

## A STUDY TO ASSESS THE EFFECTIVENESS OF LAUGHTER THERAPY ON STRESS AMONG STAFF NURSES WORKING WITH CANCER PATIENTS IN A SELECTED CANCER HOSPITAL AT JAIPUR.

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### ABSTRACT

*Stress is the nonspecific response of the body to any demand, whether it's caused by or results in, pleasant or unpleasant conditions. A study done by the Indian Council for Research on International Economic Relations, found that the Indian Workers in the Healthcare and Pharmaceuticals Industries reported the maximum rise in stress. Research's suggests that the simple act of laughing can be a powerful form of complementary medicine to reduce stress. Objectives of the study: 1. To assess the level of stress among the staff nurses working with cancer patients. 2. To assess the effectiveness of laughter therapy on level of stress among staff nurses working with cancer patients. 3. To associate the level of stress with selected socio demographic variables such as age, gender, religion, marital status, education, year of experience as a nurse, year of experience in oncology, number of death witnessed and measures adopted to reduce stress. Conceptual frame work: The conceptual framework of the study is based on Betty Neumann's Health Care System Model and it has provided a comprehensive framework for achieving the objectives of the study. Methods :The research design selected for this study was Quasi-Experimental Non Equalized Control Group Design (two group pre-test post-test). Non probability convenient sampling technique was adopted to select 60 staff nurses working with cancer patients( 30 experimental group,30 control group). The samples were selected based on the inclusion and exclusion criteria. The technique used to collect demographic variables was self administered questionnaire. Perceived Stress Scale for Oncology Nurses was used to assess the effectiveness of laughter therapy on stress level. Results and Interpretation : Study reveals that, in experimental group the mean post-test level of stress score (28.33%) was lower than the mean pre-test score (40.46%) and the calculated t-value (15.41) was greater than the table value (2.045) in experimental group. In control group the mean post-test level of stress score (34.50%) was slightly greater than the mean pre- test score (34.23%) and the calculated t-value (1.682) was less than the table value (2.045) at 0.05 level of significance. Hence research hypothesis H2 is accepted, i.e. laughter therapy is effective on level of stress among staff nurses working with cancer patients. Conclusion: The study results revealed that laughter therapy is effective on level of stress among staff nurses working with cancer patients..*

**Keywords:** Effectiveness, laughter therapy, stress and staff nurses.

## INTRODUCTION

According to Gaurav Akrani, stress is our body's natural response to various demands, triggered by both positive and negative experiences. When individuals encounter stressful situations, their bodies release chemicals into the blood, providing them with increased energy and strength. While this response can be beneficial in situations of physical danger, such as a fight-or-flight scenario, it can also be detrimental when stress is emotional, and there's no outlet for the heightened energy and strength. This underscores the importance of effectively managing stress to maintain overall well-being.<sup>1</sup>

In a global survey conducted by the Regus Business Tracker in 2009, it was revealed that India experienced the most significant increase in workplace stress after China, with a staggering 57%. This marked a substantial growth over the preceding two years, highlighting the escalating stress levels in Indian workplaces. Additionally, a study by the Indian Council for Research on International Economic Relations found that workers in the healthcare and pharmaceutical industries in India reported the highest rise in stress, reaching 65%. These findings underscore the pressing need to address workplace stress and its impact on employee well-being across various sectors in India.<sup>2</sup>

Excessive workload is a significant contributor to stress, placing individuals under immense pressure for prolonged periods. Within the healthcare sector, nurses are particularly susceptible to work-related stress and burnout due to the demanding nature of their roles. This issue has long been a major concern in the field of occupational health, especially for healthcare workers caring for patients with serious illnesses. The effects of stress on nurses worldwide have been extensively documented in the literature for over four decades. Nurses often work in environments characterized by confinement, time constraints, excessive noise or silence, limited room for error, distressing sights and sounds, and long hours on their feet. These factors contribute to the challenging and stressful nature of their work environments, highlighting the importance of addressing workplace stress and promoting strategies for nurse well-being and resilience.<sup>3</sup>

Laughter therapy stands out as a premier anti-stress measure, perfectly tailored for the stress-laden lifestyle of today. Its affordability and simplicity make it accessible to all, akin to any form of medication or relaxation technique. Scientific research has robustly demonstrated the multifaceted benefits of laughter. It has been shown to effectively lower blood pressure, induce muscle relaxation, enhance blood circulation, elevate oxygen levels in the body, uplift mood,

instill hope, and facilitate improved communication. This comprehensive array of physiological and psychological benefits underscores the effectiveness and versatility of laughter therapy as a potent tool for stress management and overall well-being.<sup>4</sup>

Research indicates that laughter, often overlooked, serves as a potent form of complementary medicine. Laughter yoga, pioneered by Indian physician Dr. Madan Kataria in the 1990s, gained popularity as an exercise regimen. Laughter in this context transcends humor, as individuals laugh without specific reasons, jokes, or comedy. Initially, laughter yoga involves simulated laughter, gradually evolving into genuine laughter through eye contact and playful interactions within a group setting. This practice combines unconditional laughter with yogic breathing techniques, known as pranayama. Laughter yoga's premise lies in the scientific understanding that the body responds similarly to both genuine and simulated laughter, offering equivalent physiological and psychological benefits. Consequently, laughter yoga fosters a sense of well-being, alleviating the minor stresses and strains of daily life. Through its inclusive and transformative approach, laughter yoga emerges as a powerful tool for promoting holistic health and enhancing resilience in individuals..<sup>5</sup>

Need of the study: The American Psychological Association's 2011 survey, as reported by the United Nations, highlights job stress as a prevalent issue among nurses, often referred to as the "twentieth-century disease." Alarming, over 70% of nurses worldwide perceive their jobs as stressful, with more than one in five reporting high levels of stress on a daily basis. A study conducted in New Zealand in 2011 corroborates these findings, revealing that half of the nurses surveyed indicated experiencing frequent or constant stress at work. Moreover, a staggering 80% of nurses believed that their workload had escalated in recent years, exacerbating stress levels. Looking ahead, 46% of nurses anticipated further increases in workload, indicating a concerning trend of heightened stress in the nursing profession. These findings underscore the urgent need for measures to address workplace stress and support the well-being of nurses to ensure the delivery of high-quality patient care.<sup>6</sup>

In the Indian context, findings from the Health & Safety Executive survey conducted between 2004-2007 reveal a concerning trend of increasing work-related stress among oncology nurses. The survey, encompassing 228 oncology nurses, indicated a significant 57% rise in work-related stress levels in India. Moreover, a subsequent survey conducted in 2006 further underscored the severity of the situation, with over 42% of 108 oncology nurses reporting their job as very or extremely stressful. Alarming, a quarter of the nurses identified their job as the primary stressor in their lives. These statistics shed light on the pervasive nature of workplace stress

within the oncology nursing profession in India, highlighting the urgent need for interventions and support mechanisms to mitigate stress and safeguard the well-being of nurses.<sup>7</sup>

Hospital environments are inherently stressful for employees due to the critical nature of the services rendered. This is especially evident for nurses, who face a myriad of job-related demands and are tasked with making precise, time-sensitive decisions that impact human lives daily. Despite holding the profession in high esteem for its intrinsic rewards, nurses frequently encounter various work-related stressors that lead to fatigue, frustration, and ultimately, burnout. Recent surveys have highlighted the prevalence of these stressors among nurses, underscoring the urgent need for interventions to address their well-being. In a notable study by Pipe et al., evidence was presented demonstrating the effectiveness of a laughter therapy program in alleviating stress-related symptoms among nurses. This suggests that incorporating such holistic interventions into healthcare settings can provide much-needed relief and support for nurses coping with the demands of their profession.<sup>8</sup>

Humor serves as a potent means of reframing distressing events and alleviating the adverse effects of stress. By evoking laughter, individuals can create a psychological distance from stressors, thereby gaining a refreshed perspective and a sense of safety. In healthcare settings, humor plays a pivotal role in assisting doctors and nurses in coping with the emotional challenges of caring for patients in pain. Furthermore, it fosters camaraderie and positive relationships among colleagues, enhancing team morale and cohesion. Maintaining a positive attitude at work not only enhances the well-being of individual healthcare workers but also extends to their peers and support staff. A simple smile or a light-hearted exchange can have a ripple effect, infusing the workplace with positivity and contributing to a nurturing and uplifting atmosphere for everyone involved.<sup>9</sup>

Laughter therapy seamlessly integrates unconditional laughter with yogic breathing, known as Pranayama. This innovative approach allows individuals to laugh without relying on humor, jokes, or comedy. Through simulated laughter exercises conducted in a group setting, participants engage in eye contact and embrace childlike playfulness, facilitating the transition to genuine and contagious laughter. The foundation of laughter therapy rests on the scientific understanding that the body responds similarly to both authentic and simulated laughter, providing identical physiological and psychological benefits. Popularized by Indian physician Sir Kataria, laughter therapy gained widespread recognition as an exercise routine aimed at promoting well-being. Kataria elucidates this practice in his book 'Laugh for No Reason,' offering valuable insights into its principles and techniques.<sup>10</sup>

In his article titled "Humour: An Antidote for Stress," Dr. Thomas Sydenham underscores the significant role of humor in promoting health and well-being. He highlights several mechanisms through which humor can effectively alleviate stress, including muscle relaxation, reduction of stress hormones, enhancement of the immune system, pain reduction, cardiac exercise, and regulation of blood pressure and respiration. Dr. Sydenham's insights emphasize the holistic benefits of incorporating humor into daily life as a means of combating stress and fostering overall wellness. By recognizing humor as a powerful antidote to stress, individuals can harness its therapeutic effects to enhance their physical and mental health.<sup>11</sup>

### **PROBLEM STATEMENT**

A STUDY TO ASSESS THE EFFECTIVENESS OF LAUGHTER THERAPY ON STRESS AMONG STAFF NURSES WORKING WITH CANCER PATIENTS IN A SELECTED CANCER HOSPITAL AT JAIPUR  
PURPOSE OF THE STUDY

The purpose of this study is to evaluate the efficacy of laughter therapy in reducing stress levels among staff nurses caring for cancer patients in a specific hospital in Jaipur. Given the emotionally demanding nature of their work, nurses often experience high levels of stress, which can impact their well-being and patient care. By assessing the effectiveness of laughter therapy, the study aims to provide valuable insights into a potentially beneficial intervention for alleviating stress among nurses in oncology settings, thereby improving their quality of life and enhancing patient care outcomes.

### **OBJECTIVES OF THE STUDY**

1. To assess the level of stress among the staff nurses working with cancer patients.
2. To assess the effectiveness of laughter therapy on level of stress among staff nurses working with cancer patients.
3. To associate the level of stress with selected socio demographic variables such as age, gender, religion, marital status, education, year of experience in nursing and in oncology, and number of death witnessed per month.

### **HYPOTHESES OF THE STUDY**

H1: There will be a statistically significant level of stress among staff nurses working with cancer patients as measured by Perceived Stress Scale for Oncology Nurse at  $P < 0.05$

H2: There will be a statistically significant difference in the level of stress among staff nurses working with cancer patients after the laughter therapy as measured by Perceived Stress Scale for Oncology Nurse at  $P < 0.05$

### **OPERATIONAL DEFINITIONS:**

**Laughter Therapy:** Laughter therapy, as defined in this study, involves structured interventions utilizing humor and laughter to enhance the emotional well-being and resilience of staff nurses working with cancer patients.

**Stress:** Stress, in the context of this research, refers to the psychological and emotional strain experienced by staff nurses due to the demanding nature of their work, particularly in caring for cancer patients.

**Staff Nurses:** Staff nurses are registered healthcare professionals responsible for providing direct patient care and support, including administering treatments and medications, monitoring patient progress, and offering emotional support.

**Cancer Patients:** Cancer patients are individuals diagnosed with various forms of cancer who receive medical treatment, care, and support from healthcare professionals such as staff nurses in a selected cancer hospital.

**Effectiveness:** Effectiveness in this study assesses the degree to which laughter therapy interventions reduce stress levels among staff nurses working with cancer patients, as measured by quantitative and qualitative indicators of stress reduction and overall well-being.

## REVIEW OF LITERATURE

A longitudinal study was carried out on 37 nursing staff members at an Indian cancer hospital to investigate stress risk factors and psychiatric morbidity. Participants completed a questionnaire assessing work hours, organization, interpersonal relationships, identification of stressors, and pain management. They also completed two scales measuring stress and psychiatric morbidity: the Nursing Stress Scale and the General Health Questionnaire. The findings revealed that 44% of the staff nurses experienced stress due to their work environment. Data collection and item analysis indicated that stress was primarily linked to inadequate training, insufficient time to address the psychological aspects of care giving, particularly in terminal care situations, and challenges in interpersonal relationships with other medical staff. This study sheds light on the significant impact of work-related factors on nursing staff's mental well-being, highlighting the need for interventions to address these issues and support nurses in managing workplace stress effectively.<sup>12</sup>

A longitudinal study investigated the interplay of biological, psychological, and environmental factors in shaping patient outcomes and the mental and physical health status of 37 nursing staff members at a cancer hospital in the United States. Each participant completed three scales

assessing stress and psychiatric morbidity: the Nursing Stress Scale, the Maslach Burnout Inventory, and the General Health Questionnaire. Item analysis revealed that for 62% of participants, stress primarily stemmed from inadequate training, insufficient time to address the psychological aspects of caregiving, especially in terminal care scenarios, and challenges in relationships with other medical staff. Multiple correspondence analyses suggested that in the face of stress, risk factors for professional burnout included high psychiatric symptomatology, lack of information at the time of diagnosis, perceived poor health, and difficulties in relationships with patients and their families. This study underscores the complex interaction of various factors influencing the well-being of nursing staff in oncology settings and highlights the importance of addressing these factors to support the mental health and resilience of healthcare professionals.<sup>13</sup>.

In a longitudinal study conducted in the United States, the interaction of biological, psychological, and environmental factors influencing patient outcomes and the mental and physical health status of 37 nursing staff members at a cancer hospital was examined. Each participant completed three scales aimed at measuring stress and psychiatric morbidity: the Nursing Stress Scale, the Maslach Burnout Inventory, and the General Health Questionnaire. Item analysis revealed that 62% of participants identified stress as primarily stemming from inadequate training, insufficient time to address the psychological aspects of care giving, particularly in terminal care situations, and challenges in relationships with other medical staff. Furthermore, multiple correspondence analyses indicated that in the presence of stress, risk factors for professional burnout included high psychiatric symptomatology, lack of information at the time of diagnosis, perceived poor health, and difficulties in relationships with patients and their families. This study underscores the complex interplay of factors influencing the well-being of nursing staff in cancer care settings and highlights the importance of addressing these factors to prevent burnout and promote overall staff health and resilience.<sup>14</sup>

A comparative study was conducted on rural Midwestern cancer patients to evaluate the effectiveness of humor therapy on natural killer (NK) cell activity. The study comprised 33 cancer patients, divided into an Experimental group, exposed to humorous videos, and a Control group, shown tourism videos. Assessment parameters included self-reported stress and arousal using the Stress Arousal Checklist Scale, mirthful laughter measured by the Humor Response Scale, and immune function analyzed through the Chromium Release Natural Killer Cell Cytotoxicity Assay. Post-intervention analysis revealed a significant increase in immune

response scale ( $P=.037$ ) and changes in NK cell activity ( $r_{16}=.744$ ;  $P=001$ ) in the Experimental group compared to the Control group ( $P=.04$ ). Notably, stress levels decreased by 58% in the humor group ( $U_{32}=215.5$ ;  $P=.004$ ), while no change was observed in the Control group. These findings highlight the stress-reducing effects of laughter and its positive impact on NK cell activity, suggesting humor therapy as a promising adjunctive intervention for cancer patients.<sup>15</sup>

## METHODOLOGY

This section deals with the methodology adopted for the study. For any research work, the methodology of the investigation is of vital importance. Research methodology is a way to systematically solve research problems.

**Research Approach:** Evaluative approach is an applied form of research that involves finding out how well a program.

**Research Design:** Quasi-Experimental Research Design involves the manipulation of independent variables to observe the effect on dependent variable.

**Variables under Study:**

**Independent variables:** In this study the Independent variable is laughter therapy.

**Dependent variables:** In this study the Dependent variable is stress among staff nurses working with cancer patients in a selected cancer hospital at Jaipur.

**Research Setting:** The present study was done in Bhagwan Mahaveer Cancer Hospital and Research Centre in Jaipur.

**Population:** The entire group of individuals who meet the criteria for inclusion in the study, which would be all staff nurses working with cancer patients in the Bhagwan Mahaveer Cancer Hospital and Research Centre at Jaipur.

**Target Population:** The staff nurses who are experiencing stress while working with cancer patients in the Bhagwan Mahaveer Cancer Hospital and Research Centre at Jaipur.

**Accessible Population:** It would include those staff nurses in the Bhagwan Mahaveer Cancer Hospital and Research Centre at Jaipur who are available and willing to participate in the assessment of laughter therapy's effectiveness on stress.

**Sample:** In this study Sample were staff nurses working with cancer patients in HCG cancer



hospital.

**Sample size:** The sample size for the present study was 60 staff nurses working with cancer patients in Bhagwan Mahaveer Cancer Hospital and Research Centre, Jaipur.

**Sampling Technique:** Non probability, Convenient Sampling was used as sampling technique in the present study.

**Inclusion Criteria:**

- Staff nurses currently employed at the Bhagwan Mahaveer Cancer Hospital and Research Centre in Jaipur.
- Nurses who work directly with cancer patients.
- Nurses who report experiencing stress related to their work with cancer patients.
- Willingness to participate in the study and undergo laughter therapy sessions.

**Exclusion Criteria:**

- Nurses not employed at the Bhagwan Mahaveer Cancer Hospital and Research Centre in Jaipur.
- Nurses who do not work directly with cancer patients.
- Nurses who do not report experiencing stress related to their work with cancer patients.
- Inability or unwillingness to participate in the study or undergo laughter therapy sessions.

## RESULTS AND ANALYSIS

Table 1: Frequency & percentage distribution of the samples N=60 (n-30, n-30)

| Sl No: | Variables             | Category        | Experimental group |                | Control group |                |
|--------|-----------------------|-----------------|--------------------|----------------|---------------|----------------|
|        |                       |                 | Frequency (f)      | Percentage (%) | Frequency (f) | Percentage (%) |
|        | Age (In year)         | 30              |                    | 66             |               | 00             |
|        |                       | 40              |                    | 33             |               | 66             |
|        |                       | 50              |                    | 00             |               | 33             |
|        | Gender                | Male            |                    | 66             |               | 66             |
|        |                       | Female          |                    | 33             |               | 33             |
|        | Religion              | Hindu           |                    | 00             |               | 00             |
|        |                       | Muslim          |                    | 66             |               | 00             |
|        |                       | Christian       |                    | 33             |               | 00             |
|        |                       | Others          |                    |                |               |                |
|        | Education             | M               |                    | 00             |               | 66             |
|        |                       | B.Sc. (N)       |                    | 33             |               | 33             |
|        |                       | B.Sc. (N)       |                    | 66             |               | 00             |
|        | Marital status        | Single          |                    | 00             |               | 66             |
|        |                       | Married         |                    | 00             |               | 33             |
|        |                       | Widow/Widower   |                    |                |               |                |
|        | Experience as a nurse | 1 month- 3 year |                    | 66             |               | 66             |
|        |                       | 3-6 year        |                    | 66             |               | 00             |
|        |                       | 6-11 year       |                    | 33             |               | 33             |

|                           |  |               |  |    |  |    |
|---------------------------|--|---------------|--|----|--|----|
|                           |  | ove 11 year   |  |    |  | 00 |
| Experience in oncology    |  | month- 3 year |  | 33 |  | 00 |
|                           |  | year          |  | 33 |  | 66 |
|                           |  | 1 year        |  | 33 |  | 66 |
|                           |  | ove 11 year   |  |    |  | 6  |
| Death witnessed per month |  |               |  | 33 |  | 00 |
|                           |  |               |  | 00 |  | 66 |
|                           |  |               |  | 00 |  | 33 |
|                           |  | ove 9         |  | 6  |  | 00 |

The table no–1 presents a detailed analysis of the frequency and percentage distribution of samples across multiple variables in both the experimental and control groups, each comprising 30 individuals. Statistical values such as frequency and percentage are meticulously recorded for variables including age, gender, religion, education, marital status, experience as a nurse, experience in oncology, and the number of deaths witnessed per month. Notable findings include a majority of individuals in the experimental group aged 21-30 (66.66%) and females (63.33%), while in the control group, the majority are also aged 21-30 (60.00%) but with a higher proportion of females (83.33%). Furthermore, the majority of participants in both groups belong to the Hindu religion (40.00% in experimental, 50.00% in control). Additionally, the majority of participants in both groups are single (60.00% in experimental, 66.66% in control) and have either 6 months to 3 years or 4-7 years of experience as a nurse. These findings underscore significant demographic and experiential differences between the two groups, emphasizing the importance of considering these factors in interpreting research outcomes.

Table-2: Distribution of pre- test and post-test mean score of level of stress among staff nurses working with cancer patient (n = 30, n = 30)

|           | Maximum score | Experimental group |       |          | Control group |       |         |
|-----------|---------------|--------------------|-------|----------|---------------|-------|---------|
|           |               | Mean               | SD    | Mean (%) | Mean          | SD    | Mean(%) |
| Pre-test  | 100           | 40.47              | 1.316 | 40.48    | 34.25         | 1.28  | 34.25   |
| Post-test | 100           | 28.32              | 1.016 | 28.35    | 34.52         | 1.244 | 34.52   |

Table 2 outlines the distribution of pre-test and post-test mean scores representing the level of stress among staff nurses caring for cancer patients, with a sample size of 30 individuals in both the experimental and control groups. The maximum score for each test is set at 100. In the Experimental group, the mean pre-test score is 40.47 with a standard deviation (SD) of 1.316, while the mean post-test score is slightly lower at 28.32 with an SD of 1.016. Conversely, in the Control group, the mean pre-test score is 40.48 with an SD of 1.28, whereas the mean post-test score is 34.52 with an SD of 1.244. These findings suggest a notable decrease in stress levels post-intervention within the Experimental group, contrasting with marginal changes observed in the Control group.

Table-3: Comparison of pre-test and post- test score of level of stress in Experimentalgroup (n=30)

| Level of stress | Category | Pre-test  |               | Post-test |                | t value |
|-----------------|----------|-----------|---------------|-----------|----------------|---------|
|                 |          | Frequency | Percentag (%) | Frequency | Percentage (%) |         |
| Mild stress     | 0 – 24   | 3         | 10.00         | 15        | 50.0           | 15.42*  |
| Moderate stress | 25 – 49  | 20        | 66.66         | 15        | 50.0           |         |
| Severe stress   | 50 – 74  | 9         | 30.00         | 0         | 0              |         |
| Extreme stress  | Above 75 | 0         | 0             | 0         | 0              |         |
| Total           |          | 30        | 100           | 30        | 100            |         |

\*significant at 95% confidence level

t<sub>29</sub> = 2.045,df=29

Table 3 presents a comparison of pre-test and post-test scores reflecting the level of stress within the Experimental group, with a sample size of 30 individuals. The level of stress is categorized into four categories: mild stress (0-24), moderate stress (25-49), severe stress (50-74), and extreme stress (above 75). In the pre-test, 10.00% of participants experienced mild stress, 66.66% experienced moderate stress, and 30.00% experienced severe stress, while no individuals reported extreme stress. After the intervention, there was a notable shift, with 50.0% experiencing mild stress, 50.0% experiencing moderate stress, and no individuals reporting severe stress. The statistical analysis reveals a significant difference in stress levels pre and post-intervention ( $t_{29} = 2.045$ ,  $df=29$ ,  $p<0.05$ ), indicating an effective reduction in stress levels within the Experimental group at a 95% confidence level.A

Table-4: Comparison of pre-test and post- test score of level of stress in Control group. (n=30)

|                 | Category | Pre-test      |                | Post-test     |                | Paired't' Value |
|-----------------|----------|---------------|----------------|---------------|----------------|-----------------|
|                 |          | Frequency (f) | Percentage (%) | Frequency (f) | Percentage (%) |                 |
| Mild stress     | 0 – 24   | 8             | 26.66          | 15            | 50.00          | 1.684           |
| Moderate stress | 25 – 49  | 15            | 50.00          | 12            | 40.00          |                 |
| Severe stress   | 50 – 74  | 7             | 23.33          | 3             | 10.0           |                 |
| Extreme stress  | Above 75 | 0             | 0              | 0             | 0              |                 |
| Total           |          | 30            | 100            | 30            | 100            |                 |

\*significant at 95% confidence level

$t_{29} = 2.045$ ,  $df=29$

Table 4 illustrates a comparison of pre-test and post-test scores reflecting the level of stress within the Control group, with a sample size of 30 individuals. Stress levels are categorized into four groups: mild stress (0-24), moderate stress (25-49), severe stress (50-74), and extreme stress (above 75). In the pre-test, 26.66% of participants experienced mild stress, 50.00% experienced moderate stress, and 23.33% experienced severe stress, while no individuals reported extreme stress. After the intervention, there was a shift, with 50.00% experiencing mild stress, 40.00%

experiencing moderate stress, and 10.0% experiencing severe stress. The paired t-test yielded a value of 1.684, indicating a significant difference in stress levels pre and post-intervention ( $t_{29} = 2.045, df=29, p<0.05$ ), highlighting a noteworthy impact of the intervention within the Control group at a 95% confidence level.

Table- 5: Unpaired t test showing the significant difference between post-test score of level of stress in Experimental group and Control group. (n = 30, n =30)

| Group                    | Mean score | SD    | Mean difference | Unpaired‘t’ value |
|--------------------------|------------|-------|-----------------|-------------------|
| Experimental group       | 28.32      | 1.016 | 6.00            | 2.12              |
| Control group            | 34.52      | 1.244 |                 |                   |
| $t_{58} = 2.002, p<0.05$ |            |       |                 |                   |

Table 5 presents the results of an unpaired t-test indicating a significant difference between the post-test scores of stress levels in the Experimental group and the Control group, each with a sample size of 30 individuals. In the Experimental group, the mean post-test score is 28.32 with a standard deviation (SD) of 1.016. The Control group, on the other hand, has a higher mean post-test score of 34.52 with an SD of 1.244. The mean difference between the two groups is 6.00. The unpaired t-value is calculated to be 2.12, signifying a significant difference in post-test stress levels between the Experimental and Control groups at a 95% confidence level.

Table-6: Association of pre test level of stress among staff nurses working with cancerpatients with selected socio-demographic variables. N = 60

| Variables | Category | Sample | Level of stress |       |          |       |        |       | $\chi^2$ | P value      |
|-----------|----------|--------|-----------------|-------|----------|-------|--------|-------|----------|--------------|
|           |          |        | Mild            |       | Moderate |       | Severe |       |          |              |
|           |          |        | F               | %     | F        | %     | F      | %     |          |              |
| Age group | 21-30    | 38     | 5               | 13.15 | 24       | 63.15 | 9      | 23.68 | 0.272    | P>0.05<br>NS |
|           | 31-40    | 9      | 2               | 22.22 | 5        | 55.55 | 2      | 22.22 |          |              |
|           | 41-50    | 13     | 4               | 30.76 | 6        | 46.15 | 3      | 23.07 |          |              |

|                        |              |    |   |       |    |       |    |       |        |               |
|------------------------|--------------|----|---|-------|----|-------|----|-------|--------|---------------|
| Gender                 | Male         | 16 | 5 | 31.25 | 8  | 50.00 | 3  | 18.75 | 9.106  | P<0.05<br>S*  |
|                        | Female       | 44 | 8 | 18.18 | 25 | 56.81 | 11 | 25.00 |        |               |
| Religion               | Hindu        | 27 | 4 | 14.81 | 17 | 62.96 | 6  | 22.22 | 1.004  | P>0.005<br>NS |
|                        | Muslim       | 8  | 2 | 25.00 | 5  | 62.5  | 1  | 12.5  |        |               |
|                        | Christian    | 25 | 6 | 24.00 | 13 | 52.0  | 6  | 24.0  |        |               |
| Education status       | GNM          | 26 | 4 | 15.38 | 19 | 73.07 | 3  | 11.53 | 0.68-0 | P>0.005<br>NS |
|                        | BSc(N)       | 17 | 3 | 17.64 | 12 | 70.58 | 2  | 11.76 |        |               |
|                        | PB B.Sc. (N) | 17 | 4 | 23.52 | 10 | 58.82 | 3  | 17.64 |        |               |
| Marital status         | Single       | 38 | 4 | 10.52 | 22 | 57.89 | 12 | 31.57 | 0.218  | P>0.05<br>NS  |
|                        | Married      | 22 | 8 | 36.36 | 12 | 54.54 | 2  | 9.09  |        |               |
| Experience in nursing  | 6mth -3yrs   | 22 | 4 | 18.18 | 12 | 4.54  | 6  | 27.27 | 4.224  | P>0.0<br>5NS  |
|                        | 4-7yrs       | 17 | 3 | 17.64 | 10 | 58.82 | 4  | 23.52 |        |               |
|                        | 8-11yrs      | 8  | 2 | 25.00 | 4  | 50    | 2  | 25    |        |               |
| Experience in oncology | 6mth -3yrs   | 28 | 6 | 21.42 | 13 | 46.42 | 9  | 32.14 | 1.757  | P>0.0<br>5NS  |
|                        | 4-7yrs       | 21 | 2 | 9.52  | 16 | 76.19 | 3  | 14.28 |        |               |
|                        | 8-11yrs      | 9  | 3 | 33.33 | 3  | 33.33 | 3  | 33.33 |        |               |
|                        | Above 11yrs  | 2  | 0 | 0     | 2  | 100   | 0  | 0     |        |               |
| Death witnessed        | 1-3          | 19 | 2 | 10.52 | 8  | 42.10 | 9  | 47.36 | 7.887  | P>0.00<br>5NS |
|                        | 4-6          | 23 | 3 | 13.04 | 14 | 60.86 | 6  | 26.08 |        |               |
|                        | 7-9          | 13 | 1 | 7.69  | 9  | 69.23 | 3  | 23.07 |        |               |
|                        | Above 9      | 05 | 1 | 20.00 | 3  | 60    | 1  | 20.00 |        |               |

Table 6 presents an analysis of the association between pre-test stress levels among staff nurses working with cancer patients and various socio-demographic variables in a sample of 60 individuals. While no significant associations are found between stress levels and variables such as age group, religion, education status, marital status, experience in nursing/oncology, and the number of deaths witnessed ( $\chi^2$  values  $> 0.05$ ), a notable finding emerges regarding gender ( $\chi^2 = 9.106, p < 0.05$ ). This significant association suggests that gender may influence pre-test stress levels, with a higher proportion of males experiencing moderate stress compared to females. Overall, the table provides valuable insights into the complex interplay between socio-demographic factors and stress levels among staff nurses in oncology settings.

**NURSING IMPLICATION:** The finding of the study can be used in the following areas of nursing profession.

**Nursing Education:** Incorporating laughter therapy techniques into nursing curricula can enhance nursing education. By teaching student nurses about the benefits of laughter therapy in stress management, educators can equip them with holistic approaches to patient care. Additionally, providing opportunities for student nurses to observe and participate in laughter therapy sessions during clinical placements can deepen their understanding of its application in oncology settings.

**Nursing Practice:** The findings of this study underscore the importance of integrating complementary therapies, such as laughter therapy, into nursing practice. Staff nurses can incorporate laughter therapy techniques into their care routines for cancer patients to alleviate stress and improve overall well-being. Additionally, nurses can collaborate with other healthcare professionals, such as psychologists and social workers, to develop comprehensive care plans that include laughter therapy as a complementary intervention for managing stress among both patients and healthcare providers.

**Nursing Research:** This study highlights the need for further research exploring the efficacy of laughter therapy in reducing stress among staff nurses working with cancer patients. Future research endeavors could focus on investigating the long-term effects of laughter therapy on nurse well-being, patient outcomes, and healthcare organization dynamics. Additionally, comparative studies examining the effectiveness of laughter therapy in relation to other stress management interventions can provide valuable insights into its role in nursing practice.

**Nursing Administration:** Nursing administrators can play a crucial role in facilitating the integration of laughter therapy into the organizational culture of cancer hospitals. By supporting training



programs and workshops on laughter therapy for nursing staff, administrators can foster a positive work environment that prioritizes staff well-being. Furthermore, administrators can allocate resources for the implementation of laughter therapy programs and evaluate their impact on nurse satisfaction, retention rates, and patient care outcomes.

## **CONCLUSION**

The study assessing the effectiveness of laughter therapy on stress among staff nurses working with cancer patients in a selected cancer hospital at Jaipur illuminates the potential of complementary therapies in nursing practice. The findings underscore the significance of incorporating laughter therapy into holistic care approaches for both healthcare providers and patients. By demonstrating a notable reduction in stress levels among staff nurses post-intervention, the study highlights the tangible benefits of laughter therapy in promoting well-being within oncology settings. Moreover, the research emphasizes the importance of addressing the psychosocial needs of healthcare providers, particularly in high-stress environments like cancer care. Moving forward, it is imperative for nursing education, practice, research, and administration to recognize and integrate laughter therapy as a valuable tool for stress management and overall wellness. Through collaborative efforts, healthcare institutions can cultivate environments that prioritize the mental and emotional health of nurses, thereby enhancing the quality of patient care and fostering a culture of holistic well-being in healthcare settings.

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