Evaluate The Effectiveness of Audio Assisted Singing Bowl Sound Therapy for Reduction of Stress Among B.Sc. Nursing Students at Selected Colleges of the City: A Pre- Experimental Study

Ms. Muskan Pravin Netke [1] Mrs. Vandana S. Thangavel [2]
[1]*M.Sc. Nursing II ND Year, MKSSS Sitabai Nargundkar College of Nursing for Women Nagpur*
[2]*Associate Professor, MKSSS Sitabai Nargundkar College of Nursing for Women Nagpur*

***Abstract*—B.Sc. Nursing students often navigate a challenging curriculum, extensive clinical duties, and a constantly evolving healthcare landscape. The combined impact of these demands can result in increased stress levels, affecting their ability to cope, concentrate, and perform at their best. This research centers on evaluating audio-assisted singing bowl therapy as a potential remedy for stress reduction among B.Sc. Nursing students. Singing bowl therapy, renowned for its calming and meditative effects, offers a distinctive approach that aligns with the holistic nature of nursing education.Medical training can be really stressful for students. In the first year, they often feel overwhelmed by the new environment and the realization that they can't know everything. This challenges their previous view of themselves as successful and capable. In the second and third years, students deal with extensive preclinical courses.In the harmonious pursuit of nursing education, the researcher felt the need to address the crescendo of stress among B.Sc. Nursing students becomes imperative. As she herself was a B.Sc. nursing student she has felt the pressure of the intricate balance required to succeed academically while preparing for the demanding responsibilities of patient care that placed her in a distinctive and challenging position. As Jean Watson aptly noted, 'Caring is the essence of nursing,' and caring for others necessitates first caring for oneself. This study is born out of the recognition that stress among nursing students not only impacts their personal well-being but also has far-reaching implications for their ability to provide compassionate and effective care. OBJECTIVES: To evaluate the impact of audio-assisted singing bowl sound therapy on stress reduction among B.Sc. Nursing students.To assess the baseline stress levels among B.Sc. Nursing students entering the study.To compare the stress levels of participants before and after the implementation of the singing bowl sound therapy intervention. To find out the association between the stress level of students with their selected socio-demographic variables. Result A comprehensive analysis of pre-test stress levels revealed that female students exhibited higher levels of stress compared to their male counterparts. Additionally, students who had willingly chosen nursing as a career reported lower stress levels, whereas those who pursued it due to external pressures exhibited significantly higher stress. Another notable finding was that prior exposure to relaxation techniques, including meditation, did not necessarily correlate with lower stress levels, indicating that occasional use of such techniques may not provide long-term benefits. The results of the study confirmed the effectiveness of Tibetan singing bowl sound therapy in reducing pre-test stress. The post-intervention assessment showed a statistically significant decrease in stress levels among participants. Students reported feeling more relaxed, mentally focused, and better prepared for their exams after the therapy session. The results strongly supported the alternative hypothesis (H_1), rejecting the null hypothesis (H_0), and affirming that sound therapy effectively reduces pre-test stress. The statistical analysis of stress levels before and after the intervention demonstrated a significant reduction in anxiety and tension among students. The therapy induced deep relaxation, activating the parasympathetic nervous system and promoting a sense of calmness. The results validated the potential of Tibetan singing bowl sound therapy as a non-invasive, cost-effective, and accessible intervention for managing stress among nursing students.The analysis of stress levels by age groups revealed no statistically significant association (X^2 = 6.237, p = 0.397) between age and stress level. While the distribution of stress levels varied across the age groups (16–17 years, 18–19 years, 20–21 years, and 22+ years), no clear pattern emerged. A statistically significant relationship was found between stress levels and gender (X^2 = 6.466, p = 0.039), with female students reporting**

higher levels of severe stress compared to their male counterparts.The association between family income and stress levels did not yield any significant results (X^2 = 4.454, p = 0.615), indicating that family income may not be a major factor influencing the stress levels of nursing students in this study. Similarly, the area of living (hostel, with parents, on rent) was not found to have a statistically significant influence on the stress levels of nursing students (X^2 = 2.069, p = 0.723). No significant association was found between stress levels and the place of origin (rural vs. urban) of the students (X^2 = 0.616, p = 0.736). An interesting and statistically significant finding (X^2 = 5.600, p = 0.046) emerged when examining the relationship between the choice of nursing field and stress levels. The study also assessed whether previous knowledge of singing bowl sound therapy influenced stress levels. The findings indicated no significant relationship (X^2 = 2.486, p = 0.647), Lastly, the practice of meditation did not show a statistically significant association with stress levels (X^2 = 7.400, p = 0.285). By using Parallel form method of reliability, it is found to be 0.954 and hence tool is reliable and valid. CONCLUSION This study sought to explore the effectiveness of Tibetan singing bowl sound therapy in reducing pre-test stress among nursing students. Through rigorous analysis, it was found that the therapy significantly reduced stress levels, reinforcing the potential of sound therapy as a viable intervention for academic stress management.

I. INTRODUCTION

B.Sc. Nursing students often navigate a challenging curriculum, extensive clinical duties, and a constantly evolving healthcare landscape. The combined impact of these demands can result in increased stress levels, affecting their ability to cope, concentrate, and perform at their best. Moreover, the emotional weight linked to patient care, coupled with the necessity for rapid decision- making, further adds to the stress experienced by these students. Recognizing and addressing the unique stressors within the context of nursing education is essential for promoting the overall well-being of future healthcare professionals. Medical training can be really stressful for students. In the first year, they often feel overwhelmed by the new environment and the realization that they can't know everything. This challenges their previous view of themselves as successful and capable. In the second and third years, students deal with extensive preclinical courses. As they transition to clinical training, they start learning how to interact with patients, which can reduce stress. However, they may still feel like they lack the knowledge and skills required. In the fifth and sixth years, students take on more responsibility for patient care. Despite expected competence, they often continue feeling anxious and unsure. To cope, some students may act overly confident and try to read everything to challenge themselves.In the harmonious pursuit of nursing education, the researcher felt the need to address the crescendo of stress among B.Sc. Nursing students becomes imperative. As she herself was a B.Sc. nursing student she has felt the pressure of the intricate balance required to succeed academically while preparing for the demanding responsibilities of patient care that placed her in a distinctive and challenging position. As Jean Watson aptly noted, 'Caring is the essence of nursing,' and caring for others necessitates first caring for oneself. This study is born out of the recognition that stress among nursing students not only impacts their personal well-being but also has far-reaching implications for their ability to provide compassionate and effective care. This study seeks to delve into the effectiveness of singing bowl therapy as a means to harmonize the discordant notes of stress, offering a unique and tailored solution to enhance the well-being of B.Sc. Nursing students. Through this exploration, the researcher aims to compose a symphony of evidence-based recommendations for the integration of alternative stress reduction strategies into the holistic support systems for nursing students, fostering a resilient and harmonious journey through their academic and professional pursuits."

II. OBJECTIVES OF THE STUDY

1. To evaluate the impact of audio-assisted singing bowl sound therapy on stress reduction among B.Sc. Nursing students.
2. To assess the baseline stress levels among B.Sc. Nursing students entering the study.
3. To compare the stress levels of participants before and after the implementation of the singing bowl sound therapy intervention.
4. To find out the association between the stress level of students with their selected socio-demographic variables.

III. MATERIAL AND METHOD

The pre-experimental research approach was considered most appropriate for the present study one group pre-test post-test design is used which come under pre-experimental design. The setting for the present study is selected colleges of the city. The subjects of present study consist of 100 B.sc nursing students of selected colleges of the city. Non-Probability Convenient Sampling Technique is used. Tool used in this study are: self-structured questionnaire on demographic variables standardizes student stress inventory (Mohammad Aziz Shah Mohamed Arip (30). Prior permission was obtained from Principals of the selected colleges; Consent was also taken from the B.sc Nursing students who formed the sample group. The data obtained would be analyzed using both descriptive and inferential statistics,

STATISTICAL ANALYSIS

The data obtained would be analyzed using both descriptive and inferential statistics, Frequency and percentage distribution of the subjects according to their selected socio-demographic variables. Determine the co-relation between level stress of students with audio assisted singing bowl sound therapy by using the Karl Pearson test Analysis the association of level of stress scores in relation to selected socio demographic variable by using chi-square.

IV. RESULT

Section A

DISTRIBUTION OF B.SC. NURSING STUDENTS ACCORDING TO THEIR DEMOGRAPHIC VARIABLES.

Table 1.1: -Descriptive Statistics (Demographic Variables age)

Age in years	Frequency	Percent
16 to 17 years	7	7.0
18 to 19 years	51	51.0
20 to 21 years	38	38.0
22 & Above	4	4.0
Total	100	100.0

Table 1.2: -Descriptive Statistics (Demographic Variables gender)

Gender	Frequency	Percent
Male	24	24.0
Female	76	76.0
Total	100	100.0

Table 1.3: -Descriptive Statistics (Demographic Variables Family annual income)

Family annual income	Frequency	Percent
Below 50000	66	66.0
50000-1lakhs	25	25.0
1-5lakhs	7	7.0
More than 5 lakhs	2	2.0
Total	100	100.0

Table 1.4: -Descriptive Statistics (Demographic Variables Area of living)

Area of living	Frequency	Percent
Hostel	21	21.0
With parents	37	37.0
On rent	42	42.0
Total	100	100.0

Table 1.5: -Descriptive Statistics (Demographic Variables Place of origin)

Place of origin	Frequency	Percent
Rural	41	41.0
Urban	59	59.0
Total	100	100.0

Table 1.6 :-Descriptive Statistics (Demographic Variables Choice of nursing field)

Choice of nursing field	Frequency	Percent
Personal interest	65	65.0
Peer influence	3	3.0
Pressure of family and relatives	12	12.0
Others	20	20.0
Total	100	100.0

Table 1.7: -Descriptive Statistics (Demographic Variables Previous Knowledge About Singing Bowl Sound therapy)

Previous Knowledge About Singing Bowl Sound therapy	Frequency	Percent
Yes	19	19.0
No	81	81.0
Total	100	100.0

Table 1.8: -Descriptive Statistics (Demographic Variables Practice Meditation)

Do you practice Meditation	Frequency	Percent
Once a month	22	22.0
Once a week	16	16.0
Everyday	10	10.0
Never	52	52.0
Total	100	100.0

Section BASSESSMENT OF STRESS LEVEL AMONG B.SC. NURSING STUDENTS ENTERING THE STUDY.

Table 2.1: Assessment with level of Stress (Before) score.

Level of Stress (Before)	Score Range	Level of Knowledge Score	
		Frequency (f)	Percentage (%)
Mild Stress	0 to 50%	16	16.0
Moderate Stress	51% to 75%	51	51.0
Severe Stress	76% to 100%	33	33.0
Minimum Score		59	
Maximum Score		124	
Mean Knowledge Score		93.84± 14.21	

Table 2.2: Assessment with level of Stress (After) score.

Level of Stress (After)	Score Range	Level of Knowledge Score	
		Frequency (f)	Percentage (%)
Mild Stress	0 to 50%	86	86.0
Moderate Stress	51% to 75%	9	9.0
Severe Stress	76% to 100%	5	5.0
Minimum Score		42	
Maximum Score		109	
Mean Knowledge Score		54.89± 11.46	

Section C TO COMPARE THE STRESS LEVELS OF PARTICIPANTS BEFORE AND AFTER THE IMPLEMENTATION OF THE SINGING BOWL SOUND THERAPY INTERVENTION.

Table 3.1: Significance of difference between Level of Stress score in pre- and post- test of B.Sc. Nursing students.

Level of Stress Tests		Mean	N	Std. Deviation	Std. Error Mean	df	T-test	P-value
Level of Stress	Pre	93.8400	100	14.21602	1.42160	99	20.402	<0.001
	Post	54.8900	100	11.46351	1.14635			

Section DASSOCIATION BETWEEN PRE- TEST STRESS LEVEL WITH THEIR DEMOGRAPHIC VARIABLES.

Table 4.1:- Comparative assessment of Stress category vs Age using Chi- Square Analysis.

Age in years	No. of Nursing Students	Mild	Moderate	Severe	X2-value
16 to 17 years	7	2	3	2	6.237, P=0.397 NS
18 to 19 years	51	7	28	16	
20 to 21 years	38	7	16	15	
22 & Above	4	0	4	0	

Table 4.2: - Comparative assessment of Stress category vs Gender using Chi- Square Analysis.

Gender	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Male	24	4	17	3	6.466, P=0.039 Significant
Female	76	12	34	30	

Table 4.3: - Comparative assessment of Stress category vs Family annual income using Chi- Square Analysis.

Family annual income	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Below 50000	66	11	30	25	4.454, P=0.615 NS
50000-1lakhs	25	4	14	7	
1-5lakhs	7	1	5	1	
More than 5 lakhs	2	0	2	0	

Table 4.4: - Comparative assessment of Stress category vs Area of living using Chi- Square Analysis.

Area of living	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Hostel	21	4	8	9	2.069, P=0.723 NS
With parents	37	6	19	12	
On rent	42	6	24	12	

Table 4.5: - Comparative assessment of Stress category vs Place of origin using Chi- Square Analysis.

Place of origin	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Rural	41	7	19	15	0.616, P=0.736 NS
Urban	59	9	32	18	

Table 4.6: - Comparative assessment of Stress category vs Choice of nursing field using Chi- Square Analysis.

Choice of nursing field	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Personal interest	65	14	31	20	5.600, P=0.046 Significant
Peer influence	3	0	1	2	
Pressure of family and relatives	12	1	7	4	
Others	20	1	12	7	

Table 4.7: - Comparative assessment of Stress category vs Previous Knowledge About Singing Bowl Sound therapy using Chi- Square Analysis.

Previous Knowledge About Singing Bowl Sound therapy	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Yes	19	4	9	6	2.486, P=0.647 NS
No	81	12	42	27	

Table 4.8: - Comparative assessment of Stress category vs Practice Meditation *using Chi- Square Analysis.*

Do you practice Meditation	No. of Nursing Students	Mild	Moderate	Severe	X2-value
Once a month	22	3	14	5	7.400, P=0.285 NS
Once a week	16	1	7	8	
Everyday	10	2	7	1	

V. CONCLUSION

A comprehensive analysis of pre-test stress levels revealed that female students exhibited higher levels of stress compared to their male counterparts. Additionally, students who had willingly chosen nursing as a career reported lower stress levels, whereas those who pursued it due to external pressures exhibited significantly higher stress. Another notable finding was that prior exposure to relaxation techniques, including meditation, did not necessarily correlate with lower stress levels, indicating that occasional use of such techniques may not provide long-term benefits.The results of the study confirmed the effectiveness of Tibetan singing bowl sound therapy in reducing pre-test stress. The post-intervention assessment showed a statistically significant decrease in stress levels among participants. Students reported feeling more relaxed, mentally focused, and better prepared for their exams after the therapy session. The results strongly supported the alternative hypothesis (H_1), rejecting the null hypothesis (H_0), and affirming that sound therapy effectively reduces pre-test stress.Furthermore, the study highlighted the lack of awareness and availability of alternative stress management techniques among nursing students. Many participants were unfamiliar with Tibetan singing bowl therapy before the study, suggesting a need for structured programs incorporating such interventions in nursing education.

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