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# EFFECT OF PROBLEM-SOLVING SKILLS TRAINING ON DEPRESSION AMONG SAUDI PSYCHIATRIC MENTAL HEALTH NURSES

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**Abstract**

Psychiatric nurses employed in secure wards experience heightened stress and depression linked to significant patient hostility, violence, instability, and dangers to their own or others' safety. Consequently, this research aimed to examine sought to investigate how training in problem-solving techniques affected on depression levels among psychiatric mental health nurses in Saudi Arabia. Design: A quasi experimental research design. Sample: A purposive sample of eighty psychiatric nurses. Forty nurses were selected randomly in the intervention group. Tools: personal data sheet, and Beck Depression Inventory. Results: a statistically significance difference was found between depression at pre and post problem solving training among nurses. Conclusion: This research presented substantial evidence demonstrating that problem-solving skills training successfully lowers depression in psychiatric nurses. It is highly recommended to implement psycho-educational programs aimed at raising awareness of depression and psychological issues in the workplace for psychiatric nurses.

**Keywords:** Depression, Problem Solving, Psychiatric Nurses.

## INTRODUCTION

Psychiatric nursing is a job that demands both physical and mental resilience from its practitioners. Nurses in psychiatric settings encounter challenges such as extended hours for patient care, control within the workplace, and various environmental stressors. The experience of handling aggressive patients, managing a heavy workload, and confronting patient suicides has been linked to negative psychological effects. Those working in secure facilities report additional stressors and higher rates of depression because of elevated degrees of patient hostility, violence, ambiguity, and dangers to their own or others' safety. Coping strategies continually evolve through cognitive and behavioral approaches aimed at addressing particular internal or external challenges that are perceived as surpassing a person’s available resources. These strategies are categorized into problem-solving and emotion-focused types (Cuijpers, de Wit, Kleiboer, Karyotaki, Ebert, 2018). a study conducted by Farahat (2025) to evaluate of nursing students’ stress, anxiety, and depression at Govt. Nursing College Gangyal in Jammu, the findings indicated that the distribution incidence for depression levels were 50% normal, 21% mild, 16% moderate, 7% severe, and 6% extremely severe. A systematic meta-analytic review

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by Hemmati et al. (2021), which assessed the rate of depression among nurses in Iran, discovered that rates of moderate to severe depression were 36% as per the BDI, 28% based on Depression Anxiety Stress Scales-21, and 52% based on the General Health Questionnaire-28. This review emphasized the considerable variation in reported incidence of depressive symptoms among nurses, highlighting how assessment tools influence the reported rates.

There is a considerable chance that psychiatric mental health nurses (PMHNs) would experience depression and other unpleasant emotions and psychological problems because demands of their long-term, high-intensity work. A study about of depression symptoms among Chinese nurses revealed that 43.83% of participants reported having such symptoms, with mild symptoms representing 31.12% of the total (Xie et al, 2020). A study by Zhao et al. (2024), 30.1% of staff in nursing homes displayed depressive symptoms. The nature of psychiatric nursing, which involves caring for patients in a confined setting, makes psychiatric nurses particularly susceptible to negative feelings. In Italy, anxiety affects 50% of nurses. A survey spanning 30 provinces in China revealed that the levels anxiety and depression in nurses are 55.5% and 41.8%.

Depression rates among psychiatric nurses were 36.6% and 52.7% in China and Australia, respectively, indicating the challenges psychiatric nurses face in their mental health. (Chen et al, 2022). 68% of nurses in Spain said they had experienced sadness, anxiety, and distress to varied degrees, with 38% reporting moderate to severe symptoms. (Martín Rodriguez et al., 2022).

management of depression involves recognizing and analyzing issues linked to it, as well as employing various therapeutic approaches to change either the root causes of depression or the stress experience. These approaches are used within a cohesive and purposeful conceptual framework. Additionally, stress management comprises range of health-promoting behaviors designed to shield individuals from the negative physiological and psychological impacts of stress (Seaward, 2017).

Stress-reduction tactics, like problem-solving abilities and relaxation techniques, are essential for improving the workplace, lowering stress levels, and improving head nurses' job performance. (Higazee, 2018 and Bakker & de Vries, 2021). Problem-solving refers to the actions taken in significant and difficult situations that require logical resoning to find resolution. The ability to solve problems is necessary for a person's capacity to engage productively in others. Problem-solving is crucial in nursing management (Mahony et al., 2021).

In tackling various psychological challenges, such as anxiety, depression, and stress experienced by psychiatric nurses, training in problem-solving skills has proven to be beneficial (Metz, et al., 2023). By teaching nurses to systematically and methodically approach issues, this intervention allows them to pause complicated problems into little, more constructive parts. Previous approach can alleviate sense of being overwhelmed and powerless while fostering feel of authority and empowerment. Additionally, training in problem-solving techniques helps nurses develop better coping mechanisms, such

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asking for help from peers or engaging in relaxation techniques, which can improve their general wellbeing. (Ezeddine, et al., 2022).

Learning how to solve problems gives people the variety of methods for useful recognizing, assessing, and addressing issues (Vosoughi Kalantari, Marashian, Dasht Bozorgi, Hafezi, 2025). It also serves as a behavioral process that presents difficult, chances, and transfer towards more favorable consequences. The training aim to encourage adaptive behavior by assisting nurses in cultivating a positive and self-assured mindset towards challenges (i.e., a constructive approach to problem-solving), and by helping them build and internalize four essential problem-solving capabilities. This process entails gathering and analyzing information, clarifying the specifics conditions, and ultimately arriving at a choice (Franestian, Suyanta, & Wiyono, 2020). Typically, this type of training instructs individuals on the steps of problem-solving, including identifying the issue, brainstorming alternative solutions, assessing the possible repercussions of each option, choosing the best solution, and implementing and reviewing the selected approach (Şenocak, Demirkıran, 2023; Nezu, Nezu, D'Zurilla, 2013; D'Zurilla, Nezu, 2010). By acquiring these abilitiess, persons enhance their self-efficacy and self-esteem in their competence to tackle difficulties (Oanh, Thuy, Huyen, 2024).

Psychiatric nurses utilize their problem-solving abilities not only to recignize and address patient issues but also to perform their professional duties, collaborate with colleagues, and tackle social challenges in their everyday lives. Give that both nursing teaching and the nursing field can be difficulty conditions (Phillips et al., 2017; Wray et al., 2021), it is necessary for nurses to cultivate problem-solving skills as a key competency throughout their careers.

## Significance

The study findings translated into practical strategies for improving depression and well-being of psychiatric nurses in Saudi Arabia. Nurses need to be prepared and efficient in dealing with the needs of their patients and theirs as well so they can optimally deliver nursing care.

The findings establish the basis for developing evidence-based interventions aimed at alleviating depression and enhancing coping skills among PMHNs. Maybe, nurse educators can create a teaching plan that will help psychiatric mental health nurses adapt to stressful situations and preventive ways to depression by managing stress.

## Aim

This study aimed to investigate the effect of problem-solving skills training on depression among Saudi psychiatric mental health nurses.

## Research Hypothesis

Psychiatric nurses who will receive problem solving skills training program will have statistically significance differences on depression at post intervention than pre for both groups (experimental and control).

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### Design

A quasi-experimental research design. A quasi-experimental design refers to a study in which participants cannot be randomly assigned to either an experimental group or a control group because of ethical or practical constraints is known as a quasi-experimental design.

### Sample

The sample includes all Saudi staff nurses of Irada psychiatric hospital, who willing in the study. A purposive sample of 80 psychiatric nurses will be chosen based on the following inclusion and exclusion criteria. The 40 nurses selected randomly to take part in the intervention whereby the remaining 40 will be for the control group who will not get the intervention.

### Sample Size

The number of samples of 80 participants. With a margin of error of 5%, an estimated population size 100 and an expected outcome level standard of care domains of 50%and 95%, the estimated sample come to 80 participants, 40 in study group and 40 in control group.

Sample size is:

The researcher determined the sample size as following

$$n=[N*p(1-p) /[(N-1) *(d2/z2) +p(1-p)]$$

* * N =100

* d: allowable error rate in the estimate = 0.05

* Z = 1.96

* P =0.50 then

The size of the sample computation from the previous equation is

$$n = (100*0.5*0.5)/ ((99*0.05*2)/1.96*2+0.5*0.5) = 80$$

* Then the sample size = 80

At the time of pre- intervention assessment participants and the researcher didn't knows who would participate in each group. The researcher gives individual from not involved in the research team a list of nurses and this person provide code for each one from to 80, after that the researcher selected single numbers and fixed it to intervention group and the double numerals were appointed to control group.

### Inclusion Criteria:

- Nationality: Saudi staff nurse.
- Gender: both male and female.
- Nurses who are licensed to practice in Saudi Arabia by the Ministry of Health

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- He/she is currently working in either of the selected mental health facilities.
- He/she has been working in the current mental health facility more than the probationary period (> 6 months).
- He has no ailments that poses risk to mental health disorders

**Exclusion Criteria:**

- Nurses who had taken problem solving skills training.
- Nurses who served in more than one hospital were excluded from the study.
- Nurses with medical or mental illness history.

**Tools**

**1. Personal Data Sheet**

It was created by these investigators. It involves, age, sex, marital status, level of education, current job, years of psychiatric work experience, Years spent in the nursing profession and attendance of any training workshop in the management of anxiety.

**2. Beck's Depression Inventory (BDI)**

It was created by (Beck, Ward, Mendelson, Mock, Erbaugh (1961). The tool is designed to evaluate the intensity of emotional, behavioral, cognitive, and physical symptoms associated with depression. It consists of 21 statements addressing fundamental depression symptoms, including feelings of hopelessness and irritability, as well as guilt or a sense of punishment, alongside physical manifestations. The Arabic version was translated by Ghareeb in 2015. The Beck Depression Inventory (BDI) features 21 self-report items rated on a 4-point scale: 0 (Never - does not apply to me), 1 (Sometimes - applies to me to some extent), 2 (Often - applies to me to a significant degree), and 3 (Almost always - applies to me very strongly)." The scoring ranges from lower of 0 to higher of 63. A higher grade represents an increased severity of depression. Scores between 0–9 suggest minimal depression, 10–16 reflect mild depression, 17–29 imply moderate depression, and 30–63 suggest severe depression. A cut-off score of 9 indicates a typical level of depression. The BDI exhibits a Cronbach's alpha reliability coefficient of 0.91, indicating strong internal consistency.

**Ethical Considerations**

A primary approval was obtained from ethical committee of scientific research at faculty of nursing, Cairo University to conduct the proposed study. The protocol accepted through Institutional Review Board (IRB) of King Khalid Hospital. IRB has reviewed the research proposal and has determined that it meets the ethical standards outlined in the Belmont Report and the GCP ICH guidelines. Approval is given for one year from the date of this letter.

The following ethical considerations were respected from the beginning of data collection: approval to the head of Irada Psychiatric Hospital provided the study. in Jeddah KSA to

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perform the study. Oral and written consents were got from the nurses after description the purpose, feature of the study. Participation in the study was voluntary, the right to opt out of the study or end participation even after beginning at whatever period without fronting any undesirable effect will be guaranteed. The researcher ensured that anonymity and confidentiality was maintained during and after the research processes, questionnaire exclude names, obtained data was safeguarded through assignment of unique code number to each participant who was respond to the questionnaire. . Final approval obtained after data collection and program implementation from ethical committee of scientific research at faculty of nursing, Cairo University.

**Procedures**

Data collection carried out using the chosen standardized measurers for personal data, and Beck Depression Inventory (BDI). The study will follow a pre-test-post-test research design whereby the selected nurses from both control and intervention groups was assessed with the selected tools. The findings in the pre-test will serve as the baseline data. After the interventions, during post-test, the nurses in experimental group were further be evaluated if there are improvements using the same tools. Conversely, the control group was answering together the tool but will not be introduced as part of the intervention. After obtaining the needed permissions to conduct the current study, the participant was recruited. The researcher provides information about the goal, scope, and length of the study as well as what was anticipated of the participants.

In order to get the cooperation and acceptance of the eligible nurses, the researcher contacts them and explains the nature and goal of the program and to fill the informed consent. The researcher divided the study groups into two group’s twenty nurses 20 for each for more effective training and practice. Each session includes information and basic guidelines about problem solving skills training. In the educational package, the forms and sheets were designed to complete the activities within a session and practice the ability to solve problem. Participants were given a program matrix. Each session of the problem-solving skills training program included practice and repetition, role-playing, feedback, role models, and additional behavioral and cognitive exercises.

Participants in the study group were given a program matrix including brief description of the program problem solving skills training program were taught in each session through role model provision, role playing, feedback, practice and repetition, and other cognitive and behavioral tasks.

At the conclusion of each session, homework tasks outside of sessions were assigned in proportion to the debates that were covered. Each session begins with, the homework assignments were investigated and feedback was given.

After the training sessions, a posttest was promptly delivered to both groups to complete once more. The control group's participants received the program bundle. After completing post test tools (program description’s booklet, pressures and program matrix. Also, the researcher conducts two sessions for program description.

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**Program aims to:**

- Provide nurses with knowledge and skills about problem solving
- Help nurses cope more effectively with stressful and challenging situation.
- Improve nurses critical thinking ability and decision making which are essential to their work place environment.

**Program description**

The program consisted of ten sessions, each session for one and half hour. The session conducted as follow

The first session: document the relationship between the researcher and the nurses and between the nurses themselves, where the researchers introduce themselves to the participating nurses, as well as encouraging the nurses to introduce themselves and get to know each other. Presenting and discussing the objectives of the program and explaining the training methods that will be used.

The second session- pre-prepared scientific simplified material is presented and explained about the meaning of depression, causes, risk factors, factors contributing to depression at workplace, problems associated with it and how to manage it.

The third session: General guidelines, the capacity to recognize the issue and acknowledge it as a normal, possibly controllable occurrence, faith in the effectiveness of the problem-solving framework in addressing the issue,

The fourth session: researcher began with an explanation about the types of problem solving: impulsive way (ineffective) and reflective way (affective) and differentiated between them. Following this explanation,

The Fifth session: defining and outlining the problem, gathering all relevant data, separating facts from theories that need more investigation, assessing the situation, and identifying the true objectives

The sixth and seventh sessions: alternatives are developed, a range of potential options are suggested, and the most effective solution among the potential solutions is chosen. Also, nurses learn how to recognize the skill of balancing alternatives and proposed solutions.

The eighth session: Making decisions and forecasting the potential results of every action as well as the advantages of each result

The ninth session: practice how to implement the selected solution

The ten sessions: Revision and evaluation, this session aims to: Summarize what was presented in previous sessions. - Discuss the activities and homework of the previous session. Discuses nurse ‘opinions about the training sessions and the extent to which they are used. Thanking the nurses participating in the program. Create contact links. Evaluate the program in terms of the appropriateness of the activities used, time, and

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homework. Encourage nurses to apply and practice what was taught during the sessions in their daily lives.

## Data Analysis

**Table 1: Personal characteristics of the studied nurses among experimental and control groups**

| Factor | Category | Experimental Group | | Control Group | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| Age | 20 to ≤ 30 years | 11 | 27.5 | 27 | 67.5 |
| | 30 to≤ 40 years | 24 | 60.0 | 10 | 25.0 |
| | 40 to ≤ 50 years | 4 | 10.0 | 3 | 7.5 |
| | More than 50 years | 1 | 2.5 | 0 | 0.0 |
| | Total | 40 | 100.0 | 40 | 100.0 |
| Gender | Male | 32 | 80.0 | 33 | 82.5 |
| | Female | 8 | 20.0 | 7 | 17.5 |
| | Total | 40 | 100.0 | 40 | 100.0 |
| Place of residence | Village | 4 | 10.0 | 3 | 7.5 |
| | Governorate | 3 | 7.5 | 5 | 12.5 |
| | City | 33 | 82.5 | 32 | 80.0 |
| | Total | 40 | 100.0 | 40 | 100.0 |

Table (1) reveals that 60% compared to 25% of the studied nurses were in age between 30 to ≤ 40 years for experimental and control groups respectively. 80% compared to 82.5% were male for experimental and control group respectively. As regards residence, 82.5% compared to 80% lived in city for experimental and control group respectively.

**Table 2: Personal characteristics of the studied nurses (marital status, educational level, and current position) among experimental and control groups**

| Factor | Category | Experimental Group | | Control Group | |
|---|---|---|---|---|---|
| | | Frequency | Percentage | Frequency | Percentage |
| Marital status Educational level | Single | 17 | 42.5 | 23 | 57.5 |
| | Married | 22 | 55.0 | 16 | 40.0 |
| | Divorced | 1 | 2.5 | 1 | 2.5 |
| | Total | 40 | 100.0 | 40 | 100.0 |
| | Diploma | 13 | 32.5 | 5 | 12.5 |
| Gender | Bachelor's | 27 | 67.5 | 34 | 85.0 |
| | Master's | 0 | 0.0 | 1 | 2.5 |
| | Total | 40 | 100.0 | 40 | 100.0 |
| Current position | Nurse | 27 | 67.5 | 38 | 95.0 |
| | Head of department | 9 | 22.5 | 0 | 0.0 |
| | Nursing Supervisor | 4 | 10.0 | 2 | 5.0 |
| | Total | 40 | 100.0 | 40 | 100.0 |

Table (2) Shows that 55% compared to 40% of the studied nurses were married for experimental and control group respectively. 42.5% and 57.5% of them were single for study and control group respectively. As regards educational level, 67.5% and 85% of

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participated nurses have a bachelor's degree for experimental and control group respectively. However, 32.5% and 12.5% of them have a diploma for experimental and control group respectively. 67.5% compared to 95% were nurses for both experimental and control groups respectively.

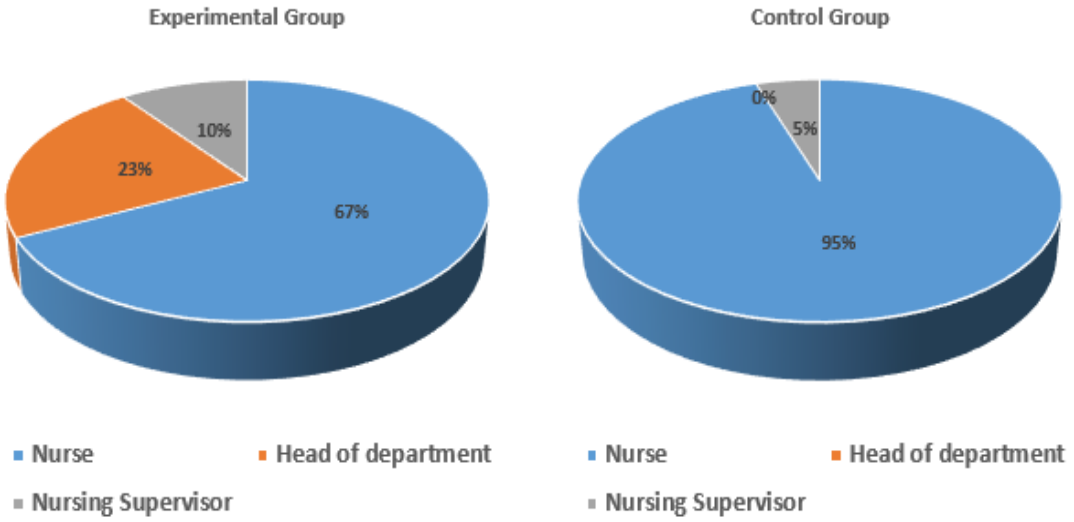


**Figure 1: Distribution of the studied nurses according to current position for experimental and control groups.**

Figure (1) shows that, the distribution of the studied nurses according to current position. Most participants are nurses; constituting 67% compared to 95% for both the experimental and control groups respectively.

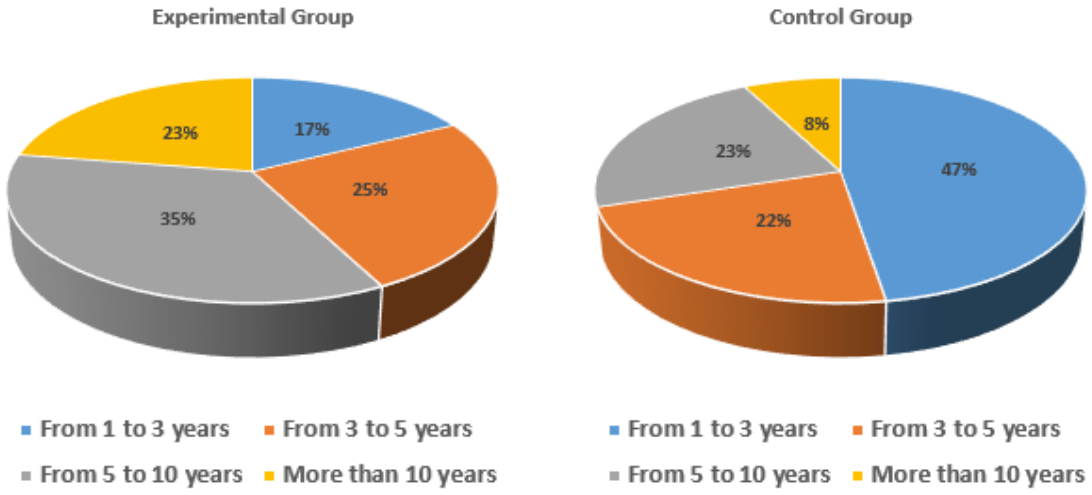


**Figure 2: Distribution of the study sample according to years of work in a psychiatric hospital for experimental and control groups.**

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Figure (2) demonstrates that 35% and 23% of nurses have 5 to ≤ 10 years of work in a psychiatric hospital for experimental and control group respectively. 17% and 47% of them have 1 to ≤ 3 years of work in a psychiatric hospital.25% and 22% of nurses have 3 to ≤ 5 years of work in a psychiatric hospital for experimental and control group respectively. Also, 23% and 8% of nurses have more than 10 years of worked in a psychiatric hospital for experimental and control group respectively.

**Table 3: Levels of depression among nurses at pre-training and post- problem-solving skills training program for experimental and control groups**

| Levels of depression | Groups | Pre-training | | Post-training | |
|---|---|---|---|---|---|
| | | No | % | No | % |
| Minimal | Experimental | 0 | 0 | 7 | 17.5 |
| | Control | 2 | 5 | 2 | 5 |
| Mild | Experimental | 5 | 12.5 | 18 | 45 |
| | Control | 8 | 20 | 7 | 17.5 |
| Moderate | Experimental | 25 | 62.5 | 15 | 37.5 |
| | Control | 20 | 50 | 21 | 52.5 |
| Sever | Experimental | 10 | 25 | 0 | 0 |
| | Control | 10 | 25 | 10 | 25 |

Table (3) shows that zero%, 12.5%, 62.5% and 25% at pre-training compared to 17.5%.45%, 37.5% and zero% for experimental group at post training among nurses have minimal, mild, moderate and severe depression respectively. Also, 5%, 20%, 50% and 25% at pre- training compared to 5%, 17.5%, and 52.5% 25% among nurses at control group have minimal, mild, moderate and severe depression respectively. =

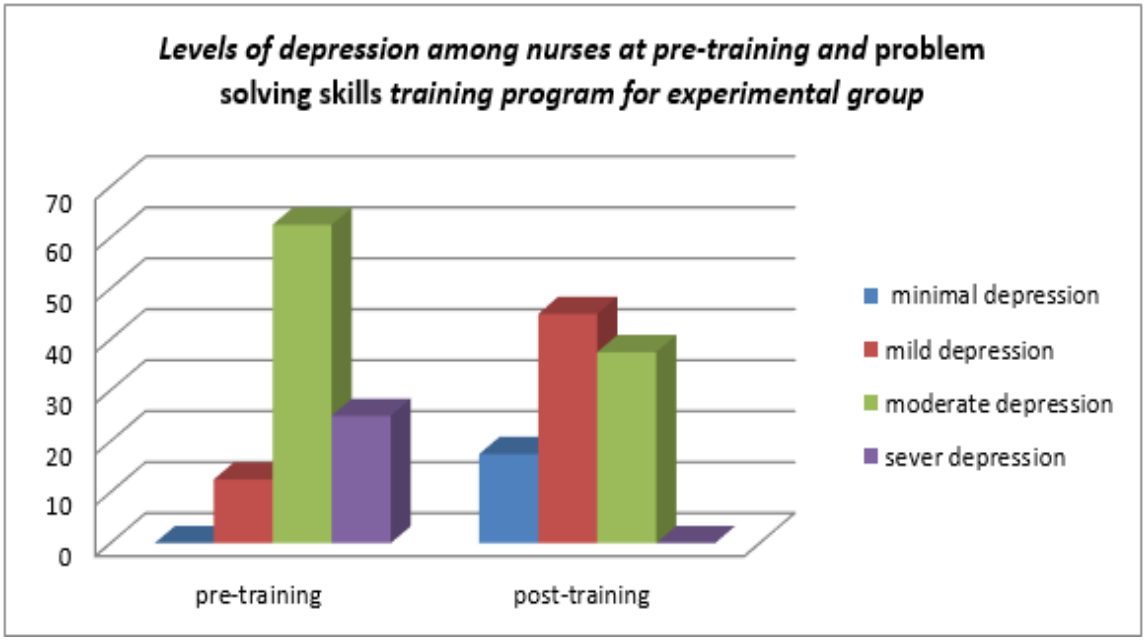


**Figure 3: Levels of depression among nurses at pre-training and post- problem-solving skills training program for experimental group**

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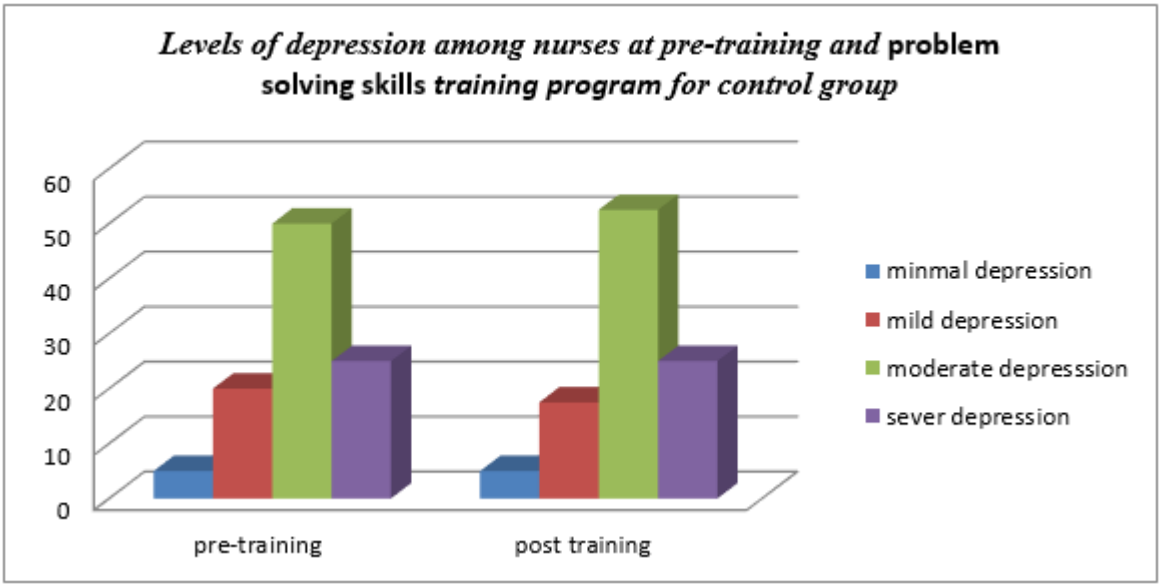


**Figure 4: Level of depression among nurses at pre-training and post-stress management training program for control group**

**Table 4: Differences in depression at pre and post problem solving skills training program among nurses for experimental and control groups**

| Two Way ANOVA with Repeated Measures | | | | | |
|---|---|---|---|---|---|
| **Source** | **Group** | **Mean ± SD** | **Wilks' Lambda** | | **Partial Eta Squared ( $\eta^2$)** |
| | | | **F** | **Sig.** | |
| Depression (Pre-Training) | Experimental | 29.92 ± 13.643 | 58.735 | .000 | .430 |
| | Control | 25.35 ± 12.530 | | | |
| | Total | 27.64 ± 13.217 | | | |
| Depression (Post-Training) | Experimental | 14.68 ± 5.081 | | | |
| | Control | 25.43 ± 12.376 | | | |
| | Total | 20.05 ± 10.845 | | | |
| Training * Group | | | 59.902 | .000 | .434 |

Partial Eta Squared: (0.01: Small effect size, 0.06: Medium effect size, 0.14: Large effect size)

Table (4) shows that the level of significance of F-test (Wilks' Lambda) between the depression among nurses at pre-training and post problem solving skills *training program* is less than 0.05 (Sig. < 0.05), indicating that there is a statistically significant difference in depression among nurses at post problem solving skills *training program* than pre, this difference in favor of beck's depression inventory after the training, where the results show that the total mean of beck's depression inventory after the training is less than the total mean of it before the training, with a total mean (standard deviation) of 20.05 (10.845) and 27.64 (13.217), respectively. In addition to the level of significance of F-test (Wilks' Lambda) is less than 0.05 (Sig. < 0.05), indicating that there is an interaction between the training and the study groups (experimental and control), that is, the effect of training on

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control and experimental groups is not equal, where the mean of beck's depression inventory after the training according to experimental group is less than the mean of it according to control group, with a mean (standard deviation) of 14.68 (5.081) and 25.43 (12.376), respectively.

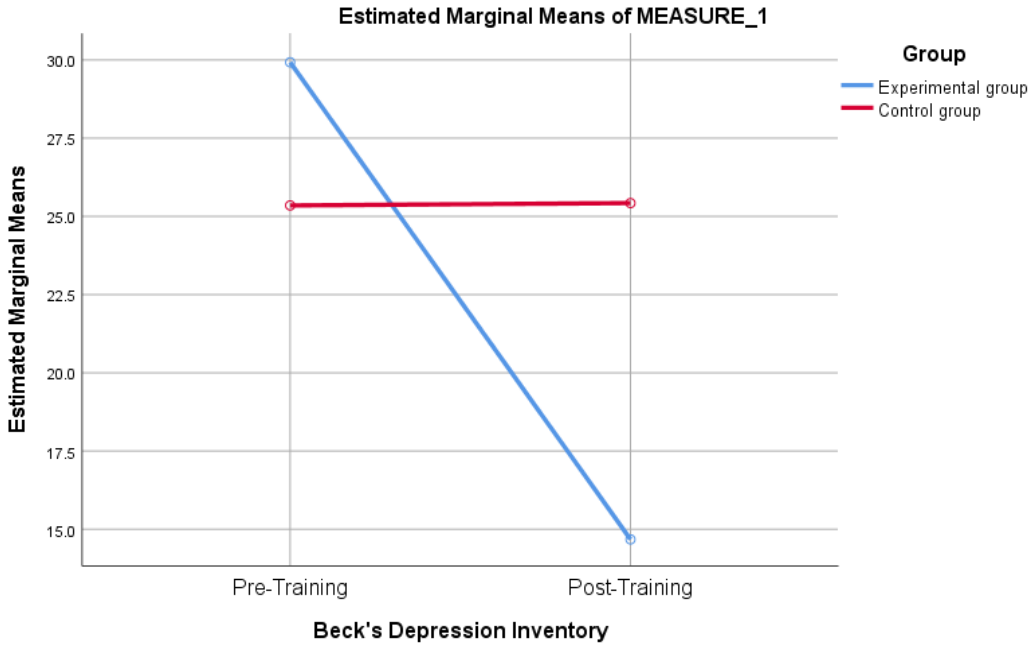


**Figure 5: Estimated marginal means of beck's depression inventory before and after the training according to the study groups (experimental and control)**

Figure (5) shows the effect size of the training on reducing the depression among nurses pre-training and post-training is large, as the partial Eta squared ($\eta^2$) equal to (0.430) where ($\eta^2 > 0.14$), in addition to the effect size of the interaction between the training and group is large, with the partial Eta squared ($\eta^2$) equal to (0.434) where ($\eta^2 > 0.14$).

## DISCUSSION

Results of the current study revealed that sixty percent compared to twenty-five of the studied nurses were in years between thirty to less than forty years for experimental and control group respectively. As regards residence, eighty-two and five percent compared to eighty percent lives in city for experimental and control group respectively. The studied nurses' age and degree of maturity may suggest that they were able to develop a certain degree of professional isolation. Younger nurses or those with less experience may face unique stressors related to navigating the demands of the profession and developing coping mechanisms. Older nurses, while potentially having more experience, may also background higher levels of stress due to increased tasks or potential career plateaus. Concerning marital status, this study revealed that peak of the nurses surveyed married. This outcome may be attributed to the heightened stress levels arising from the various

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and intricate roles that these women must fulfill: as wives, mothers, employees, and housekeepers. This finding aligns with the research conducted by Kantola & Lombardo (2019) from Canadian institutes of health research, which included a sample of 90 nurses, most of whom were married. However, results contrast with those of Salmond et al. (2019) at the University of Ottawa, who reported that the majority of nurses working in pediatric oncology were divorced, with only twelve% being married.

As regards educational level, sixty seven percent and eighty five percent of participated nurses have a bachelor's degree for experimental and control group respectively. However, thirty two percent and half and twelve and half percent of them have a diploma for experimental and control group respectively. Similary, (Vegal et al.,2023) Research demonstrated that nurses employed in inpatient settings who possessed higher educational qualifications experienced increased levels of anxiety contrasted to their peers with mild educational backgrounds. A similar investigation carried out in Bangladesh revealed that nurses had significantly lower scores on the anxiety and stress subscale ($p < 0.001$) when contrasted to those nursing professionals holding a master's degree (Chowdhury, et al., 2021). Additionally, a study conducted in Greece found that nurses with graduate degrees were 3.44 to 4.24 times more susceptible to encounter symptoms of anxiety than nursing supporters. These outcomes might be linked to the heightened levels of task, good expectations, and self-evaluation approaches faced by nurses with advanced education, which can contribute to a greater risk of anxiety (Tsaras, et al., 2018a).

Findings of this study indicated that eighty percent of the experimental group and eighty-two percent of the control group were male. The predominance of male nurses in mental health environments may stem from their perceived physical capability and their ability to handle aggressive patients. Additionally, the necessity for rapid and decisive actions during emergencies corresponds well with the strengths and preferences of many male nurses. In line with the research by (Shmilovitz, Ithaki, and MKoton ,2021), male nurses' capacity to stay calm and collected under pressure is crucial in psychiatric emergency situations. Male nurses frequently thrive in high-pressure conditions, utilizing their problem-solving abilities and determination to deliver effective care during crises. Their involvement in these environments can enhance team dynamics, leading to a more balanced and efficient collaboration. Male mental health nurses can also take on important roles in advocacy and leadership, tackling systemic challenges in mental health care and championing rules that promote psychiatric health strategies.

Findings of current study indicated that 35% of nurses in the experimental group and 23% in the control group have between five and less than ten years of experience working in a psychiatric hospital. Seventeen percent of nurses in the experimental group and 47% in the control group have between one and less than three years of experience in a psychiatric hospital. For both groups, 25% of nurses in the experimental group and 22% in the control group have three to less than five years of experience working in a psychiatric hospital. Additionally, 23% of nurses in the experimental group and 8% in the control group have over ten years of experience in a psychiatric hospital.

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A research study conducted by (Mohamed, Ghaith, and Ahmed, 2022) revealed that most nurses with ten or more years of experience experienced symptoms of depression. This may be attributed to factors such as occupational pressures, excessive function demands, and inadequate of acknowledgment. The depressive symptoms in nurses showed a highly statistically significant positive correlation with their age and marital status, whereas their years of experience only exhibited a statistically significant relationship. This result aligns with the findings from (Tsaras et al. 2018 a, b), who explored “Predicting Factors of Depression and Anxiety in Mental Health Nurses” in Greece, discovering that age, marital status, educational attainment, and nursing background were all linked to a rise in depressive symptoms among mental health nurses.

In examining the depression levels among the nurses involved in the study, it was found that the depression levels significantly improved for those in the experimental group. The pre-intervention assessments indicated that percentages of nurses experiencing minimal, mild, moderate, and severe depression were zero percent, twelve and a half percent, sixty-two and a half percent, and twenty-five percent, respectively. In comparison, the post-training results for the experimental group showed seventeen and a half percent, forty-five percent, thirty-seven percent, and zero percent in the same categories. However, there was an increase in the percentage of nurses experiencing minor mood disorders, suggesting a transition from severe to milder symptoms. This could be attributed to the interconnection between challenging work environments, the demanding nature of their roles, and insufficient rewards for their efforts. Considering the professional stress and uncertainties faced in the field, psychiatric nurses are likely to endure psychological strain as they consistently interact with patients, which can influence their behavior and attitudes. Additionally, life stressors, economic circumstances, and prolonged engagement with patients suffering from depression can impact their mood and emotional well-being. Furthermore, the challenges related to the relapse and long-term care of psychiatric patients contribute to their feelings of frustration and disappointment.

According to the research conducted by (Liao, Deng, Jian, and Liu ,2024), a study involving 64 psychiatric nurses revealed findings about their levels of depression. The study showed that these 64 nurses had an average BDI score of 5.73 ± 1.61, with 12 nurses (18.75%) scoring above 4, while 52 nurses (81.25%) scored 4 or lower. This indicates that psychiatric unit nurses commonlly experience a low level of depression, although some are dealing with moderate depressive symptoms that may require clinical intervention.

The elevated likelihood of depression among psychiatric nurses could be attributed to the intense work load of their profession and prolonged exposure for stress, resulting in emotional fatigue, lower job satisfaction, diminished self-confidence, and decreased self-esteem. Psychiatric nurses frequently confront challenging and emotionally taxing situations, such as managing aggressive patients, handling trauma, and observing suffering. A study conducted by (Farahat, 2025) aimed at evaluating levels of depression, anxiety, and stress among nursing students at Govt. Nursing College Gangyal, Jammu,

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found that the percentage distribution of depression levels was as follows: 50% normal, 21% mild, 16% moderate, 7% severe, and 6% extremely severe. A systematic meta-analytic review of studies from Iran on the prevalence of depression among nurses, carried out by Hemmati et al. (2021), indicated that the incidence of moderate to severe depression was 36% based on the BDI, 28% based on the Depression Anxiety Stress Scales-21, and 52% as per the General Health Questionnaire-28. This review pointed out significant variability in reported rates of depressive symptoms among nurses, highlighting the effect of different assessment tools on the documented prevalence.

The findings of the current study indicate that there is a significant statistical difference in depression levels among nurses after completing a problem-solving training program compared to before the training. Specifically, the results demonstrate that the average score on Beck's Depression Inventory is lower after the training than before. This outcome may be attributed to the problem-solving training, which empowers psychiatric nurses by boosting their confidence and enhancing their skills in managing difficult, challenging, and stressful situations. Furthermore, it improves their self-efficacy and coping strategies, thereby reducing depressive symptoms and stress levels among them.

The research conducted by (Şenocak and Demirkıran ,2023) highlights that training in problem-solving skills enables clients to utilize their inherent resources and capabilities during the change process, promoting feeling of optimism. Psychologists foster clients' feelings of self-efficacy and independence by encouraging them to create and organize their own solutions. The success of problem-solving skills training is likely linked to its power to inspire clients by fostering a sense of self-efficacy and independence in devising and organizing solutions. Essentially, this methodology redirects attention from obstacles and medical disease to the positive and healthy life style elements, viewing every patient like an an individual client as a self-guided and resourceful person with distinct strengths and attributes. These fluctuations raise patients’ incentive to explore individualized solutions (Oanh, Thuy, Huyen, 2024; Metz et al., 2023).

The findings from the research conducted by (Eskin, Kurt, and Demirkiran ,2012) indicate that cognitive-behavioral problem-solving interventions may effectively lower psychological distress and enhance resiliency factors. Participants who underwent problem-solving training experienced a significant mitigation in depression and perceived stress levels, along with a notable increase in self-esteem from the beginning to the end of the training, whereas those in the waiting control group showed no changes in their depression, stress, or self-esteem levels.

According to research by (Lau,2014 and Fowler ,2013), participants in the intervention group who developed social problem-solving abilities were capable of identify, agree, and address their problems by focusing on their advantages and disadvantages. They demonstrated the impact of problem-solving skills on self-awareness and stress management. Furthermore, (Robinson, Weitzner, and Calamia, 2022) validated that they illustrated how self-awareness and stress management are impacted by problem-solving abilities (Foroughi et al., 2019). In summary, it is anticipated that problem-solving skills will enhance emotional intelligence.

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The findings also indicated a large effect size of the training in lowering depression levels among nurses between pre-training and post-training assessments, along with a large effect size for the interaction between training and group. Notable decrease in depression levels among psychiatric nurses following the problem-solving skills training is significant and indicates that the intervention successfully addresses a major psychological concern in mental health care. Nurses acquired resilience and adaptive coping strategies to alleviate severe depressive symptoms and enhance their emotional stability and mood. Research by Ebrahimi, Atri, Ghavipanjeh, Farnam, and Gholizadeh (2013) indicates that ineffective or negative approaches to problem-solving can enhance the start and persistence of depression. Educating nurses in problem-solving techniques can result in improved mental health outcomes for them. One method of enhancing coping skills is through the training of problem-solving abilities. The development of problem-solving skills is one way to improve coping abilities. The cognitive behavioral strategy of problem-solving provides potential helpful answers. Training in problem-solving equips individuals with the necessary skills, ultimately enhancing their ability to cope effectively.

A study conducted by (Ebrahimi and colleagues, 2013) investigated how teaching depressed nursing and maternal health care students how to solve problems affects their coping mechanisms. The results showed that there were no discernible differences in the study groups and control group's coping mechanisms before the intervention. But after the intervention, a notable distinction between the study group and the control group was observed. Within the study group, a significant difference was observed between the average coping skills before and after the intervention

## CONCLUSION

Psychiatric nurses can prevent and treat depression by learning problem-solving techniques, according to this study's compelling evidence. These significant decreases in depression after the intervention suggest that this approach is a promising nursing therapeutic intervention.

### Recommendations

- Problem-solving skills training is an essential intervention must be periodically conducted for psychiatric nurses.
- The intervention in the present study is needed to be applied in a large sample of nurses and in longer duration to follow up their abilities to be integrated in the workplace, social life and cope effectively with its problems.
- Regular Mental Health Screening for psychological problems among PMHNs (stress, anxiety, and depression) must be incorporated as part of the nurse’s regular check-up.

Further study is needed to apply this approach in a large sample of nurses and in longer duration to follow up their abilities to be integrated in the workplace, social life and cope effectively with its problems.

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