

“Effectiveness Of Structured Teaching Program On Knowledge Regarding Psychotherapeutic Approach (Problem Solving Skills) On Academic Performance Among 1ST YEAR B. Sc Nursing Students At Adichunchanagiri College Of Nursing”.

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Abstract – Aim of the study was to identify the effectiveness of structured teaching program (STP) effectiveness of structured teaching program on knowledge regarding problem solving skills. Pre experimental one group pre & post test design with non probability sampling technique was used with 60 sample. Among 1st year B.Sc. Nursing students 15 (46.87%) had moderate knowledge and 17 (53.12) had inadequate knowledge, none of them had adequate knowledge regarding problem solving skills before administration of STP. In pre-test, the overall mean 13.36 (124.2%) with standard deviation 5.169 before the administration of STP. Overall mean post test knowledge score was 16.21 (149.11%) with standard deviation 5.242 after the administration of STP. Overall enhancement between pre-test and post-test mean score percentage was 24.91. Paired ‘t’ test knowledge scores revealed that ‘t’ value is 3.35 with standard deviation 5.19. Chi- square test for knowledge on demographic variables revealed that there is no association with any demographic variables. Based on the findings of study it was concluded that majority of 1st year B.Sc. Nursing students had moderate knowledge regarding problem solving skills.

Keywords: Knowledge; Problem Solving Skills; Structured teaching Program.

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I. Introduction:

Problem solving is a methodic way of discovering a solution to a given problem. We must remember that there is not always only one method or path to the solution from the problem that is at hand. Problem solving is considered to be one of the most complex intellectual processes and one that children today struggle with. The reason for this struggle has a lot to do with the technological age that we live in; children can have almost any problem solved within seconds by simply "Googleing it" therefore, they see no reason to know how to methodically learn to solve problems. It has been suggested that ineffective problem-solving results in stressful outcomes and psychological maladjustment. As it occurs in the natural environment, problem solving may be defined as the self-directed cognitive-behavioral process by which a person attempts to identify for discovering effective or adaptor solutions for specific problems encountered in everyday living. More specially, the cognitive-behavioral process (a) makes available a variety of potentially effective solution for a particular problem, and (b) increases the probability of selecting the most effective solution from among the various alternatives (D'Zurilla & Nezu, 1999). As this definition implies, problem solving is conceived here as a conscious, rational, effortful, and purposeful activity (D'Zurilla & Nezu, 2007). Findings in educational psychology show that expert problem solvers master a large body of easily accessible domain-specific knowledge (Brown, 1992; De Corte).

II. Related Work:

Problem-solving and decision-making skills are both important in the workplace because they can help you to navigate a variety of situations that come up at work. Problem-solving is a process of creating a solution to address a challenge, and it often involves making decisions. Decision-making, similarly, is the action of choosing the best option in a situation, including choosing the best solution to a problem. Problem-solving and decision-making can complement one another and be used to resolve many of the same issues. Problem-solving is important both to individuals and organizations because it enables us to exert control over our environment. Fixing things that are broken some things wear out and break over time, others are flawed from day-1. Personal and business environments are full of things, activities, interactions and processes that are broken or not operating in the way they are desired to work. Problem-solving gives us a mechanism for identifying these things, figuring out why they are broken and determining a course of action to fix them. Addressing risk humans have learned to identify trends and developed an awareness of cause-and-effect relationships in their environment. These skills not only enable us to fix things when they break but also anticipate what may happen in the future (based on past-experience and current events). Problem-solving can be applied to the anticipated future events and used to enable action in the present to influence the likelihood of the event occurring and/or alter the impact if the event does occur.

Statement of research study & Objectives

Effectiveness of structured teaching program on knowledge regarding psychotherapeutic approach (problem solving skills) on academic performance among 1st year B. Sc nursing students at Adichunchanagiri college of nursing

Objectives of the study:

1. To assess the pre-test and post-test knowledge regarding problem solving skills among 1st year B.Sc. nursing students.
2. To compare the pre-test and post-test knowledge regarding problem solving skills among 1st year B.sc nursing students.
3. To associate the pre-test knowledge scores regarding problem solving skills among 1st year B.sc nursing students.

Operational Definition

1. **Effectiveness:** It refers to the improvement in knowledge of 1st year B.sc nursing students regarding problem solving skills.
2. **Structured teaching program:** It refers to systematically organized teaching strategy for duration of 45 min to 1 hr. for 1st year B.sc nursing students on problem solving skills by verbal interaction with the use of LCD projector. It includes recruiting, selecting, promoting, super annulation etc.
3. **Knowledge:** It refers to level of understanding regarding problem solving skills among 1st year B.sc nursing students.
4. **1st year B.sc nursing students:** The students who are perceiving in the 1st year B.sc nursing at Adichunchanagiri college of nursing, B.G Nagara.

Research Hypothesis:

H1: There will be significant difference between mean pre-test and post-test knowledge regarding Problem solving skills.

H2: There will be significant association between pre-test knowledge scores of 1st year B.sc nursing students regarding Problem solving skills with their selected demographic variables.

Assumptions:

1. 1st year B. Sc nursing students may not have adequate understanding regarding problemsolving skills.
2. Structured teaching program along with verbatim may improve the knowledge of 1st year B.sc nursing students regarding “Problem solving skills”.
3. 1st year B.sc nursing student’s knowledge regarding “Problem solving skills” may vary with their selected demographic variables.

III. Research Methodology

Research Approach: Quantitative evaluative research approach.

Research Design: Pre experimental one group pre-test post-test design.

Variables:

Dependent Variable: Knowledge regarding problem solving skills

Independent Variable: Structured teaching program

Setting of study: 1st year B Sc. Nursing classroom in Adichunchanagiri College of Nursing

Population: All 1st year B.Sc. nursing students at Adichunchanagiri College of Nursing.

Sampling and Sample Size: Sample size used for study was 60 using non probability purposive sampling technique.

Criteria for Selection of Sample

Inclusion criteria:

1. Only 1st year B.Sc. Nursing students.
2. 1st year B.Sc. Nursing students who were available at the time of data collection in the class room.

Exclusion criteria: 1st year B.Sc. nursing students who are not willing to participate in the study.

Description of The tool: Structured interview schedule consisted of 2 sections covering the following areas.

Section A: Educational status of mother, Educational status of father, Occupation of mother, Occupation of father, Sources of information.

Section B: Structured questionnaire schedule was used to assess the knowledge regarding problem solving skills among 1st year B.Sc. Nursing students.

Scoring Key: Knowledge regarding problem solving skills was measured in terms of knowledge scores. Each correct answer was given a score of one and wrong answers score of zero. Maximum score was 20 and the minimum score was 0. To interpret the level of knowledge the scores were distributed as follow.

Inadequate knowledge: <50 %

Moderate knowledge: 50-75 %

Adequate knowledge: >75 %

Reliability of Tool: In order to establish reliability of the tool, the split half technique with the spearman Brown's prophecy formula was used & the r value was 0.88 which indicated that the developed tool was found to be artistically reliable.

Development of structured teaching program:

Following steps were adopted to develop the structured teaching program

- Preparation of 1st draft of structured teaching programmed.
- Content validity of the structured teaching programmed.
- Preparation of final draft of structured teaching programmed.
- Description of the structured teaching programmed.

Content validity of the structured teaching program

The initial draft of the STP were given to 3 experts comprising of three from nursing educators and Biostatistician and along with criteria check list. There was 100% agreement in the criteria of content. The suggestions given by the experts were accepted and ensured the clarity and validity of the tool.

Description of the structured teaching program

It consists of objectives like meaning of problem-solving skills, steps of problem-solving skills, importance of knowledge on problem solving skills in future.

Data collection procedure:

Prior permission was obtained from the principal; the data collection was carried out in the month of October 2021 in Adichunchanagiri college of nursing BG Nagara. 1st year B.Sc. Nursing students were selected based on inclusion criteria.

1. On the first day purpose of the study was explained to the sample and informed consent was taken before starting the study followed by conduction of pre-test using structured knowledge questionnaire schedule among 1st year B.Sc. Nursing students.
2. On the same day the structured teaching programmed was administered on problem solving skills for 45 minutes, by using LCD projector.
3. Post test was conducted 8 days after pre test by using the same structured knowledge questionnaire to each sample.

Plan for data analysis: The data obtained was analyzed by using descriptive and inferential statistics as follows:

-Descriptive statistics:

1. Demographic data was analyzed in terms of frequencies and percentage.

Inferential statistics:

1. The significant difference between pre-test and post-test score was determined by paired 't' test.
2. Chi-square test was used to determine the association between pre-test knowledge scores with their selected demographic variables.

IV. Results and discussion

Table 1: Frequency and percentage distribution of selected demographic variables of 1st year B. Sc Nursing students such as gender, types of family, religion, educational status of father, hobbies n=60

Sl.No.	Demographic variables	Frequency(n)	Percentage(%)
1	Gender		
	a) Male	16	26.67
	b) Female	44	73.33
2	Type of family		
	a) Nuclear family	50	83.33
	b) Joint family	10	16.67
3	Religion		
	a) Hindu	40	66.67
	b) Muslim	4	6.67
	c) Christian	16	26.67
4	Educational status of the Father		
	a) Secondary	15	25
	b) Higher secondary	30	50
	c) Graduate	15	25
5	Hobbies		
	a) Reading	13	21.67
	b) Listening music	25	41.67
	c) Watching TV	20	33.33
	d) Gardening	2	3.33

Table 2: Frequency and percentage distribution of level of knowledge regarding problemsolving skills among 1st year B Sc Nursing students before and after administration of STP.

n =60

Level of knowledge	Pre-test		Posttest	
	Frequency	Percentage	Frequency	Percentage
Inadequate (<50%)	33	55	–	–
Moderate (50-75%)	27	45	6	10
Adequate (>75%)	–	–	54	90

Table3: Mean and Standard Deviation for overall improvement of knowledge regarding problem solving skills among 1st year B. Sc Nursing students before and after STP.

n=60

Knowledgeaspects	Max. score	Pre-test			Posttest			Enhancement		
		Mean	SD	Mean %	Mean	SD	Mean %	Mean	SD	Mean %
General Information	16	5.46	1.77	45.5	6.34	1.95	52.83	0.88	1.95	7.33
Personal perception regarding problem solvingskills	20	4.81	1.98	40.08	6.5	2.02	54.16	1.69	2.02	14.08
Techniques of problem-solving skills	24	3.09	1.41	38.62	3.37	1.27	42.12	0.28	1.272	3.5
Overall	60	13.36	5.16	124.2	16.21	5.24	149.11	2.85	5.242	24.91

Table 3 reveals the mean, SD and improvement of knowledge score on problem solving skills among 1st year BSc Nursing students, with regard to general knowledgeregarding problem solving skills the gain in mean score percentage was7.33, with regard to question regarding Personal perception regarding problem solving skills the

gain in mean score percentage was 14.08, with regard to questions regarding to Techniques of problem solving skills the gain in mean score percentage was 3.5. The overall enhancement between pre-test and post-test mean score percentage was 24.91.

The above table represented the mean pre-test and post-test knowledge regarding problem solving skills among 1st year BSc Nursing students. Paired ‘t’ test was carried out it and was invariably significant at $p > 0.05$ level. Hence null hypothesis H₀₁ is rejected and research hypothesis H₁ was accepted. It was evidenced that STP is significantly effective in improving the knowledge regarding problem solving skills among 1st year B Sc Nursing students.

Table3: Association between pre test knowledge scores with selected socio demographic variables

n=60

Sl. No	ANALYSIS OF CHI-SQUARE					Cal value	Tab value	
	Observed freq.(O)	Expected. (E)	O-E	(O-E) ²	(O-E) ² /E			
1	Gender							
	7	10.4	3.4	11.56	1.11	χ² =4.328	d.f=4 9.49	
	9	5.6	3.4	11.56	2.064			
	32	28.6	3.4	11.56	0.404			
	12	15.4	3.4	11.56	0.750			
	2	2.81	-0.81	0.66	0.23			
	1	2.63	-1.63	2.64	1.01			NS
	3	3.50	-0.50	0.25	0.07			
	5	3.94	1.06	1.13	0.29			
	2	1.75	0.25	0.06	0.04			
	3	2.19	0.81	0.66	0.30			
				Σ=	4.328			
2	Type of family							
	35	34.16	0.84	0.705	0.020	χ² =0.383		
	15	15.83	0.83	0.688	0.043			
	6	6.83	0.83	0.688	0.100	d.f=4	9.49	
	4	3.16	0.84	0.7056	0.22			
	1	1.69	-0.69	0.47	0.28			
	1	2.63	-1.63	2.64	1.01			
	4	3.94	0.06	0.00	0.00			
	7	5.25	1.75	3.06	0.58			
	0	0.88	-0.88	0.77	0.88			
	2	1.31	0.69	0.47	0.36			
				Σ=	0.383	NS		
3	Religion							
	18	12.66	5.34	28.51	2.0252			
	22	27.33	5.33	28.40	1.03	χ² =9.904		
	0	1.26	1.26	1.587	1.26			
	4	2.73	1.27	1.61	0.59	df=4	9.49	
	1	5.06	4.06	16.48	3.25			
	15	10.93	4.07	16.564	1.515	NS		
	3	5.25	-2.25	5.06	0.96			
	7	3.94	3.06	9.38	2.38			
	1	2.19	-1.19	1.41	0.64			

	2	1.75	0.25	0.06	0.04	
					$\Sigma=$ 9.904	
4	Education of father					
	2	4.75	2.75	7.56	1.592	
	13	10.25	2.75	7.56	0.737	$\chi^2 = 3.92$
	10	9.5	0.5	0.25	0.026	
	20	20.5	0.5	0.25	0.01	
	7	4.75	2.25	5.06	1.065	
	8	10.25	-2.25	5.06	0.49	
8						
	3	3.38	-0.38	0.14	0.04	
	2	2.81	-0.81	0.66	0.23	d.f=4 9.49
	6	4.50	1.50	2.25	0.50	
	2	2.19	-0.19	0.04	0.02	NS
	4	3.50	0.50	0.25	0.07	
	3	2.63	0.38	0.14	0.05	
	3	2.19	0.81	0.66	0.30	
	2	3.50	-1.50	2.25	0.64	
					$\Sigma=$ 3.92	
5	Hobbies					
	2	4.11	-2.11	4.452	1.08	$\chi^2 = 11.45$
	11	8.88	2.12	4.49	0.50	
	5	7.91	-2.91	8.46	1.07	
	20	17.08	2.92	8.52	0.49	
	12	6.33	5.67	32.14	5.07	
	8	13.66	-5.66	32.03	2.34	
	0	0.6	-0.6	0.36	0.6	Df =3 7.81
	2	1.36	0.64	0.40	0.30	NS
					$\Sigma=$ 11.45	
NS= Not significant, S=Significant, *P<0.05						

The results of chi square analysis presented in tables indicated that there was significant association between educational status of mother, educational status of father, father’s occupation, mother’s occupation, sources of information. It was evidenced that the knowledge regarding problem solving skills is associated with demographic characteristics of 1st year B ScNursing. Hence Research Hypothesis H₂ was accepted, that there is significant association between pre –test knowledge regarding problem solving skills among 1st year B. Sc nursing students with selected demographic variables.

V. Discussion

The first objective was to assess the pre-test and post-test knowledge regarding problemsolving skills among 1st year B Sc Nursing students.

The overall mean pre-test knowledge score obtained by the subjects was 13.36 with standard deviation of 5.169 in the pre-test. The overall mean post-test knowledge obtained by the subjects was 16.21 with standard deviation of 5.242 in the post-test.

The second objective was to compare the pre-test and post-test knowledge regarding problem solving skills among 1st year B Sc Nursing students.

The level of knowledge distribution showed that 1st year BSc Nursing students 15(46.87%) had moderate knowledge and 17 (53.12%) had inadequate knowledge regarding problem solving skills in pre-test. The level of knowledge distribution showed that 1st year BSc Nursing students 8(25%) had moderate knowledge and 24(75%) had adequate knowledge on problem solving skills on post-test.

The third objective was to associate the pre-test knowledge score regarding problem solving skills among 1st year B Sc Nursing students.

Association of pre-test knowledge scores of subjects with selected demographic variables such as educational status of mother, educational status of father, father's occupation, mother's occupation, sources of information evidenced that there was statistically significant association at $p < 0.05$ level. Hence their search hypothesis H2 stated that there will be significant association between the pre-test knowledge of 1st year BSc Nursing students regarding problem solving skills score with their selected demographic variables was accepted.

The above study was supported by a study, which was done to identify association in of demographic variable between the 1st year B Sc Nursing students regarding problem solving skills. The study included 60, 1st year B Sc Nursing students from Adichunchanagiri College of Nursing, B.G. Nagara.

VI. Conclusion

Nursing implications: The investigator has drawn the following implications from the studies which are of vital concern to the field of nursing practice, nursing education, nursing administration and nursing research.

Nursing practice:

- Nurses can conduct teaching session on problem solving skills among 1st year B Sc Nursing students, which will be helping improvement of knowledge for students.
- Nursing personnel can offer opportunity to create awareness among 1st year B Sc Nursing students through structured teaching program.

Nursing education

- The student nurses should be encouraged to attend specialized courses and seminars regarding problem solving skills.
- Nursing faculty should come forward and encourage the student to provide the information on problem solving skills with the help of audio-visual aids.

Nursing administration

- Nursing leaders should enhance nursing services through reinforcement teaching.
- Teaching program can be given to 1st year BSc Nursing students through mass media regarding problem solving skills

Nursing research

- Nursing can be forced on selected aspects of problem-solving skills which could help to improve nurse's autonomous decisions and collaborate with the medical team to ensure continuing care towards more successful management.
- This study will serve as a valuable reference material for future investigators.

Recommendations

- Similar study can be undertaken on large scale.
- An explorative study may be conducted to identify the awareness, knowledge and practice of working parents regarding problem solving skills.
- A similar study can be undertaken by using different teaching methods.
- Similar study can be replicated with a control group.

References:

- [1]. D'Zurilla TJ, Nezu AM. Development and Preliminary Evaluation of the Social Problem-Solving Inventory. Psychol Assess [Internet]. 1990 [cited 2021 Dec 16];2(2):156–63. Available from: /record/1990-29838-001
- [2]. Introduction to Problem Solving [Internet]. [cited 2021 Dec 16]. Available from: https://www.cs.odu.edu/~toida/nerzic/content/problem_solving/problem_solving.html

- [3]. MacNair RR, Elliott TR. Self-perceived problem-solving ability, stress appraisal, and coping over time. *J Res Pers.* 1992 Jun 1;26(2):150–64.
- [4]. Chinaveh M. The effectiveness of problem-solving on coping Skills and Psychological Adjustment. *Procedia-Social Behav Sci [Internet].* 2013 [cited 2021 Dec 16];84:4–9.
- [5]. Por J, Barriball L, Fitzpatrick J, Roberts J. Emotional intelligence: Its relationship to stress, coping, well-being and professional performance in nursing students. *Nurseeducation today.* 2011 Nov 1;31(8):855-60.
- [6]. Sheard M. Hardiness commitment, gender, and age differentiate university academic performance. *British Journal of Educational Psychology.* 2009 Mar;79(1):189-204.
- [7]. Furnham A, Monsen J, Ahmetoglu G. Typical intellectual engagement, Big Five personality traits, approaches to learning and cognitive ability predictors of academic performance. *British Journal of Educational Psychology.* 2009 Dec;79(4):769-82.
- [8]. Gadbois SA, Sturgeon RD. Academic self- handicapping: Relationships with learning specific and general self- perceptions and academic performance over time. *BritishJournal of Educational Psychology.* 2011 Jun;81(2):207-22.
- [9]. Saputra WN, Supriyanto A, Astuti B, Ayriza Y, Adiputra S. The effect of student perception of negative school climate on poor academic performance of students in Indonesia. *International Journal of Learning, Teaching and Educational Research.* 2020 Feb;19(2):279-91.
- [10]. Li YS, Yu WP, Liu CF, Shieh SH, Yang BH. An exploratory study of the relationship between learning styles and academic performance among students in different nursing programs. *Contemporary nurse.* 2014 Oct 1;48(2):229-39.
- [11].

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