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HUMOR IN HEALING: A NOVEL APPROACH TO ADDRESSING BURNOUT THROUGH LAUGHTER YOGA IN PSYCHIATRIC NURSING

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Abstract
Nurses face significant stress and demanding situations in their roles, making them highly susceptible to tension, stress, and burnout syndromes. Among nurses, those working in psychiatric units are particularly vulnerable to burnout syndromes. Psychiatric nursing is considered one of the most stressful healthcare occupations due to its unique working environment, which includes locked ward entrances, the potential for patient conflicts leading to physical and mental violence, and the need to restrain patients to ensure safety.
Burnout is a multi-dimensional construct characterized by emotional exhaustion, depersonalization, and diminished personal competence. It is a common response to chronic exposure to workplace stressors, encompassing feelings of cynicism, inefficacy, and exhaustion. Burnout is not the result of a single factor but rather a combination of factors, making it a complex phenomenon. When there is a significant discrepancy between the nature of the job and the individual performing it, burnout can occur.
Understanding and addressing burnout among psychiatric nurses is crucial for both the well-being of healthcare professionals and the quality of patient care. This study explores the factors contributing to burnout among psychiatric nurses and aims to identify strategies for preventing and managing burnout in this specialized field of nursing.

Keywords: psychiatric nursing, burnout, stress, healthcare, mental health, healthcare professionals

1. Introduction:

Nurses have great responsibilities and cope with many demanding situations. They're greatly vulnerable to growing tension, stress and burnout syndromes than other health care professionals. Unfortunately, many nurses in different parts of the world are exposed today to burnout syndromes particularly among psychiatric nurses compared to nurses in other units [1] .Psychiatric nursing is appeared as one of the most tense occupations within the world, because of unusual working environment which includes locked ward entrances as a result, the potential for patient disagreement with the associated risk of each physical and mental danger violence perpetrated by aggressive patients and being necessary to restrain patients to protect themselves or others from harm[2].
Burnout described as “a multi-dimensional construct comprised of emotional exhaustion, depersonalization and diminished personal competence that occurs among those who do „people work“ of some kind” [3]. Burnout is a final response that occurs as a result of chronic exposure to stressors from the job characterized by three magnitudes which are cynicism, inefficacy, and exhaustion. This implies that burnout is characterized by a variety of factors not just one single symptom so irregular day or bad day at work can lead to the individual suffering from burnout.

Burnout will be expected when inconsistency occurs between the type of job performed and the type of person performing the job. The widening gap between the individual and demands from the job becomes too great finally leading to burnout [4].

The physiology of humor is known in science as Gelotology which explain the emotional response to humor is mirth and the behavior is laughter. Laughter is a psycho-physiological response to a stimulus that leads to the production of muscle contractions, facial expressions, and other neurophysiologic processes. The physiological changes have been accompanied by psychological benefits of laughter, consisting of reduction in stress, anxiety and tension, elevation of mood, self-esteem, energy and vitality, enhancement of memory, creative thinking and problem solving, improvement in interpersonal relationships, increase in friendliness and helpfulness, sense of relaxation and effects on pain thresholds. Also promotion of psychological well-being [5, 6].

Laughter has positive, scientific physiological and psychological effects on certain aspects of health. In the clinical setting, laughter interventions can be used with preventive intent or as a complementary or alternative therapeutic option to other established therapeutic strategies [5]. Reactions to humor, including laughter, involve a variety of different systems of the body [6].

As science and technology improves, it has been found that negative emotions can contribute to an increased risk in cardiovascular disease. Positive emotions, specifically mirthful laughter, would cause constructive effects on the different systems of the body [7]. Mirthful laughter and humor may serve as an important skill for the promotion of vascular health. Sense of humor maybe associated with fewer symptoms of depression and anxiety and related to enhanced quality of life. Hyperinflation of the lungs due to induction of spontaneous laughter is one of the negative effects of humor [8]. Exposure to comedy video elevates the threshold for physical discomfort, and the threshold for physical discomfort decreased after exposure to tragedy [9, 10].

Stressful life situations including workplace burnout can lead to negative effects on various aspects of health, including suppression of the immune system, causing a person to be sick or for a disease while the laughter therapy shown to be a useful, cost-effective, and easily-accessible intervention, the ability to see the funny side in stressful situations may enable one to cope with stress[11].The Association for Applied and Therapeutic Humor defines therapeutic humor as “any intervention that promotes health and wellness by stimulation a playful discovery, expression, or pleasure of the irrationality or incongruity of life‟s situations” Also therapeutic humor can defined by The American Cancer Society as “the complementary method use to promote health, cope with illness and relief of physical or emotional pain or stress [12].

Laughter therapy in nursing practice helps to relive the work stress that associated with low pay offered, discontinuous shortages of nurses, high staff turnover work overload and additional stresses associated at workplace [11].Laughter Yoga (LY) is a mixture of simulated laughter with Yoga breathing exercises that is typically carried out in a group setting. It consists of clapping, arm and leg movement, deep breathing exercises, gentle neck and shoulder stretches as well as facilitated laugh and smile exercises. It can enhance mood, life satisfaction, and subjective wellbeing and reduce anxiety and stress in healthy participants. Evidence to support positive health-related effects of LY is still limited, although some study suggests LY may be a useful therapeutic intervention. Other study has demonstrated that LY is a safe, inexpensive, available and low-intensity form of physical activity which has the potential to improve mood and decrease the anxiety [13].

The effect of laughter on the stress hormones: epinephrine, nor epinephrine, and cortisol is very important because it is theorized that laughter decrease stress hormones, this is one mechanism that might explain the proposed connection between laughter and immune function, and improved health

outcomes [14]. Laughter triggers the release of a mixture of happy chemicals that boosts the immune responses. Laughter diminishes the secretion of cortisol and epinephrine, while enhancing immune reactivity. Laughter boosts secretion of growth hormone. Laughter stimulates circulation and aids muscle relaxation, both of which help reduce some of the physical symptoms of stress. Laughter can provide a positive respite from the adverse emotional effects associated with illness by improving mood, reducing depression and improving life satisfaction and quality of life [15, 16].

1.1. Significance of the study:

Exclusively, the prevalence rates of burnout syndrome among the psychiatric nurses ranging from average to high [17]. Caring for both the mental and physical health of the psychiatric patient is especially important for psychiatric nurses. Additionally, psychiatric nurses are generally considered as a group at risk for excessive stress and burnout because they are in constant interaction and frequent interpersonal contact with psychiatric clients and their families.

Job burnout has negative impacts onorganizations in terms of work performance, job dissatisfaction, absenteeism and turnover. Therefore, it was important to assess the effect of laughter yoga therapy on the level of job burnout among psychiatric nursing working in mental health hospitals to improve their mental health, and help to deal positively with their burnout syndromes.

1.2. Purpose of the study

The purpose of the study is to investigate the effectiveness of laughter yoga therapy on burnout syndromes among psychiatric nurses.

1.3. Hypothesis

Psychiatric nurses who participate in the laughter therapy intervention (experimental group) will have lower mean score of burnout post therapy (intervention) than the psychiatric nurses who don't receive the intervention (control group).

2. Methodology

2.1. Research design: -

A quasi experimental (experimental and control group pre/ posttest) research design was used to achieve the purpose of the study.(Quasi- experimental design introduces some research control when full experimental rigor is not possible).

2.2. Research setting:

The study was conducted at Psychiatric Mental Health and Addiction Treatment Hospital at Menofia Governorate, Egypt

2.3. Sample Size:

A sample was selected to be representative to the target population from nurses working at psychiatric mental health hospital. Purposive sample of nurses (64). A42 female and 22 male present during period of data collection, divided into two groups; experimental group (n = 32 nurses (21 female, 11 male) and control group (n = 32 nurses, 21 female, 11 male) selected randomly in each group and fulfills the following inclusion and exclusion criteria.

Note :-(Total number of nurses was 72 nurses only 64 have burnout after complete Maslach Burnout Inventory Human Services Survey, 8 nurses not have burn out excluded from the sample).

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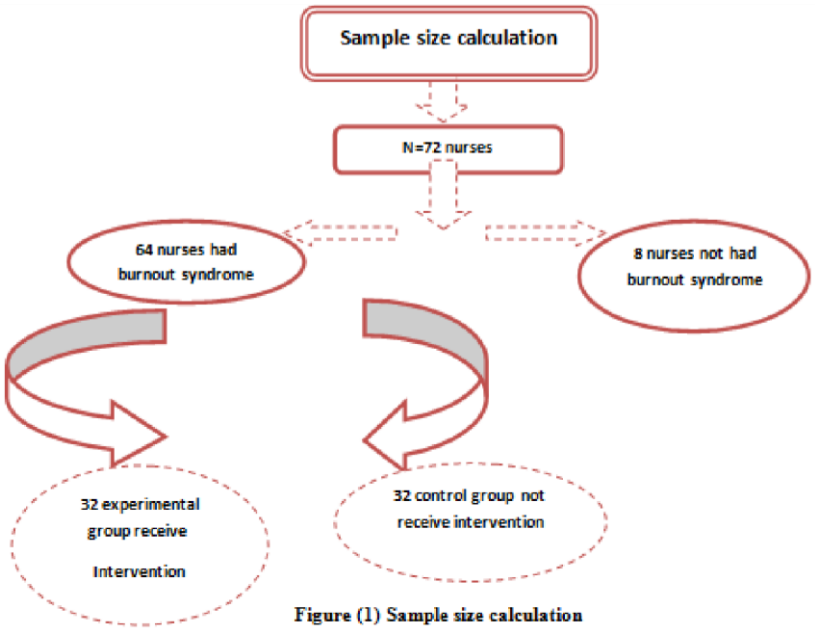

Figure (1) Sample size calculation

2.3.1. Inclusion Criteria

- Both Male & Female Nurses.
- Nurses between the age group of 23yrs-50yrs.
- Nurses caring for psychiatric patients for more than six months.

2.3.2. Exclusion Criteria

- Nurses who are not willing to participate.
- Not available at the time of study.
- Nurses not have burn out.

2.4. Research instruments:-

To achieve the purpose of the study two instruments were used for data collection as following:-

Instruments one: It consisted of two main parts:

Part 1: constructed by the researchers to collect relevant socio demographic characteristics and personal data of the studied nurses such as, age, sex, religious, marital status ,number of children and level of education, in additions to occupational data as working years in psychiatric department, number of days/ hours worked per week .

Part 2: Maslach Burnout Inventory Human Services Survey (MBI-HSS): It developed by Maslach, Jackson, S. E., &Leiter[18]and used by Khamisa, Peltzer, Ilic& Oldenburg[19]and translated into Arabic by the researchers and back into English again.MBI is a standardized tool for measuring burnout. It‟s a 22 items in the form of statements based on personal feelings and attitudes. This survey consists of three subscales to measure burnout which include, Emotional Exhaustion (EE) subscale has 9 items, Depersonalization (DP) subscale has 5 items and the Personal Accomplishment (PA) subscale has 8 items. Feelings of EE are considered as the trademark of burnout syndrome. All the 22 items of this tool are measured across the seven-point Likert scale indicating the frequency of characteristic symptoms from 0, never to 1, few times a year ; 2, once a month or less, 3, few times a month to 4, once a week; 5, few times a week to lastly 6, every day. Maslach characterizes three levels of burnout: low, moderate and high. A high degree of burnout is reflected in high scores on the EE and DP subscales and in low scores on the PA subscale, which is rated inversely.

- **Emotional Exhaustion** scores of 0 to 18 are considered low burnout, scores of 19 to 26 are moderate, and score of 27 or greater are high.
- **Depersonalization** scores of 0 to 5 are considered low burnout, scores of 6 to 9 are moderate, and scores of 10 or greater are high burnout
- **Personal Accomplishment** scores of 0 to 33 are considered high burnout, scores of 34 to 39 are moderate, and scores of 40 or greater are low.

The final scores of each group of items related to Emotional Exhaustion, the depersonalization and the personal accomplishment was then divided into "low, moderate and high " the score were rated as follows: persons with high score for emotional exhaustion, depersonalization and low score on the personal accomplishment tend to have high level of burnout. Persons with moderate score on three subscales tend to have a moderate level of burnout. While low level of burnout is reflected in persons with low score for emotional exhaustion, depersonalization and high score for emotional exhaustion, high score on the personal accomplishment.

Instrument two: A Laughter Yoga attitudes and perceptions survey. It developed by Bennett et al[20]and used by Khamisa, Peltzer, Ilic& Oldenburg[19] and modified by the researchers to assess psychiatric nurses‟ perception and attitude toward laughter yoga therapy. This survey contains a 7 items in the form of statements based on personal feelings and attitudes. All the 7 items of this survey are measured across three point likert scale as agree, neutral, and disagree. Each item was rated independently. The scores of each item were summed up and then converted into a percent score.

2.4.1. Validity of the instruments:-

These instruments were tested for validity (face and content) through distribution of the instruments to jury (panel) of five experts in the field of nursing. They were asked to examine the questionnaires for content coverage, clarity, wording, length, format, relevance and completeness and overall appearance. Based on experts‟ comment and recommendations minor changes had been made for face and content validation.

The tools were modified on these experts‟ opinions. A helpful tool in determining content validity is the test blueprint. A test blueprint can help the researchers and panel to determine if items in the instrument represent all basic content that must be represented.

2.4.2. Reliability of the instruments:-

Test- retest reliability was applied by the researchers for testing the internal consistency of the tools. It was done through the administration of the same tools to the same participants under similar condition on two or more occasions. Score from repeated testing were compared. The tools proved to be strongly reliable at 0.87for tool two and also The MBI-HSSis a reliable measure of burnout among nurses with Cronbach alpha coefficients exceeding 0.73 for all subscales (emotional exhaustion 0.79, depersonalization 0.76 and personal accomplishment 0.73).

2.5. Ethical considerations:-

1- The study was approved by the IRB (Institute Research Board) of the faculty of nursing before conducting the research.

2- A written approved was obtained from the setting before conducting the study.

3- Informed consent was obtained from all nurses after providing an appropriate explanation the purpose nature of the study. The confidentiality and anonymity of the individual responses, volunteer participation and right to refuse participating in the study were emphasized.

4- After completing the intervention and taken the posttest from two groups the control group provided with two laughter yoga sessions and guide booklet for theoretical parts and guide Videos for clinical parts and encourage them to apply it regularly at twice per week to reduce burnout syndromes

2.6. A pilot study:-

A pilot study was conducted on eight psychiatric nurses to test the clarity, applicability of the instruments and
to estimate the time needed for data collection. On the basis of the pilot results the necessary modifications were done accordingly.

2.7. Data collection Method:

- Formal permission was obtained from the head of the institution.
- After obtaining the informed consent from the psychiatric nurses and assuring about the confidentiality of the information obtained, the researchers administered the pretest questionnaire to the psychiatric nurses to assess the level of burn out for 30 minutes.
- Based upon the result; Firstly, purposive sample technique was used to select only nurses who suffer from burnout and agreed to participate in the study. Secondary, the selected sample was divided into experimental and control group using simple random sample.
- The laughter therapy will be administered for 30 minutes per day for one week and repeated for 3 months to the experimental group only.
- Post test administered two times, firstly immediate after complete laughter therapy to both the control and experimental group and secondary, after three months to experimental group for follow up the nurses to assure the continuity of the application of laughter therapy. In this session the researchers follow the nurses for other 3 months (two days per month for each group).

2.8. Procedure:-

An official approval was obtained from the director of Psychiatric Mental Health hospital at Menofia Governorate. The questionnaires used in the study were administered by the researchers. The nurses give fully informed verbal and written consent to participate. It was emphasized that all data collected was firmly confidential and the data would be used for scientific purposes only. Data collection for this study was carried out in the period from the beginning of Mai to the end of July 2017.

- The current study was carried out in three phases; preparatory, implementation, and evaluation phases.

2.8.1. The preparatory phase:-

An extensive literature related to the study area was done including electronic dissertation, available books, articles, doctoral dissertation, research and peer interaction, and idea from external sources and periodicals. A review of literature to formulate knowledge base relevant to the study area was also done. The researchers plan articulates for describing the aim of the study to participants, the actual collection of data and recording information. A guide booklet for theoretical parts and guide Videos for clinical parts were collected and prepared by the researchers.

2.8.2. The implementation phase:-

The researchers applied the implementation phase according to the following steps:

2.8.2.1. The first step (Pre assessment phase):-

A comfortable, private place was chosen for the interviewers. Orientation was done about the purpose and content of the study. All nurses who were supposed to be meeting the inclusion criteria were included in the study. The researchers introduced themselves to the participants and provide verbal explanation of the study and answered all related questions. Nurses were interviewed individually at their places where pre- assessment was done by asked them to complete the tools of the study (socio-demographic, work data and pre- test questionnaires (MBI-HSS) and laughter yoga attitudes and perceptions survey.

2.8.2.2. The second step:
The researchers started to divide the participants into 7 equal sub-groups. Every sub-group was 6 nurses(2 sub- groups for male & 5 sub- groups for female), every group attended (12) intervention sessions every session take one hour within two days/week on Saturday and Monday because those days are available to the researchers and for the participants because there is no ECT in both days and they have enough time for the intervention (three groups per day and other day four groups (one researcher for each group) from 10 AM to 11 or 11.30 AM and also from 4PM- 6PM.(for second day to group 7). The period of implementation was 12 weeks for each group. The implementation of the program sessions was achieved within 3 months.

2.8.2.3. Implementation phase:-
This therapy has a general objective and divided into 12 sessions. Each session lasted for one hour and has a set of specific objectives. This was achieved through several teaching methods as brain storming, lecture, group discussion, Demonstration & re demonstration of laughter technique, role playing, data show, picture, posters and booklet was used as media. At the end of each session summary, feedback, further clarification was done for vague items and homework activity for the following session.

The content of the training sessions was as follows:

1. Introduction about the concept and forms of burnout
2. Personal & occupational effects of the burnout.
3. Strategies of prevention to reduce burn out on psychiatric nurses.
4. Introduction about the concept of laughter therapy and types.
5. Benefit from a good laugh and Laughter therapy aims.
6. Component of laughter therapy Laughter exercises and activities
7. Application for Laughter therapy

The sessions for intervention were:

Session 1: In this session the researchers introduced themselves to the nurses. It was concerned with open discussion to identify, integrate the group, and clarify the aim of the time table allowed for interventions. The researchers interviewed with the nurses at their places in the hospital where collecting the initial data by using the pretest instrument one (part 1 and 2) and instrument two. At the end of this session, the researchers determine the other meeting times with the nurses. This session took about 60 minutes.

Sessions 2 and 3: The researcher given the nurses introduction about the concept and forms of burnout, Personal & occupational effects of the burnout and the main strategies of prevention to reduce burn out on psychiatric nurses.

Sessions 4 and 5: included revision for the previous sessions for 15 minutes and also included the introduction about the concept of laughter therapy and types and benefits from a good laugh (physical and psychological) and Laughter therapy aims.

Sessions 6 and 7: Involved the component of laughter therapy as (Clapping in rhythm to „ho-ho-ha-ha-ha", Breathing and stretching, Child-like play) also included Laughter exercises and activities (demonstration and re demonstration for all steps of Laughter technique.

Sessions 8, 9 and 10: started with deep breathing exercise and then applied for Laughter therapy which includes different types of laughter exercises like greeting laughter, handshake laughter, mobile phone laughter, milkshake laughter, lion laughter, argument laughter, bow and arrow laughter, belly laughter, jokers laughter, which will be done for 30 minutes per day for one week for experimental group only.

- Each day 5-10 laughter exercises will be done for seven days from the above stated laughter exercises.
- After 2-3 laughter exercises, breathing exercise will done for relaxation.

The intervention of Laughter therapy

The intervention followed the standard structure of a Laughter Yoga session, which involves repetition of three key components: During the „Laugh‟ phase, the researcher's guides nurses through activities to simulate laughter. At the beginning of the session, this usually involves a greeting laugh, whereby nurses greet each other by shaking hands and laughing while maintaining eye contact. After this introduction and orientation following by, the „Laugh‟ phase which can involve different types of laughing, as the "lion laugh", the "telephone laugh" or the "eating breakfast laugh". In the „Clap‟ phase of the class, nurses silence to repeat the Laughter Yoga song of "Ho, ho, ha, ha, ha" while clapping in rhythm. This is followed by the „Breathe‟ phase, where nurses focus on relaxing and regulating their breathing. The „Laugh, Clap, Breathe‟ structure is common to all sessions even if laughter games and the time spent in each phase can vary class by class. Each session taken 45-60 minutes.

1. Mechanism of Laughter therapy through Varity of fun activities.

These activities such as, „"argument laughter" which invite nurses to shake their index fingers at everyone else and fight. Instead of using words to fight, nurses abdomen laugh to make their point. The "electric shock laughter" is another exercise in which nurses touch another‟s index finger, jumping back, and laughing (**Broderick, 2012**).

2. Laughter Yoga International describes their sessions as consisting of 4 steps.

Step 1: includes clapping and warm-up exercises including nonsense talk (language with sound and no meaning). Nurses will clap hands parallel to each other for full finger-to-finger and palm to-palm contact. Movement is added by lifting one‟s arms up and down or swinging one‟s arms from side to side. Dancing movements can then be added to encourage the feelings of joy and happiness.

Step 2*:* consists of the deep breathing exercises usually seen in yoga. These exercises are used to flush the lungs and to elicit relaxation both physically and psychologically.

Step 3*:* includes the child-like playfulness. The sense of laughing without reason is the essential themes of Laughter Yoga. During this part of the class, nurses will laugh in a variety of different ways such as laughing while making animal noises or laughing and pretending they are on a roller coaster.

Step 4: laughter exercises is continued followed by a few moments to cool down, breath, and refocus ("Laughter Yoga Session"). The nurses started with five minutes of simple breathing and stretching exercises, followed by ten minutes of laughter exercises with rhythmic clapping, chanting, movement while maintaining eye contact with others and deep breathing. The last five minutes of the session were spent quiet, seated and participated in deep breathing and guided meditation. The results showed that laughter yoga increased feelings of energy, happiness, and openness. -Nurses also showed improvements in tension and fatigue as well as burnout compared to the control group.

Sessions 11: Post assessment phase:-

During this phase, the nurses were encouraged to ask any questions or demand clarifications they needed and re- administration of pre-test as a post- test was given to them. Evaluation was done by using Maslach Burnout Inventory Human Services Survey and laughter yoga attitudes and perceptions survey immediately after complete laughter therapy for both groups and distributed the booklets and videos for experimental and control group after completing the posttest questionnaires.

Sessions 12: Follow up session

☐ This session was done to assure the continuity of the intervention. In this session post test administered after three months to experimental group to assure the continuity of the application of

laughter therapy. In this session the researchers follow the nurses for other 3 months (two days per month for each group).

3. Statistical methodology:

Data was coded and transformed into specially designed form to be suitable for computer entry process

3.1. Data Processing and analysis:

Data was analyzed by using SPSS (Statistical Package for Social Sciences) version 20. Graphics were done using Excel program. In categorical data Chi-squared test was used for comparison between groups. Odds ratio and 95% confidence interval was calculated. $P<0.05$ was considered statistically significant.

3.1.1. Descriptive statistics:

- Frequency and percentage distribution to analyze the demographical variables
- Mean and standard deviation to assess the burnout level scores

3.1.2. Correlation statistics:

- Statistical (T - Test) is used to compare the pre and post test scores for statistical analysis.
- Chi square will be used to develop an association between socio-demographic variables and burn out.
- The Mann-Whitney *U* test is used to test the difference between two independent groups when the dependent variable is measured on an ordinal scale.

Limitations of the Study

- Drop out of some nurses from the study sample because some nurses not submit the sealed envelope after one week based on the previous agreement with the subject. This situation forced the researchers to select new nurses to continue the study.
- The current study needs more follow up after implementations to ensure that the nurses already applied the laughter yoga therapy regularly.
- The researchers unable to control the other extraneous variables because the conclusions from quasi-experiments ultimately depend in part on human judgment, rather than one more objective criteria, cause and effect interferences are less compelling [33]

4. Result:

Table 1: Personal and Occupational Characteristics of the Studied Nurses (experimental and control groups). (n=64)

Personal and occupational characteristics of studied nurses:	Experimental group (n=32) No (%)	Control group (n=32) No (%)	Test of significance	P value
Age (years): <30 30-40 ☐ >40 ☐	16 (50.0) 11 (34.4) 5 (15.6)	10 (31.3) 15 (46.9 7 (21.9)	χ^2=2.33	0.31
Sex: Male ☐ Females ☐	11 (34.4) 21 (65.6)	11 (34.4) 21 (65.6)	χ^2= 0.0	1.0
Residence:				

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Rural ☐ Urban ☐	14 (43.8) 18 (56.2)	15 (46.9) 17 (53.1)	χ^2=.06	0.80
Marital status: Single ☐ Married ☐	10 (31.1) 22 (68.9)	4 (12.5) 28 (87.5)	χ^2= 3.29	0.07
Education levels: Diploma ☐ High Institute ☐ Bachelor ☐	15 (46.9) 9 (28.1) 8 (25.0)	15 (46.9) 9 (28.1) 8 (25.0)	χ^2= 0.0	1.0
Having children: No ☐ Yes ☐	12 (37.5) 20 (62.5)	7 (21.9) 25 (78.1)	χ^2=1.87	0.17
Working years in psychiatric department Mean ± SD Range	12.38±6.89 2 – 29	15.31±6.54 4 – 30	U=1.75	0.09
Working days/week Mean ± SD Range	6.59±0.50 6 – 7	6.44±0.50 6 – 7	t=1.20	0.23
Working hours/week Mean ± SD Range	55.75±6.89 48 – 64	53.25±6.62 48 – 64	t=1.48	0.14

U: Mann-Whitney test - t:t -test **NA: Not applicable**

Table 1: Demonstrated the distribution of personal and occupational characteristics of studied nurses. The results indicate that there is no statistically significant difference between the experimental group and control group, this means that both group are matched regarding all data of personal and occupational characteristics.

Table 2: Distribution of Number and Percentage of studied Nurses regarding their perception to Laughter Therapy (n=64)

A Laughter Yoga attitudes and perceptions survey Items	Agree	Neutral	Disagree
Laughter Yoga had a positive impact and improve mood	61(95.3%)	2(3.1%)	1(1.6%)
I would recommend Laughter Yoga to my colleges	59(92.1%)	3(4.6%)	2(3.2%)
I would like to have more information about Laughter Yoga	63(98.4%)	1(1.6%)	0 (0%)
I concerns regarding safety of laughter yoga during my work.	54(84.3%)	6(9.4%)	4(6.3%)
Laughter Yoga may be a beneficial therapeutic intervention	61(95.3%)	2(3.1%)	1(1.6%)
Laughter Yoga is a safe, inexpensive, and accessible	59(92.1%)	3(4.6%)	2(3.2%)
Laughter Yoga is low-intensity form of physical activity	63(98.4%)	1(1.6%)	0 (0%)

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Laughter Yoga has the potential to decrease the anxiety	54(84.3%)	6(9.4%)	4(6.3%)
Laughter Yoga is a feasible intervention	59(92.1%)	3(4.6%)	2(3.2%)

Table 2: Displayed the distribution of number and percentage of studied nurses regarding their perception to laughter therapy. The results indicate that the majority of the participant nurses agree that yoga have a positive impact on the mood, would recommend Laughter Yoga to colleagues, would like to have more information about Laughter Yoga and have concerns regarding safety of laughter yoga during the work.

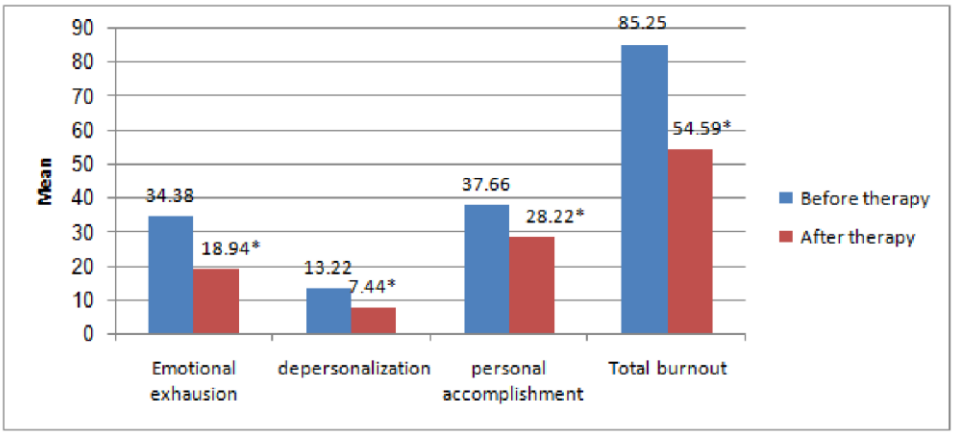
Table 3 :Means and Standard Deviation of Studied Nurses Regarding Level of Burnout pre-test , post-test and follow Up the Laughter Therapy (n=64)

Burnout scale items:	**Experimental group (n=32) Mean± SD**	**Control group (n=32) Mean± SD**	**t test**	**P value**
	Pre-test t herapy			
Emotional exhaustion	34.38±8.80	31.47±6.48	1.50	0.14
Depersonalization	13.22±5.67	14.38±2.95	1.20	0.31
Personal accomplishment	37.66±2.50	37.94±1.64	0.53	0.60
Total burnout	85.25±13.47	83.78±9.46	0.51	0.62
	Post- test therapy			
Emotional exhaustion	18.94±3.12	28.84±6.16	8.11	0.001
Depersonalization	7.44±2.31	12.66±2.85	8.05	0.001
Personal accomplishment	28.22±3.03	35.84±2.32	11.30	0.001
Total burnout	54.59±6.83	77.34±9.25	11.19	0.001

P value**:** *significance at P < 0.05

Table 3: revealed the distribution of means scores of studied nurses (experimental and control groups before and after the laughter therapy) regarding their level of burnout. The results indicated that before therapy, there is no significant difference between the experimental and control groups regarding the level of burnout. Conversely, there is a highly statistical significant difference between the experimental and control groups regarding the level of burnout after laughter therapy where P value<0.001

Fig (2): The level of burnout measured by (MBI-HSS) among the studied group before and after the laughter therapy



*: significant difference

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Figer2: Showed that all dimensions of burnout were significantly lower after therapy than before therapy and the total level of burn out among studied nurses before therapy is 85.25% decreases to 54.59% after therapy.

Table 4: Correlation between Total Burnout Score with Age, Working Years, Working Days/Week and Working Hours/ Week in the Experimental Group Before and After Therapy.

Before therapy								
	Emotional exhaustion		Depersonalization		Personal accomplishment		Total burnout	
	R	P value	r	P value	r	P value	r	P value
Age (years)	-0.22	0.238	-0.22	0.24	-0.41	0.02*	-0.31	0.08
Working years in psychiatric department	-0.31	0.084	-0.26	0.15	-0.43	0.01*	-0.39	0.03*
Working days/week	0.81	<0.001	0.51	0.003*	0.69	<0.001	0.78	<0.001
Working hours/week	0.82	<0.001	0.42	0.02*	0.64	<0.001	0.83	<0.001
After therapy								
Age (years)	-0.09	0.630	-0.13	0.48	0.01	0.95	-0.08	0.67
Working years in psychiatric department	-0.08	0.664	-0.11	0.54	0.11	0.55	-0.03	0.89
Working days/week	0.50	0.003*	0.55	0.001*	-0.07	0.72	0.39	0.03*
Working hours/week	0.65	<0.001	0.49	0.004*	0.06	0.73	0.49	0.004*

* Significant correlations

Table5: Represents that there is highly significant positive correlation between burn out score and age, working years, working days/week and working hours/ week in the experimental group before and after laughter therapy.

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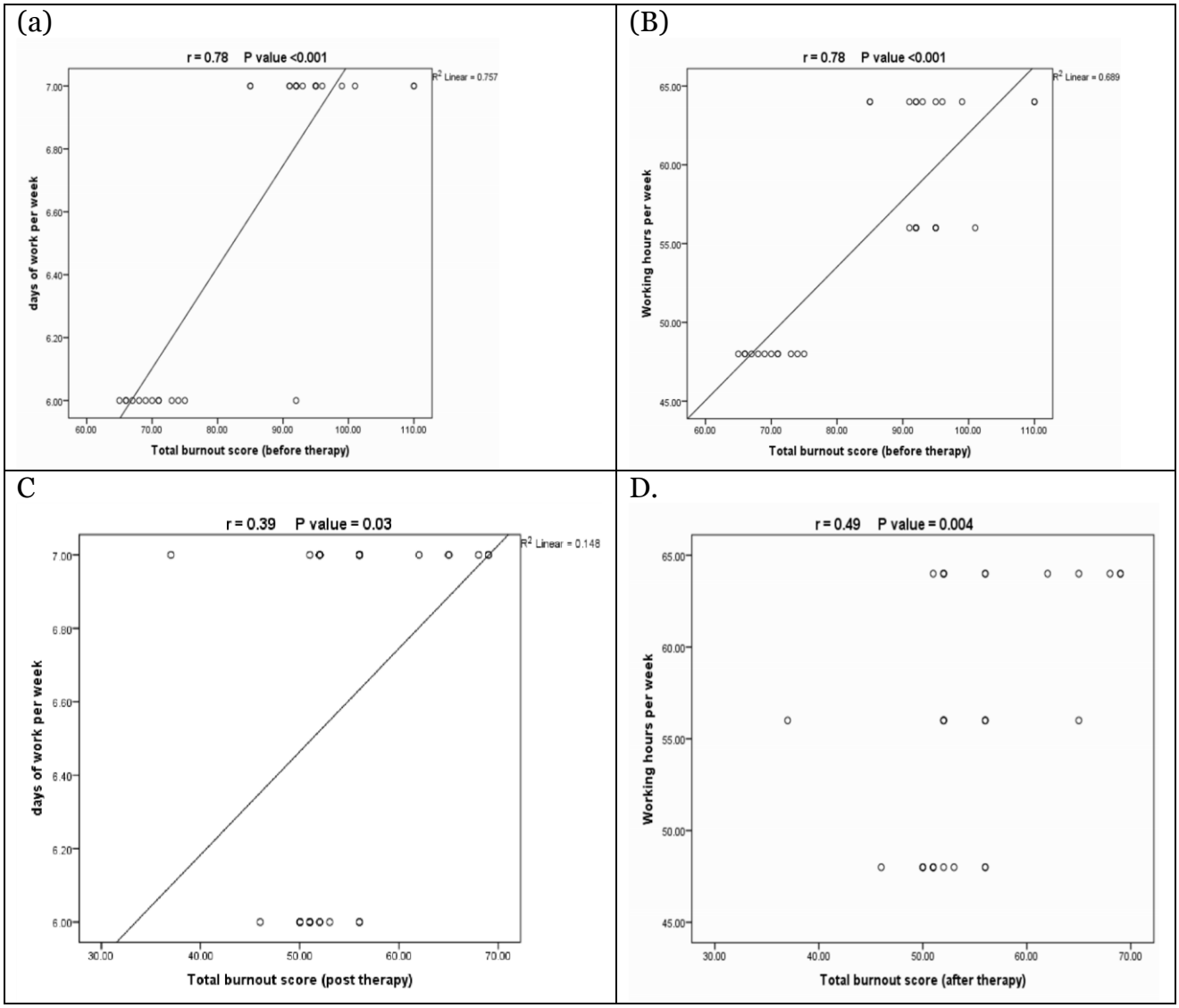

5. Discussion

Among the different health professions, nursing has been considered a profession highly susceptible to stress and workplace burnout. Although psychiatric nurses face considerable stress in their job, research into nursing burnout has mainly focused on general nursing rather than psychiatric nursing. Unfortunately, most of the studies on burnout in psychosocial nursing have been conducted in Europe and United States [20].There are few studies from Asian countries indeed, a thorough search using keywords of burnout, psychiatric nursing, and India revealed little research on burnout in psychiatric nursing from India. One reason why psychiatric nurses and their burnout is an under studied area could be the fact that there are many states where psychiatric nurses are limited[1]. Stress reduction techniques were not aware to them. The various research studies conducted on laughter therapy have supported the implemented laughter therapy to reduce the stress level among school teachers and enhance their well-being. Laughter is a powerful solution to stress, pain, and conflict. Nothing works faster or more dependably to bring your mind and body back into balance than a good laugh.

Laughter lightens the burdens, inspires hopes, connections to others, and keeps grounded, focused, and alert.

Laughter is positive for one‟s wellbeing [21]. Therefore the present study was conducted to assess the effect of laughter therapy on burnout syndrome among psychiatric nurses through the following objectives: assessing the pre-test level of burnout among staff nurses working with psychiatric patients. Elaborating laughter yoga sessions contents and procedure based on laughter yoga international, determining the effectiveness of laughter therapy on the level of burnout among psychiatric nurses, assessing the post-test level of burnout among psychiatric nurses , associating the level of burnout with their selected demographic variables such as age, sex, religion, education, marital status and years of experience in psychiatric department.

Before discussing the results related to these research questions, the light should be directed to socio demographic characteristics of the studied nurses. The result of the present study showed that the experimental group and control group were matched regarding to all data of personal characteristics the studied nurses in psychiatric mental health hospital at Menofia Governorate, Egypt. The highest percentage of the studied nurses was married, from urban, having children, have diploma and most of them were female nurses. From the researchers' point of view, this may be due to nursing field is female dominant (nursing is feminine profession)

Concerning nurses' perception and attitude toward laughter yoga therapy, the results of the present study indicated that the majority of the studied nurses agree that yoga had a positive impact on the mood, would recommend Laughter Yoga to colleges, would like to have more information about Laughter Yoga and had concerns regarding safety of laughter yoga during the work. This finding of the present study was consistent with Bennett et al [22]who study the intradialytic laughter yoga therapy for hemodialysis patients: a pre-post intervention feasibility study and found that all nurses agreed or strongly agreed that Laughter Yoga had a positive impact on patients‟ mood, it was a feasible intervention and they would recommend Laughter Yoga to their patients.

Regarding level of burnout measured by (MBI-HSS) among experimental and control groups (pre-test and post-test) the laughter therapy, the present study findings revealed that; there were no significant differences between the experimental and control groups as regards burnout score before the implementation of laughter therapy . On the other hand, there were significantly lower mean values of all subscales and total burnout in the experimental group than controls at post-test the implementation of laughter therapy. This evident that laughter yoga has positive effect. (This support research objective “assessing the pre-test and post-test level of burnout among staff nurses working with psychiatric patients".

This finding of the present study was matched with Yazdani, et.al [21] who studied the effect of laughter yoga on general health among nursing students and reported that laughter yoga positively affected the general health of nursing students, which is almost consistent with the results of some studies. Additionally, the findings of Nagendra et al., [22]concerning the efficacy of laughter Yoga on professionals to overcome professional stress in India showed that there was a significant improvement in stress parameters including the level of blood cortisol. Moreover, Shahidi et al [23]in their study comparing the effects of laughter Yoga and group sport program on the depressed elderly women, reported that laughter Yoga not only had positive effect similar to sport program on the reduction of depression but also imposed positive effects on the feeling of life satisfaction among the elderly women. Moreover, the findings of the foregoing present study was in line with the positive effect of laughter Yoga on the dimensions of depression and social function in general health obtained on a study was conducted by Kong et al.[24]to investigate the effects of a stress management program, based on

meditation, on stress, anxiety, and depression of nursing students in Korea. Their results revealed a significant difference concerning the scores of stress and anxiety in the two groups after intervention. Meanwhile, the present study findings have revealed statistically significant improvement after applying the intervention. This was detected in both post-test and follow-up phases of intervention, comparing to pre-test. There was a slightly higherin mean scores of burnout at follow-up test but this score has never reached down to the pre- intervention level. This might be attributed to the subjects' motivation and enthusiasm to know and acquire skills related to laughter yoga therapy and to practice it successfully. Additionally, the finding of the present study was in agreement with previous studies as Diab[25]&El-Deeb, [26]who have similarly shown a statistically significant difference between performance levels at pre-, post-, and three months after program intervention .This might be explained by fact that the knowledge could be forgotten easily if it is not used frequently in the practice. On the other hand, they are overloaded with their work rather than to update their knowledge or continue their education.

This finding of the present study was matched with Yazdani, Esmaeilzadeh, Pahlavanzadehand Khaledi[21]who study the effect of laughter yoga on general health among nursing students and reported that laughter yoga positively affected the general health of nursing students, which is almost consistent with the results of some studies. Additionally, the findings of Nagendra, Chaya ,Nagarathna, Kataria and Rao[22]concerning the efficacy of laughter Yoga on professionals to overcome professional stress in India showed that there was a significant improvement in stress parameters including the level of blood cortisol. Moreover, Shahidi et al.[23]in their study comparing the effects of laughter Yoga and group sport program on the depressed elderly women, reported that laughter Yoga not only had positive effect similar to sport program on the reduction of depression but also imposed positive effects on the feeling of life satisfaction among the elderly women.

Moreover, the findings of the present study are in line with the positive effect of laughter Yoga on the dimensions of depression and social function in general health obtained on a study was conducted by Kong et al.[24]to investigate the effects of a stress management program, based on meditation, on stress, anxiety, and depression of nursing students in Korea. Their results revealed a significant difference concerning the scores of stress and anxiety in the two groups after intervention.

Additionally, Yazdani, Rezaei and Pahlavanzadeh[27]in a study on the effect of a stress management educational program on the level of students‟ depression, anxiety, and stress in Isfahan University of Medical Sciences, reported that the mean scores of stress, anxiety, and depression were reduced in the study group after administration of a stress educational program, and this reduction was significant compared to the control group. Moreover, the findings of Ko and Youn [28]on the effects of laughter therapy on depression, cognition, and sleep among the elderly in Korea showed that laughter therapy is an efficient, cost-effective, and available intervention which has positive effects on depression, insomnia, and sleep quality among the elderly. In contradiction with Makola et al. [29]showing that personal stress and burnout is a strong predictor of job satisfaction. Concerning, the relationship between sociodemographic characteristics of studied nurses and total burnout levels.

The present study revealed that burnout levels were statistically significantly higher among males' psychiatric nurses where p- value was 0.007, aged from 30-40 years where p- value was 0.016, singles (0.003), having high institute education levels where p- value was 0.033 and having no children where p- value was 0.009.

The present study was in line with Takayanagi[30]who study the internal predictors of burnout in psychiatric nurses (An Indian study) then reported that age, duration of total period of nursing, and emotional maturity had significant correlation with total burnout , while on contradictory qualification,

marital status and family status not have a significant correlation with total burnout. Psychiatric nurses in Iran experienced a significantly greater degree of emotional exhaustion which one indicator or burnout than the medical nurses. Significant positive correlation was noted between ages, years of experience, frequency of on calls, and emotional exhaustion for the psychiatric nurses.

The result of the present study was incongruent with Al-Turkiet al. [31]who stated that married nurses were prone to emotional exhaustion than single. From the point of the researchers' view related to overload of duties of married nurses in the house and work and responsibility. This result is confirmed to the review by Hareet al. [32]who identified longer duration of service was accompanied by higher degree of emotional depersonalization for nurses. This may be due to single nurse and without children, their friends depend on them and changes their shifts with them and overload of duties

6. Conclusion

Based on the results of the current study, it can be concluded that: laughter therapy has great positive effect on burnout syndromes among psychiatric nurses.

7. Recommendations

1-The nurse develops her knowledge on laughter therapy to help herself to reduce burnout. The nurse should create awareness among psychiatric nurses regarding laughter therapy to the level of burnout.

2- Nursing administrators can formulate policies which include all nursing staff to be actively involved in health education program especially through information, education, and communication.

3- Student nurses should understand the effectiveness of laughter therapy exercise to protect themselves from several health problems that causes as a result of increasing level of burnout and stress.

4- This study can be used as an access to further studies. One of the aims of nursing providing evidence based practice in the setting.

5- The study findings could be disseminated to the authorities in the study setting and introduced as a component of laughter therapy exercise.

6- This study can be conducted on a large sample for better generalization, and it can be carried out in different settings.

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