, spur stress in their offspring. Stressed children show signs of emotional disabilities, aggressive behavior, shyness, social phobia and often lack interest in otherwise enjoyable activities. *Method:* a quantitative approach pre experimental the one group pre-test and post-test design was adopted to assess the effectiveness of structured-teaching programme on stress reduction techniques among adolescent girls aged 15 - 18 years. The General System Theory was adopted for conceptual frame work. A total of 60 adolescent girls staying in the Nandhanar girl's hostel were selected by using simple random sampling techniques. The instrument used for the study was a structured-questionnaire which consists of two sections. The first section consists of the demographic variables of the adolescent girls and the second section consists of 50 closed-ended questions to assess the knowledge regarding stress-reduction techniques. The structured-teaching programme on stress-reduction techniques was provided through Lap top for a period of 30 minutes. A post-test was given after 7 days. The data were analyzed using the descriptive and inferential statistics. *Result:* The knowledge score of the adolescent girls was inadequate before STP. After the LCD teaching programme 18.33% had moderately adequate knowledge and 81.67% had adequate knowledge. The effectiveness of LCD teaching programme was statistically tested by paired 't' value and the result found to be significant at $p < 0.001$ level. There was no significant relationship between demographic variables and pre-test knowledge of subjects on stress-reduction techniques. *Conclusion:* These result demonstrated that STP was effective in improving the knowledge on stress-reduction techniques among adolescent girls who are staying in the hostel

Keywords: Stress; Structured-Teaching Programme; Stress-Reduction Techniques; Hostel.

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Introduction

The community is prone to variety of stress in modern life. People of all ages suffer from one or other type of stress. Recently school children, regardless

of the level of education, suffer different types of stress. The recent changes in school curriculum, constructivist approach in instruction, modern trends in a rapidly changing society, change in family structure into a nuclear family, preferably with a single child complicated the situations further. If a teacher wishes to provide guidance to his disciples in this regard, she/he should first of all know the stressful situations, possible causes of such stressful situations, and how to relieve them from such situations. Hostel-care is not meeting the hostlers perceived needs for relief. A greater range of "normalized" and family-orientated respite care resources might be more effective for relieving stress and providing support to improve coping nature with educational stress. Children, like adults, are stressed by factors in today's life-style. The goals of success, achievement, and acquisition are well recognized, these same goals can contribute to the disruption of a child's sense of well-being, resulting in the inability to cope with the environment. Four common causes of stress in children today are child care arrangements, pressure for early academic achievement, athletic achievement, and early sexual activity. Nurse practitioners must be able to recognize the symptoms of stress in children and assist the family to help children to modify their life-style and develop problem-solving abilities essential for successful maturity.

Garnezy's and Tellegen (1988) study examined the associations of stress exposure to various aspects of school-based competence in a normative sample of 205 children aged 8-13. Results suggest that the relations of stress exposure to competence vary as a function of individual differences as well as the competence criterion. Disadvantaged children, with lower IQ and socioeconomic status, and less positive family qualities, were generally less competent and more likely to be disruptive at high stress levels. Advantaged children were more competent, and with stress positively engaged in school, but were not likely to be disruptive. Boys were less socially

competent than girls and, when stress was high, appeared to be less protected by positive family qualities. This study is focusing on knowledge on adolescent girls regarding stress and coping who stay in a hostel as researcher believe that adolescent girls usually have more stress due to increased family demand and social demand along with that hostel life can induce more stress and it is necessary for them to have enough knowledge about stress management.

Objectives of the Study

1. To assess the pre-test knowledge regarding stress-reduction techniques among adolescent girls aged 15-18 years staying in a selected hostel at Chidambaram.
2. To evaluate the effectiveness of structured-teaching programme regarding stress-reduction techniques among adolescent girls aged 15-18 years staying in a selected hostel at Chidambaram.
3. To associate the selected demographic variables such as age, religion, educational status, occupation of the parents, educational status of the parents and no of siblings with the knowledge regarding stress reduction techniques.

Delimitations

1. The sample size is limited to 60
2. The period of the study is limited to 4 weeks
3. The study is limited to the adolescent girls who are staying in the hostel.

Assumptions

1. Adolescent girls have inadequate knowledge regarding stress-reduction techniques.
2. The structured- teaching programme enhances the knowledge of the adolescent girls on stress reduction techniques.

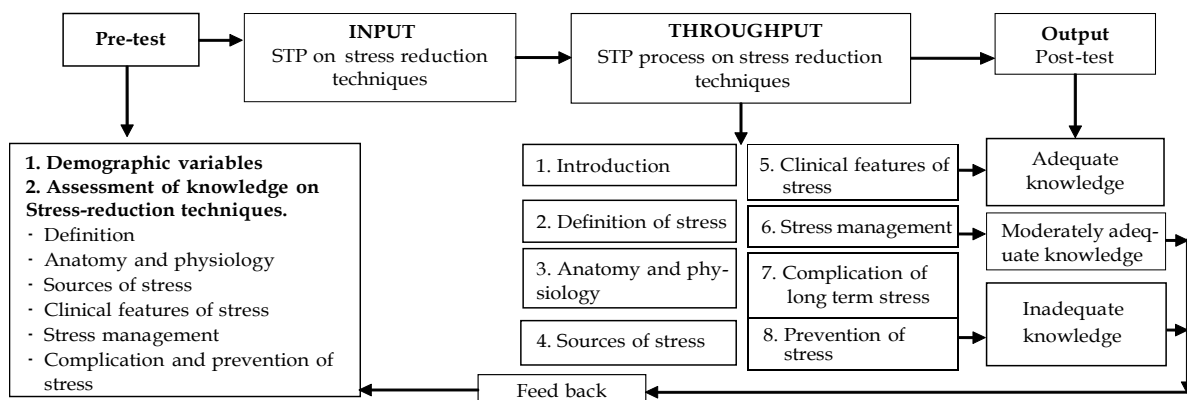


Fig. 1: Conceptual frame work based on General System Theory modified Ludwig von Bertalanffy's model (1968)

Hypothesis: The adolescent girls demonstrate significant improvement in the level of knowledge regarding stress-reduction techniques after attending the structured- teaching programme.

Conceptual frame work: The conceptual framework for the study was derived from General Systems Theory. According to this theory, a system consists of a set of interacting components within a boundary that filters the type and rate of exchange within the environment.

Methodology

Research Approach and Design

The research approach used for this study is Quantitative approach. The effectiveness of knowledge on stress-reduction techniques was assessed in one group before and after giving a structured-teaching program

Setting of the Study

The study was conducted in Nandhanar girl's hostel. This hostel is functioning from 1970s. This hostel is situated inside the Nanathanar girl's higher secondary school campus at Chidambaram town. Nearly 700 school students are staying in the hostel at present.

Target Population

Adolescent girls who are staying in the hostel.

Accessible Population

Adolescent girls who are staying in Nandhanar girl's hostel.

Sample Size

The sample comprises of 60 adolescent girls who are staying in the Nandhanar girl's hostel.

Sampling Technique

Simple random sampling technique was used to select subjects from the target population.

Development of the Tool

Structured-interview schedule was selected for the study. The tool was developed after adequate retrieval of research studies and under the guidance of nursing and medical experts. The research tool was developed in Tamil after obtaining the experts' opinion.

Inadequate knowledge.	<50% (12 to 25)
Moderately adequate Knowledge	Between 50% - 75% (26 to 37)
Adequate knowledge	>75% (38 to 50)

Description of the Tool

The instrument used for data collection was a self administered structured-questionnaire which consists of two sessions. Section A: Demographic data & Section B: Structured-Questionnaire

Score interpretation of instrument: Questionnaire has 50 items with 50 score.

Reliability: The reliability of the tool was established by test-retest method using a correlation coefficient method. The reliability was found to be significant ($r=0.92$).

Validity: The content validity of the tool was assessed by obtaining opinion from three experts in the field of nursing and medicine. The experts suggested reorganization and deletion of certain items. Appropriate modifications were made accordingly and the tool was finalized.

Description of the Intervention: The structured-teaching programme included introduction, definition of stress, anatomy and physiology of endocrine and nervous system, sources of stress,

clinical features of stress, stress management, complication of long term stress and prevention of stress. The investigator carried out the structured-teaching programme in the local language (Tamil) for the period of 30 minutes. Appropriate Audio-visual Aid (LCD) was used during teaching programme.

Ethical Clearance: Permission was obtained from the Institutional Human Ethical Committee and also from the Head Master of the Nandhanar girl's higher secondary school and from the Warden of Nandhanar girl's hostel to conduct the study. The samples were selected, Informed Consent were obtained from the participants and explained about the purpose of the study

Pilot Study: The pilot-study was conducted from for 10% of total sample at Chidambaram, in Nandhanar girl's hostel. During the study, practicability of the tool was assessed. Subjects were given a Pre-test questionnaire to assess the knowledge regarding stress-reduction techniques. After the pre-test, planned LCD teaching programme was given

by using the LCD projector and the post-test was conducted for the same samples after 7 days.

Data Collection Procedure: Data was collected from 14.12.2009 to 17.01.2010. Sixty samples were selected using simple random sampling method. The pre-test knowledge regarding stress-reduction techniques was assessed by giving a structured-questionnaire to the adolescent girls for 30 minutes. Samples were gathered in one room and self administered-questionnaire was given to all the samples. After that the subjects were divided in to 4 groups. Each group consists of 15 subjects. The structured-teaching programme was conducted for each group as planned to make the teaching more effective. Post-test was done after 7 days for the same sample.

Plan for Data Analysis: The data were analyzed based on the objectives of the study using descriptive and inferential statistics. The plan for analysis is as follows:

1. Frequencies and percentages for the analysis of the demographic data

2. Mean score, percentage and standard deviation for the knowledge score.
3. Computing Kruskal-Wallis test to determine the association between the selected demographic variables and pre-test knowledge score.
4. Paired 't' - test to find out significant differences between the mean values.

Result

The collected data were assembled, analyzed and tested for their significance. The findings, based on the statistical analysis are presented in this chapter. Descriptive and inferential statistics were used for analyzing the data in the light of the objectives of the study. The findings of the study were discussed in the following section.

Section I: Frequency and percentage distribution of demographic characteristics of the adolescent girls.

Table 1: Frequency and Percentage Distribution of Demographic Characteristics of the Adolescent Girls N= 60

S. No.	Demographic Variables	No.	%
1.	Age		
	15 years	26	43.33
	16 years	14	23.33
	17 years	14	23.34
	18 years	06	10.00
2.	Religion		
	Hindu	45	75.00
	Christian	10	16.67
	Muslim	05	08.33
3.	Educational status		
	9 th standard	12	20.00
	10 th standard	17	28.33
	11 th standard	15	25.00
	12 th standard	16	26.67
4.	Previous history of hostel stay		
	Yes	0	0.00
	No	60	100
5.	Duration of hostel stay		
	1 year	20	33.33
	1 to 3 years	40	66.67
	4 to 7 years	0	0.00
	above 7 years	0	0.00
6.	Place of living		
	Rural	45	75.00
	Urban	15	25.00
7.	Educational status of the mother:		
	Uneducated	28	46.67
	Primary education	19	31.67
	Higher secondary education	08	13.33
	Graduate	05	08.33
8.	Educational status of the father:		
	Uneducated	19	31.67
	Primary education	12	20.00

	Higher secondary education	15	25.00
	Graduate	14	23.33
9.	Occupation of the mother:		
	Unemployment	23	38.33
	Professional worker	08	13.33
	Non professional work	29	48.34
10	Occupation of the father:		
	Unemployment	06	10.00
	Professional worker	17	28.34
	Non professional worker	37	61.66
11.	Type of family		
	Joint family	16	26.60
	Nuclear family	44	73.34
12	No of siblings		
	0	05	08.33
	1	12	20.00
	2	23	38.33
	3 and above	20	33.34

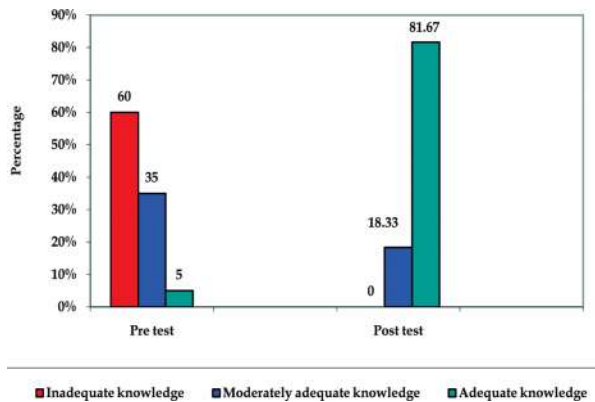


Fig. 2: The percentage distribution of pre and post-test knowledge of the adolescent girls about stress-reduction techniques

Table 2: Comparison of overall mean and standard deviation of adolescent girls based on pre & post-test knowledge

Variables	Mean	Standard deviation	Paired 't' test	'p' value
Pre - test	25.8	5.98		<0.001
Post - test	43.22	4.23	24.44	S

S - Significant

In post-test 11 (18.34%) of them had moderately adequate knowledge, 49 (81.66%) had adequate knowledge and none of them had inadequate knowledge.

It shows that there was an improvement in the level of knowledge in post-test when compared to pre-test score.

It is inferred from the Table 2 that the mean knowledge score in the pre-test was 25.8 with standard deviation of 5.98. In the post-test the mean score was 43.22 with standard deviation of 4.23. Thus the difference in the level of knowledge was confirmed by Paired 't' test value (24.44), which was significant at $p < 0.001$ level.

It shows that the LCD teaching programme was very effective in improving the knowledge level of

Section II: The percentage distribution of pre and post-test knowledge of the adolescent girls about stress-reduction techniques.

Section IV: Comparison of overall mean and standard deviation of adolescent girls based on pre and post-test knowledge.

Section VI: Association of demographic variables with pre-test knowledge on stress-reduction techniques.

Figure 2 reveals that 36 (60%) of adolescent girls had inadequate knowledge, 21 (35%) of them had moderately adequate knowledge, and only 3 (5%) had adequate knowledge on stress-reduction techniques in pre-test.

the adolescent girls stress-reduction techniques.

Association of demographic variables with pre test knowledge score reveals that the mean pre-test knowledge score obtained by the adolescent girls with the age group of 16 years had higher knowledge score. The Kruskal Wallis test shows that the age group of adolescent girls had no significant influence on the pre-test knowledge.

Further, the results revealed that the adolescent girls belonged to Hindu religion had a mean score of 26.4 with standard deviation of 6.10, Christian had a mean score of 23.8 with standard deviation of 2.6 and the Muslims had a mean score of 19.75 with standard deviation of 1.03.

The Kruskal Wallis' test infers that the religion of adolescent girls had no significant influence on the

pre-test knowledge score.

Further, the results showed that the educational status of the adolescent girls also had no significant influence in the pre-test knowledge.

The above table shows that the mean score obtained by the samples of graduated father is 27.7 with standard deviation of 7.73. Where as the mean score obtained by the children of uneducated father is 23.09 with standard deviation of 6.49. The Kruskal Wallis test infers that there is no influence on the knowledge score of the adolescent girls with educational status of the father. The result also showed that the educational status of the mother also had no significant influence in the pre-test knowledge level of the adolescent girls.

The result also showed that the occupational status of the parents also had no significant influence in the pre-test knowledge. The above table reveals that the adolescent girls who have 2 siblings had higher mean knowledge score of 27.77 with standard deviation of 6.67. The mean score of adolescent girls who had 1 sibling is 24.73. The adolescent girls who have 3 and above siblings had mean knowledge score of 24.11 with the standard deviation of 5.59. The adolescent girls who have no sibling had mean knowledge score of 23.02 with standard deviation of 3.98. The Kruskal Wallis test infers that there is no significant influence in the knowledge level of adolescent girls with no of siblings. The Kruskal Wallis test infers that there is no significant association between the demographic variables (Age, religion, educational status, occupation of the parents, educational status of the parents and number of siblings) and level of knowledge on stress-reduction techniques.

Conclusion

The present study assessed the knowledge adolescent girls regarding stress-reduction techniques, and found that the adolescent girls had inadequate knowledge related to stress-reduction techniques. After the structured-teaching programme on stress-reduction techniques there was a significant improvement on knowledge of the adolescent girls regarding stress-reduction techniques. The study concluded that the structured-teaching programme was effective in improving knowledge of the adolescent girls regarding stress-reduction techniques.

Nursing Implications

The nursing implication included the specific suggestion for nursing practice, nursing education,

nursing administration and nursing research.

Nursing Practice

1. Stress management program can be extended to all the children who are admitted in the pediatric ward.
2. Early recognition of depression and anxiety disorder can reduce the high risk behavior of stressful person like suicidal ideation.
3. Education program can be conducted to the parents of stressful children to help them to cope with stress.
4. The nurses can create an opportunity for the adolescent to express their feelings and can provide opportunity to relax.

Nursing Education

1. Nurse-educator needs to prepare nursing students to obtain the skill in observing stressful behavior of the children.
2. Student nurses must be motivated to provide counseling to stressful children to cope with stressful situation.
3. The curriculum should explain the mental problems faced by the children who are staying in the hostel and their management.
4. Stress management program can be conducted to school children like yoga, deep breathing exercises etc.
5. Community students must organize health education program on stress management for adolescent girls at schools and hostels.
6. Organize educational program to teacher to create awareness about mental problems faced by students in the school and hostel.

Nursing Administration

1. Hostel administration should take proper step to reduce the stress-level of the students who are staying in the hostel.
2. School administration should give special consideration to the students who are staying in the hostel.
3. Nursing administration should conduct educational program on stress reduction techniques in the school and hostel.

Nursing Research

1. Generalization of the study result can be made

by further replication of large samples.

2. Future research should focus on interventions that decrease the level of stress of the children's.
3. Future research should focus on factors that influence the mental health of the children who are staying in the hostel.
4. Comparative study can be done on the efficacy of individual education and education by mass media on stress management.
5. A qualitative study can be carried out to assess personal factors which lead children to practice stress management.

Recommendations

1. A similar study can be conducted in a large number of samples at different hostel to validate and generalize the findings.
2. A similar study can be conducted among male population who is staying in hostel.
3. A similar study may be done as an experimental study between control and experimental group.
4. A study can be conducted to assess the attitude of school children about hostel life.
5. A study can be conducted to assess the practice of stress reduction techniques in the hostel.
6. A study can be conducted to assess the factors which influence a subject's likelihood of attending teaching programme on yoga and meditation.
7. A comparative study can be conducted to assess the stress level between school children staying in government hostel and private hostel.
8. A study can be conducted to assess the stress and its health effect on school children.
9. A study can be conducted to assess the stress and coping of physically handicapped children who staying in the physical rehabilitation center.

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