



EFFECT OF GUIDED IMAGERY ON TEST ANXIETY AMONG NURSING STUDENTS

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ABSTRACT

The study was aimed to assess the effectiveness of guided imagery on test anxiety among nursing students. An experimental research design was used on 100 B.Sc (N) 1st year students studying in DMCH College of Nursing and Institute of Nursing Education Guru Teg Bahadur Sahib Hospital, Ludhiana. The convenience sampling was used to select the colleges and then by using lottery method 50 students were selected from DMCH College of Nursing as an experimental group and 50 students were selected from the Institute of Nursing Education Guru Teg Bahadur Sahib Hospital as control group. Pre-interventional scores of test anxiety were checked in both control and experimental group by using Sarason Test Anxiety Scale (1980). Guided imagery as an intervention in the form of audio tape for 30 minutes was given to the experimental group. After the intervention, post-interventional scores were assessed and were compared with pre-interventional scores. It was found that in experimental group post-interventional mean scores of test anxiety (18.3 ± 3.9) was significantly low in comparison to pre-interventional mean scores of test anxiety (20.4 ± 4.1). It reflects the improved anxiety level among nursing students after guided imagery ($p = 0.001$). Whereas in control group post-interventional mean scores of test anxiety (23.2 ± 5.5) was significantly high in comparison to pre-interventional mean scores of test anxiety (22.3 ± 4.7) at $p = 0.13$.

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INTRODUCTION

Anxiety is a serious condition that makes hard for person to cope up with daily life. It is a strong and unpleasant feeling of nervousness or distress in response to a feared situation. When that fear or anxiety increases and gets in the way of one's life (school or work, relationships, ability to enjoy things or cope), doesn't go away and causes distress that is when it could be a more serious anxiety disorder (<http://www.apa.org>. Accessed on 13 March 2015) (<http://www.apa.org>. Accessed on 13 March 2015). Anxiety causes the physical effects, emotional effects, behavioral symptoms and cognitive symptoms (<http://www.cedu.niu.edu/test-anxiety-in-adolescents/> Accessed on 15/3/15). Test anxiety is actually a type of performance anxiety, it is a kind of feeling someone might have in a situation where performance really counts or when the pressure on to do well.

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Test anxiety is a combination of physiological over arousal, tension and somatic symptoms, along with worry, dread, fear of failure, and catastrophizing that occur before or during test situations. Test anxiety can cause stress which indeed can cause suicide (<http://www.apa.org>. Accessed on 13 March 2015). In 2014, a study was conducted in Tamil Nadu to analyze the level of anxiety among board exam attending school students. Majority of students (74%) experienced moderate level of anxiety. The latest report by the national crime records bureau has positioned Tamil Nadu as the Indian state with highest suicide rate and the main cause associated with it is test anxiety (Revina Ann Mary, 2014). India has the world's largest youth population with 356 million, ranges from ages 10 – 24 year old. Anxiety is one of the most common psychological disorders in school aged children and adolescents worldwide. The prevalence rates range from 4% to 25%, with an average rate of 8.0% (Deb, Chatterjee and Walsh, 2010). According to W.H.O, in India, nearly 1, 36,000 persons ended their lives in a suicidal act and about 40% out of

them were below 30 years of age who committed suicide due to stress or anxiety in their life (www.thehindu.com/./article6612615.ece/ Accessed on 22/3/15). Review of literature and investigator's personal experience found that many bright, talented, intelligent and hard working students perform very poorly in the examination due to test anxiety, which interferes with their mental power and keeps them away from doing their best. With the aid of guided imagery, an intervention will be given in the present study, with the goal of reducing test anxiety among nursing students.

MATERIALS AND METHODS

The objectives of the study were to assess the effectiveness of guided imagery on test anxiety among nursing students. The study was approved by research and ethical committee of DMC and Hospital, Ludhiana. Instructions were given to them and they were assured that their responses would be kept confidential. Informed consent was obtained from the Students. An experimental research design was used on 100 B.Sc (N) 1st year students studying in DMCH College of Nursing and Institute of Nursing Education Guru Teg Bahadur Sahib Hospital, Ludhiana. The convenience sampling was used to select the colleges and then by using lottery method 50 students were selected from DMCH College of Nursing as an experimental group and 50 students were selected from the Institute of Nursing Education Guru Teg Bahadur Sahib Hospital as control group. The tool was organized as Part (A) socio demographic profile and Part (B) Sarason Test Anxiety Scale. Pre-interventional scores of test anxiety were checked in both control and experimental group by using Sarason Test Anxiety Scale (1980). Guided imagery as an intervention in the form of audio tape for 30 minutes was given to the experimental group. After the intervention, post-interventional scores were assessed and were compared with pre-interventional scores. Reliability of tool is predetermined by using test-retest method ($r=0.80$). The data obtained was analyzed by using both descriptive and inferential statistics.

RESULTS

Table 1. Distribution of nursing students as per their socio demographic characteristics

N=100	
Socio demographic characteristics	f%
<i>Age (in years)</i>	
17-20	96
>20	04
<i>Gender</i>	
Female	99
Male	01
<i>Religion</i>	
Hindu	17
Sikh	81
Christian	02
<i>Habitat</i>	
Rural	72
Urban	28
<i>Major sources for financial support for education</i>	
Parents and family	98
Borrowed	01
Loan	01

Table 1 reveals the socio demographic characteristics of B.Sc (N) 1st year students. Maximum number of nursing students i.e. 96 were in the age group of 17-20 years and rest 4 were from the age group of >20 years.

Almost all the students i.e. 99 were females and only 1 student was male. Majority of students i.e. 81 belonged to Sikh religion followed by 17 who were from Hindu religion and rest 02 students were from Christian religion. Out of 100 students 72 belonged to rural area and other 28 students were from urban area. Regarding financial support, majority of students i.e. 98 were having support from parents and family, 1 student had borrowed money and other 1 had taken loan.

Table 2. Distribution of nursing students as per their family pattern

N=100	
Family Pattern	f%
<i>Type of family</i>	
Nuclear	67
Joint	33
<i>Father's education</i>	
Illiterate	04
Elementary	28
Higher secondary	44
Graduate & above	24
<i>Mother's education</i>	
Illiterate	06
Elementary	25
Higher secondary	49
Graduate & above	20
<i>Occupation of father</i>	
Working	98
Non-Working	02
<i>Occupation of mother</i>	
Working	28
Non-Working	72
<i>Socioeconomic status (According to Kuppaswamy's scale)</i>	
Upper (I)	
Upper Middle (II)	02
Middle/Lower middle (III)	51
Lower/Upper Lower (IV)	46
	01

Table 2 reveals the family pattern of B.Sc (N) 1st year students. Regarding type of family, 67 students were living in the nuclear family whereas other 33 were living in joint family. Regarding education of father of the students, 44 were educated upto higher secondary followed by 28 whose education level was elementary and almost one fourth of the fathers i.e. 24 were having education of graduate and above and 04 fathers were illiterate. Near about half i.e. 49 mothers were educated upto higher secondary and one fourth i.e. 25 mothers had their education upto elementary, 20 mothers were graduated and above and rest 06 mothers were illiterate. Regarding occupation of the fathers and mothers, majority of fathers i.e. 98 were working and rest 02 were non working. Whereas almost three fourth i.e. 72 mothers were non working and rest 28 were working. As per the socio economic status, nearly half i.e. 51 students were upper/middle class followed by 46 who belonged to middle/lower class, 02 students were from upper class and only 1 student was from lower/upper lower socio economic status. Table 3 depicts the pre and post-interventional scores of test anxiety of control group. During pre-intervention, most of the students i.e. 34 (68%) were having high level of test anxiety followed by 16 (32%) students who were having moderate level of test anxiety. Also during post-intervention majority of students i.e. 36 (72%) were having high level of test anxiety followed by 11 (22%) students who were having moderate level of test anxiety and very few i.e. 03 (06%) were having low level of test anxiety at $p = 0.13$. Table 4 depicts the comparison of pre and post intervention scores of test anxiety among nursing students of both the experimental and control groups.

Table 3. Distribution of level of test anxiety of experimental and control group

		Level of Test Anxiety			χ^2 Value p Value
		Low f%	Moderate f%	High f%	
Experimental Group	Pre- interventional scores	02	22	26	$\chi^2 = 9.7$ p = 0.007*
	Post- interventional scores	04	35	11	
Control Group	Pre-interventional scores	00	16	34	$\chi^2 = 3.96$ p = 0.13 ^{NS}
	Post-interventional scores	03	11	36	

*significant p<0.05 NS non significant p>0.05

Table 4. Comparison of pre and post interventional scores of test anxiety among experimental and control group

		Experimental Group n ₂ =50		Control Group n ₁ =50		t value	p value
		Mean±SD	Mean%	Mean±SD	Mean%		
Pre-interventional	Scores	20.4±4.1	55.1	22.3±4.7	60.2	-2.5	0.016*
Post-interventional	Scores	18.3±3.9	49.4	23.2±5.5	62.7	-5.4	0.001*
	t value	4.55		-1.5			
	p value	0.001*		0.13 ^{NS}			

*significant p<0.05 NS non significant p>0.05

In experimental group the mean post-interventional score (18.3±3.9) was found to be lower than the mean pre-interventional score (20.4±4.1) at p = 0.016. Whereas in control group the mean post-interventional score (23.2±5.5) was higher than the pre-interventional score (22.3±4.7) at p = 0.13.

DISCUSSION

The present study revealed that in control group during pre-intervention 68% were having high level of test anxiety followed by 32% students who were having moderate test anxiety and during post-intervention the anxiety level was increased, 72% students were having high level of test anxiety followed by moderate and low level of anxiety i.e. 22% and 6% respectively. Whereas, in experimental group during pre-intervention the test anxiety was high in 52% students followed by moderate and low level i.e. 44% and 04% respectively and during post-intervention, the high level of anxiety were left in 22% students and moderate was in 70% students and low was in 08% students. The findings are consisted with the findings of Senthil Kavitha R. *et al.* (2011) who conducted an experimental study in Bangalore to evaluate the effects of guided imagery relaxation programme for reducing the anxiety level among exam going students. The findings revealed that in control group during pre-intervention 60% students were having unhealthy anxiety followed by 40% students who were having healthy anxiety and the results were same during post-intervention. Whereas in experimental group, during pre-intervention 65% students were having unhealthy anxiety followed by 35% students who were having healthy anxiety and during post-intervention no student was having unhealthy anxiety followed by 25% and 75% who were having healthy anxiety and no anxiety respectively (Senthil kavitha *et al.*, 2011). The present study revealed that the pre and post interventional scores of experimental group were 20.4±4.1 and 18.3±3.1 (p = 0.001). Whereas the pre and post interventional scores of control group were 22.3±4.7 and 23.2±5.5 (p = 0.13). It reflects the reduced anxiety level after guided imagery. Hence, null hypothesis was rejected and the guided imagery had significant positive effect on post interventional group of experimental group among B.Sc (N) 1st year students of DMCH College of

Nursing Ludhiana, Punjab. The findings are consisted with the findings of Farkhondeh *et al.* (2013) conducted an experimental study which was designed to assess the effect of guided reflection on test anxiety among nursing students of second and third year of education in Faculty of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran. The study found that the pre and post test anxiety mean scores of experimental group were 35.47±10.66 and 27.72±10.09. Whereas in control group scores were 35.34±9.50 and 36.48±9.34. This showed that guided reflection is effective in reducing test anxiety among nursing students (Farkhondeh *et al.*, 2013). The study findings are also supported by Paul Ratanasiripong, Nop Ratanasiripong and Duangrat Kathalae (2012) who conducted a randomized controlled study with second year baccalaureate nursing students at a public nursing college in Thailand. In the interventional group, the mean post-intervention state anxiety score (M = 13.70, SD = 6.70) was significantly lower than the mean pre-intervention state anxiety score (M = 18.60, SD = 10.25). For the control group, the moderate increase from the mean pre-intervention state anxiety score (M = 16.40, SD = 8.34) to the mean post-intervention state anxiety score (M = 19.00, SD = 8.69) was not statistically significant. When comparing the two groups, the interventional group had a significantly lower level of anxiety than the control group after the 5-week intervention (Ratanasiripong Paul *et al.*, 2012). Thus, the present study concluded that administration of guided imagery was effective to improve the test anxiety among nursing students of selected colleges in Ludhiana, Punjab. Hence, the investigator suggests that the administration of guided imagery will be useful for nursing students to improve the test anxiety.

Conclusion

The study concluded that, in terms of control group the level of test anxiety during pre-intervention and post-intervention was high whereas in experimental group the level of test anxiety during pre-intervention was high and was moderate during post-intervention. So, this depicts that guided imagery has reduced the test anxiety level among nursing students.

Hence, guided imagery has positive effect on test anxiety level among B.Sc (N) 1st year students.

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