EFFECT OF MUSIC THERAPY ON WORK RELATED STRESS AMONG STAFF NURSES IN SELECTED HOSPITALS.

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ABSTRACT

The Word "stress has been derived from Latin word" stringer which means draws things. Stress is experienced when body responds to any kind of excessive demand: stress can be caused by both good and bad experiences. When body feels stressed by something around, music therapy can be used to accomplish individual goals such as reducing stress, Improving mood and self-expression. This study aims to assess the effect of music therapy on work related stress among staff nurses. Objectives of the study were: 1. To assess the level of work related stress among staff nurses. 2. To assess the effect of music therapy on work related stress among staff nurses. 3. To associate selected demographic variables to work related stress.

Quantitative Research approach was used in this study. Using Non probability purposive sampling a sample of 60 staff nurses working in various wards of the hospital qualifying inclusion criteria were involved in the study. Samples were assigned to control group and experimental group. A questionnaire regarding demographic variables was prepared & Modified Work Related Stress Assessment Scale was used to collect data from study participants after obtaining their consent. The study finding revealed that in experimental group, 26.7% of them had moderate work-related stress (score 47-73) and 73.3% of them had severe work related stress (score 74-100). In control group, 13.3% of them had mild work-related stress (score 20-46), 26.7% of them had moderate work-related stress (score 47-73) and 73.3% of them had severe work-related stress (score 74-100). After intervention participants from experimental group, 10% of them had mild stress (score 20-46), 70% of the staff nurses had moderate work-related stress (score 47-73) and 20% of them had severe work-related stress (score 74-100). From control group 33.3% of them had mild work-related stress (score 20-46), 63.3% of them had moderate work-related stress (score 47-73) and

3.3% of them had severe work-related stress (score 74-100). This indicates that the work-related stress improved remarkably among staff nurses after music therapy.

Key Words: Assess, Effect, Music Therapy, Work Related Stress, Staff Nurse

INTRODUCTION

The "stressors" is the actual threat to an organism, and the stress response is the organism's response to the stressors. The two types of stress are acute and chronic. Acute stress lasts for a few days or weeks, whereas chronic lasts for weeks or months. At the time of stress, the autonomic nervous system gets activated to protect the body from it. When instant fight-or-flight is possible, autonomic and hormonal activities accelerate, maximizing the opportunities for physical exertion.[1] Music can have a beneficial effect on brain chemicals such as dopamine, which is linked to feeling of pleasure, and oxytocin, the so called "love hormone." And there is moderate evidence that music can help lower levels of the stress hormone cortisol.[2] Music can have a profound effect on both the emotions and the body. Faster music can make an individual feel, more alert and concentrate better. Music makes us feel more optimistic and positive about life. Music helps in calming down mind and relaxes muscles, making an individual feel soothed while relaxing stress of the day. Music is effective for relaxation and stress management. Music has demonstrated effectiveness in reducing pain depressing anxiety, and increasing relaxation.[3]

Music makes you feel calm and relaxed. It has a unique effect on our heart rate as well as blood pressure, and makes us feel more relaxed by releasing happy hormones. Brains scans of musician and non-musician show that musician have bigger, better connected, and more sensitive brains.[4] Flute music gives brain a full workout. It specifically helps in improving the mental performance and memory. There is evidence that music can help a brain recover from a stress, depression, anxiety, and dementia.[5]

NEED OF THE STUDY

Music can have a profound effect on both the emotions and the body. Faster music can make you feel more alert and concentrate better. Upbeat music can make you feel more optimistic and positive about life. A slower tempo can quite your mind and relax your muscles, making u feel soothed while releasing the stress of the day. Music is effective for relaxation and stress management.[6] Music can help to explore your emotions, reduce anxiety or depression, regulate your mood, strengthen your communication skills, and improve speaking and language skills. It's also stimulates memories and manage pain. Music therapy shown that blood flows more easily when music is played. If we do feel stressed often, mastering a musical instrument can make a massive positive impact in us life. The study of effect of music is called neuromusicology and its show how the nervous system reacts to the brain. It can also reduce the heart rate, lower blood pressure, decrease cortisol levels and increase serotonin and endorphin levels in the blood.[7]

Work related stress if not taken due care can convert into psychological distress among staff nurses taking a heavy toll on the life of a nurse herself and on the life of the patients under care. This indicates that the management of this work related stress is a vital element.[8]

AIM OF STUDY

The primary aim of this study was to assess the effect of music therapy on work related stress among staff nurses. Specifically, determine the possibility of using this method as routine practice to reduce stress levels and prevent burnt out.

RESEARCH METHODOLOGY

Objectives of the study were: 1. To assess the level of work related stress among staff nurses. 2. To assess the effect of music therapy on work related stress among staff nurses. 3. To associate selected demographic variables to work related stress. This study involved collection of data from staff nurses in the target population. Sampling was done using purposive sampling methods. Quantitative Research approach was used in this study. A sample of 60 staff nurses qualifying inclusion criteria were involved in the study. A structured demographic questionnaire was developed to collect data on demographic variables. The questionnaire was administered after obtaining their consent through face-to-face interviews.

Tool was developed in alignment with the research objectives; it included a demographic Performa and a Modified Work Related Stress Assessment Scale seeking information on level of stress. Tool was sent out to experts for obtaining content validity. Test-retest reliability was used to assess reliability of the tool.

Pilot study for this study was conducted from 24.07.2023 to 03.08.2023 in a hospital. 10 samples who met the inclusion criteria were selected by non probability purposive sampling. The researcher introduced themselves to the subjects and obtained consent from participants. Data was collected from each subject using socio-demographic Performa and Modified Work Related Stress Assessment Scale. Data analysis involved descriptive statistics to summarize the demographic characteristics of the study population and level of work related stress. Inferential statistics, such as chi-square tests or logistic regression, were used to identify factors associated with work related stress and explore relationships between variables

RESULTS

The results of this study revealed that in experimental group pre test scores were, 73.3% of staff nurses were had severe stress (score 74-100) and 26.7% staff nurses had moderate stress (score 47 – 73). Post intervention the scores of post test showed that 33.3% staff nurses had mild stress (score 20- 46) and 63.3% (score 47-73) staff nurses had moderate stress and 3.3% (score 74-100) staff nurses had severe stress. Average stress score in pre test was 80.6 which reduced to 66.3 in post test. T-value for this test was 8.4 with 29 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Average stress score in post test is significantly less than that in pre test. It is evident that music therapy is significantly effective in improving the work-related stress among staff nurses.

Description of samples (staff nurses) based on their personal characteristics.

In the experimental group, 40% of the staff nurses had age 21-25 years, 46.7% of them had age 26-30 years, 6.7% of them had age 31-35 years, 3.3% of them had age 36-40 years and 3.3% of

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them had age 41-45 years. In control group, 60% of the staff nurses had age 21-25 years, 30% of them had age 26-30 years, 3.3% of them had age 31-35 years, 3.3% of them had age 36-40 years and 3.3% of them had age 41-45 years.

In experimental group, 50% of them were females and 50% of them were males. In control group, 70% of them were females and 30% of them were males.

In experimental group, 6.7% of them had Auxiliary Nursing & Midwifery, 40% of them had B.Sc. Nursing, 46.7% of them had General Nursing & Midwifery and 6.7% of them had M.Sc. Nursing. In control group, 13.3% of them had Auxiliary Nursing & Midwifery, 43.3% of them had B.Sc. Nursing, 30% of them had General Nursing & Midwifery, 10% of them had M.Sc. Nursing and 3.3% of them had Ph.D. nursing.

In experimental group, 6.7% of them had monthly income up to Rs. 10000, 13.3% of them had monthly income Rs. 10001-20000, 10% of them had monthly income Rs. 20001-30000 and 70% of them had monthly income Rs. 30001-40000.In control group, 10% of them had monthly income up to Rs. 10000, 13.3% of them had monthly income Rs. 10001-20000, 73.3% of them had monthly income Rs. 20001-30000 and 3.3% of them had monthly income Rs. 30001-40000.

In experimental group, 60% of them had joint family and 40% of them had nuclear family. In control group, 56.7% of them had joint family and 43.3% of them had nuclear family.

In experimental group, 80% of them had less than 5 years of work experience, 13.3% of them had work experience 5 to 10 years, 3.3% of them had work experience 10 to 15 years and 3.3% of them had work experience more than 15 years. In control group, 70% of them had less than 5 years of work experience, 23.3% of them had work experience 5 to 10 years, 3.3% of them had work experience 10 to 15 years and 3.3% of them had work experience more than 15 years.

In experimental group, 40% of them had followed recreational activities. In control group, 56.7% of them had followed recreational activities.

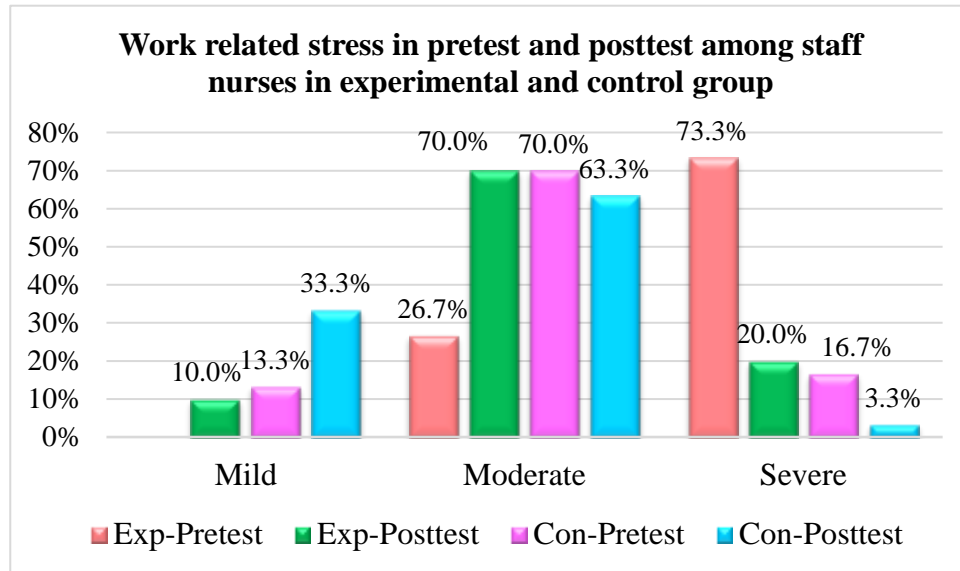Analysis of data related to work related stress among staff nurses

N=30, 30
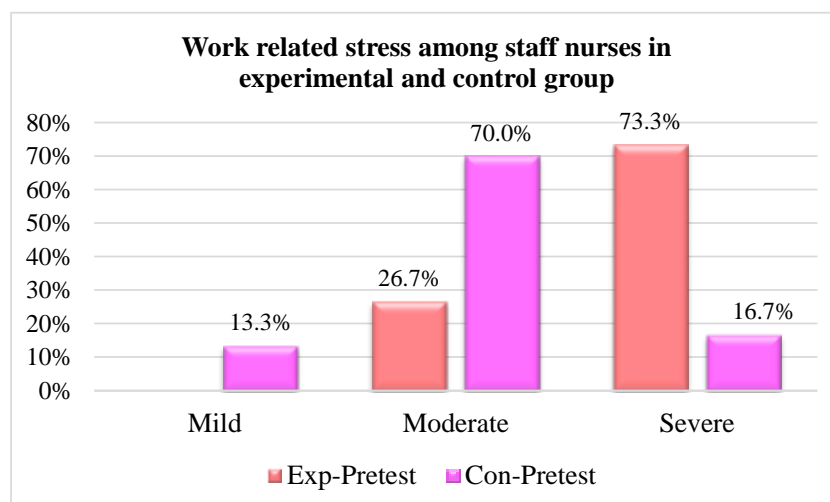
Fig 1: Work related stress among staff nurses

Figure 1, shows that in the experimental group, 26.7% of them had moderate work-related stress (score 47-73) and 73.3% of them had severe work related stress (score 74-100). In control group, 13.3% of them had mild work-related stress (score 20-46), 26.7% of them had moderate work-related stress (score 47-73) and 73.3% of them had severe work-related stress (score 74-100).

Analysis of data related to the effect of music therapy on work related stress among staff nurses

N=30, 30

Fig 2: Effect of music therapy on work related stress among staff nurses

Figure 2, depicts that in experimental group, in pre-test, 26.7% of the staff nurses had moderate work-related stress (score 47-73) and 73.3% of them had severe work-related stress (score 74-100). In post test, 10% of them had mild stress (score 20-46), 70% of the staff nurses had moderate work-related stress (score 47-73) and 20% of them had severe work-related stress (score 74-100). In control group, in pre-test, 13.3% of them had mild work-related stress (score 20-46), 26.7% of them had moderate work-related stress (score 47-73) and 73.3% of them had severe work-related stress (score 74-100). In post test, 33.3% of them had mild work-related stress (score 20-46), 63.3% of them had moderate work-related stress (score 47-73) and 3.3% of them had severe work-related stress (score 74-100).

This indicates that the work-related stress improved remarkably among staff nurses after music therapy.
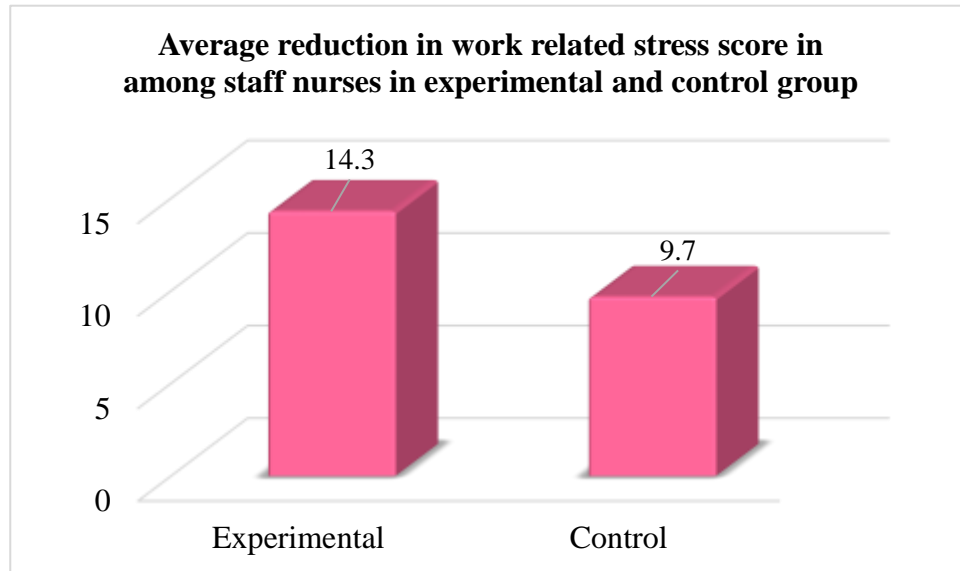
Table 2: Paired t-test for the effect of music therapy on work related stress among staff nurses

N=30, 30

	Mean	SD	T	df	p-value
Pre-test	80.6	10.6	8.4	29	0.000
Post test	66.3	12.1			

Table 4 shows that paired t-test was used for the analysis of effect of music therapy on work related stress among staff nurses. Average stress score in pre-test was 80.6 which reduced to 66.3 in post test. T-value for this test was 8.4 with 29 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Average stress score in post-test is significantly less than that in pre-test. It is evident that music therapy is significantly effective in improving the work-related stress among staff nurses.

N=30, 30

Average reduction in work related stress score in among staff nurses in experimental and control group

Fig 3: Two sample t-test for the effect of music therapy on work related stress among staff nurses

Figure 3, depicts that two sample-test was used for the comparison of average reduction in work related stress among staff nurses in experimental and control group. Average reduction in stress score in experimental group was 14.3 which were 9.7 in control group. T-value for this test was 1.7 with 58 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Average reduction in stress score among staff nurses in control group is significantly less than that in experimental group. It is evident that music therapy is significantly effective in improving the work-related stress among staff nurses.

Analysis of data related to the association between demographic variables and work-related stress among staff nurses

All the p-values are large (greater than 0.05), none of the demographic variables was found to have a significant association with work-related stress among staff nurses.

DISCUSSION

A pre-experimental study was conducted among operating room staff of urology and maxillofacial surgery with aimed to assess the impact of music therapy on stress levels and burnout risk on the operating room staff. The operation theatre staffs are exposed to various constraints such as

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excessive working hours, severe medical conditions and dreadful consequences in case of malpractice. These working conditions may lead to high and chronic levels of stress, which can interfere with medical staff well-being and patients' quality of care. The first was an initial assessment of stress level using the Perceived Stress Scale, second included three music therapy sessions per day over one month, the third was an immediate stress level reassessment.[9]

The results of the study revealed only the interaction time/treatment emerged as supporting a trend toward statistical significance (P = 0.07). PGWBI showed stability in music groups and a clear decline in controls, without significant effects. The researcher concluded that, it is suggested that daily music listening could be implemented to reduce work-related stress.[10]

Similarly in present study the samples were 60 staff nurses who were further divided into experimental & control group (30 each) using simple random sampling. Self structured interview on demographic variables & Modified Work-Related Stress Assessment Scale with score (55-70) for mild stress, (71-85) moderate stress and (86-100) for severe stress. Average stress score in post test is significantly less than that in pre test. It is evident that music therapy is significantly effective in improving the work-related stress among staff nurses.

CONCLUSION

This study concludes that, the music therapy is effective in reducing work related stress and can be made into a routine practice to avoid people suffering from stress generated out of workload. The result showed that the Self-structured interview on demographic variables & Modified Work-Related Stress Assessment Scale with score (55-70) for mild stress, (71-85) moderate stress and (86-100) for severe stress. In Experimental group pre test scores showed that 73.3% of staff nurses were had severe stress (score 74-100) and 26.7% staff nurses had moderate stress (score 47 – 73). Post intervention the scores of post-tests showed that 33.3% staff nurses had mild stress (score 20-46) and 63.3% (score 47-73) staff nurses had moderate stress and 3.3% (score 74-100) staff nurses had severe stress. Average stress score in pre- test was 80.6 which reduced to 66.3 in post-test. T-value for this test was 8.4 with 29 degrees of freedom. Corresponding p-value was small (less than 0.05), the null hypothesis is rejected. Average stress score in post test is significantly less than that in pre test. It is evident that music therapy is significantly effective in improving the work-related stress among staff nurses.

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Authors' Contribution

All the authors have contributed to the planning, implementation and analysis of the research study and its presentation in the form of the manuscript.

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