

Effect of Resilience Training Program on Thriving at Work and Burnout Mitigation for Nurses

Rasha Mohamed Nagib Ali¹, Maaly Zayeded Mohamed², Fatma Nagy Kotb³, Nadia Taha Mohamed⁴, Marwa Kamal Mohamed⁵

¹Assistant professor of Nursing Administration, Faculty of Nursing, Minia University, Egypt.

^{2,4}Assistant professor of Nursing Administration, Faculty of Nursing, Cairo University, Egypt.

³Assistant professor of Psychiatric and Mental Health Nursing, Faculty of Nursing, Minia University, Egypt.

⁵Lecturer of Nursing Administration, Faculty of Nursing, Cairo University, Egypt.

Corresponding author: Fatma Nagy Kotb

Email: fatmanagi@mu.edu.eg

Abstract

Background: The nursing profession, which is vital to the healthcare system, suffers difficulties like high levels of stress and job burnout as a result of demanding work environments. **Aim:** determine the effect of resilience training program on thriving at work and burnout mitigation for nurses. **Research Design:** A one group pretest- posttest, a quasi-experimental research approach was used. **Setting:** the study conducted at Minia Psychiatric Mental Health and Addiction Hospital; and Chest Hospital. **Sample:** 90 staff nurses participated in the study. **Tools:** Personal characteristics and work-related data sheet; Nurses' Knowledge questionnaire of Resilience, Resilience Practice at Workplace Scale, Thriving at Work Scale, and Maslach's Burnout Inventory Scale. **Results:** Study findings denote that, statistically significant improvement in nurses' resilience knowledge, practices, and thriving levels immediately post-program, also, satisfactory resilience knowledge increased. Moreover burnout rates showed a dramatic decline, immediately after the program. **Conclusion:** The study revealed the effectiveness of resilience training on enhancing staff nurses' psychological well-being, workplace thriving, and mitigation, professional performance while reducing burnout. **Recommendations:** incorporating resilience-building strategies into nurses' education and professional development to promote a sustainable and thriving workforce in healthcare settings.

Keywords: Resilience training program, Staff nurses, Thrive at work, Burnout Mitigation.

Introduction

The nursing profession plays a vital role in the healthcare system by giving patients the care and assistance they need. Nonetheless, nurses frequently experience significant levels of stress and strain due to the demanding nature of their work. Job burnout is mostly caused by long workdays, emotional strain, and the ongoing pressure to provide patients with high-quality care. Depersonalization, emotional weariness, and a lessened sense of personal success are characteristics of job burnout. It has an adverse effect on nurses' mental, physical well-being and the standard of care they deliver, which could put patients' safety at danger (Li, & Wang, 2020).

The idea of resilience has become essential in assisting nurses in managing and overcoming stress at work as a result of these difficulties. Resilience is the ability to swing back from challenging circumstances, preserve psychological health, and adjust favorably to adversity. A variety of abilities and qualities, including emotional control, optimism, and problem-solving skills, are involved, allowing people to successfully overcome obstacles. Resilience, adaptability, and coping are often used interchangeably. An individual needs, however, develop four primary forms of resilience in order to sustain himself in trying circumstances. Among these are social, emotional, physical, and psychological resilience (Bonanno, 2023).

For frontline healthcare personnel to handle challenging circumstances, particularly during public health

emergencies, resilience is crucial. Good psychological resilience is linked to good coping methods that can improve nurses' work performance, help them react quickly, improve their capacity to handle pressure at work, avoid work tiredness, and prevent potential psychological issues. Furthermore, Tenacity, strength, and optimism are the three components that make up psychological resilience, often referred to as psychological adaptability, which is a positive elasticity quality exhibited by an individual when confronted with challenge (Bonanno, 2023).

The term emotional resilience describes the range of methods in which people cope with unpleasant emotions like grief, anger, fear, and vulnerability as well as their emotional reactions to adversity. It is essential that we have the emotional strength to endure our circumstances while simultaneously accepting their truth (Mills & Kimbrough, 2023). The same author defines physical resilience as the body's ability to adapt to physical stimuli and maintain the stamina and strength needed for rapid and effective recovery. Additionally, social resilience, also known as community resilience, refers to the collective capacity of a group to adapt to and overcome adversity.

Programs for resilience training aim to improve these abilities and qualities, giving people the means to develop and preserve resilience. Techniques like mindfulness, cognitive-behavioral tactics, stress management, and the building of social support are frequently included in these programs.

These initiatives seek to enhance nurses' general well-being, job happiness, and performance by promoting resilience. According to **Foster, Cuzzillo, and Furness (2019)**, these programs usually incorporate elements like stress management approaches, cognitive-behavioral tactics, mindfulness practices, and emotional regulation abilities. According to recent research, resilience training can help healthcare workers feel more satisfied with their jobs, have better mental health, and lessen burnout symptoms (**Arrogante & Aparicio-Zaldivar, 2020**).

Another important thing that resilience training programs aim to foster is the capability to thrive at work. The psychological state of flourishing is characterized by people feeling alive and learning at work. It is more than just professional pleasure; it is a dynamic process of personal development. High-performing nurses are more engaged, driven, and able to provide patients with superior care. They feel more fulfilled and purposeful in their jobs, which enhances their general well-being and length of service (**Stephens, Heaphy, & Dutton, 2021**). Additionally, a dual sensation of learning and vitality are characteristics of flourishing in the workplace. While learning entails both professional and personal development, vitality is the sensation of being alive and invigorated. People who are flourishing are more productive, more able to handle stress, and more inclined to take initiative. In the nursing environment, flourishing can result in improved patient

outcomes, increased job satisfaction, and a decreased risk of burnout (**Spirig, Bauer, & Jenny, 2020**).

Because of the nature of the work, which frequently entails life-or-death circumstances, emotional encounters with patients and their families, and the requirement to remain composed and professional under duress, nursing is an inherently stressful career. Nurses frequently experience job burnout, which has serious consequences for their own well-being and patient care. In addition to psychological symptoms like sadness, worry, and a sense of helplessness, burnout can cause physical symptoms including exhaustion, headaches, and sleep problems. Increased absenteeism, high rates of turnover and a drop in the quality of care are some of the organizational implications (Jennings, 2020).

Depersonalization, diminished personal accomplishment, and emotional tiredness are the three main characteristics of job burnout. Feelings of being overextended and emotionally spent are referred to as emotional tiredness. In **2023**, **Maslach and Leiter**. A detached response to health care and a cynical attitude toward patients are examples of depersonalization. Reduced personal accomplishment is the propensity to have negative self-perception, especially when it comes to one's work with patients. Serious outcomes include lower job satisfaction, higher absenteeism, and a higher turnover rate among nurses can result from burnout (**Dall'Ora et al., 2020**).

The current study explores the impact

of resilience training programs on staff nurses' ability to thrive at work and mitigate job burnout. By equipping nurses with resilience-building techniques, these programs can potentially transform the work environment, fostering a culture of support and sustainability. This research aims to offer valuable insights into the effectiveness of resilience training interventions and their role in promoting the well-being of nurses.

Significance of the Study

The nursing sector is encountering a worldwide shortage, with numerous countries finding it challenging to recruit and retain skilled nurses. It is vital to ensure that nurses not only survive but thrive in their work environment while being shielded from burnout, in order to establish a sustainable workforce capable of addressing the increasing needs of healthcare systems (WHO, 2020). Exploring the impact of resilience training programs on enhancing workplace thriving and reducing job burnout among nurses is essential for boosting both individual well-being and the overall standard of patient care. Such training can equip nurses with improved coping strategies, lessening stress levels and averting burnout. Moreover, when nurses acquire robust resilience skills, they are more likely to flourish at work, experiencing a greater sense of competence, purpose, and positive involvement in their roles.

An expanding body of research shows that resilience training programs can play a significant role in tackling these issues by boosting nurses' capacity to

thrive in their work environment, mitigating job burnout, and enhancing overall job satisfaction (Kelly et al., 2021). According to studies by Bakker and van Wingerden (2021), nurses with higher levels of resilience may be more adept at managing challenging patient care scenarios, workplace disputes, and the emotional demands associated with their roles. Resilience training offers a powerful tool to support nurses' mental health, reduce the prevalence of burnout, promote positive psychological states like thriving, and leads to a more stable and engaged nursing workforce. Therefore, this study, aimed to unearth the effect of resilience training program on staff nurses' thriving at work and burnout mitigation.

Aim of the study

The study aimed to determine the effect of resilience training program on thriving at work and burnout mitigation staff nurses'

Research Hypothesis:

- **H1:** There will be increase in staff nurses' resilience knowledge, and practices test score after resilience training program implementation than before.
- **H2:** There will be increase in staff nurses' level of thriving at work mean score after program implementation than before.
- **H3:** There will be decrease in staff nurses' level of burnout mean score after program implementation than before.

Subjects and Method

Design:

The study was carried out using a quasi-experimental one-group pretest-

posttest research design.

Setting:

The study was conducted at two hospitals: Minia Psychiatric Mental Health and Addiction Hospital and Chest Hospital. The Minia Psychiatric Mental Health and Addiction Hospital, located in New Minia City in Upper Egypt and affiliated with the Ministry of Health, offerings the (9) districts of Minia Governorate. There are two floors: the 1st floor houses the female inpatient unit, outpatient clinics, and a pharmacy, while the 2nd floor includes administrative offices, a nursing office, a department dedicated to addiction treatment, and a male inpatient ward. The hospital has a total of 53 beds available for patients of both genders.

The Chest Hospital is separated into three sections. The first section consists of two floors: the ground floor contains emergency rooms and outpatient clinics, while the first floor houses the intensive care unit, and the second floor is dedicated to pediatric and neonatal care. The second section of the hospital has three floors, with the ground floor accommodating the hospital kitchen. The third section also consists of three floors: the ground floor includes X-ray facilities, operating rooms, and the hospital pharmacy, while the third floor contains laundry and sterilization rooms.

Subjects:

A convenience sample of available staff nurses (n=90 out of 180) who were working at previously selected settings was targeted. This sample size was calculated using G Power to ensure sufficient statistical power.

Minia Psychiatric Mental Health and Addiction Hospital (33nurses), Chest hospital (57nurses).

Tools of data collection:

Tools: To achieve the current study's a goal, data was gathered using five different instruments.

Tool I: Personal characteristics and work-related data sheet: It was developed by researchers which include the following data: age, sex, residence, and years of experience, previous training courses on resilience.

Tool II: Nurses' Knowledge questionnaire of Resilience: to assess (pre/posttest) nurses' resilience knowledge. It was developed by researchers based on based on a literature review guided by Gillespie, Chaboyer, and Wallis, (2007); McAllister and McKinnon, (2009) and Hart, Brannan, and De Chesnay (2014). The questionnaire consisted of 30 questions, including multiple-choice and True/False formats. These questions were divided into five dimensions to assess staff nurses' knowledge of resilience. The dimensions were as follows: (Definition and Understanding of Resilience (5 items), Personal Resilience Strategies (5 items), Workplace Resilience (5 items), Emotional Regulation and Coping Mechanisms (5 items) and Social Support and Relationships (5 items).

The scoring system was designed such that each correct answer was granted (1) point, while incorrect answers received (0) points. The overall score for each nurse was calculated based on their total responses. A score of 75% or higher

was considered to indicate a satisfactory level of knowledge, whereas a score below 75% was classified as unsatisfactory.

Tool III: Resilience Practice at Workplace Scale was adapted from Connor and Davidson (2003) and consisted of 30 items designed to evaluate staff nurses the resilience practices level (pre- and post-test). The scale was divided into five dimensions as follows: Personal Competence/Tenacity (11 items), Trust in One's Instincts/Tolerance of Negative Emotions (8 items), Positive Acceptance of Change and Secure Relationships (5 items), Control/Sense of Control (4 items), and Spiritual Influences (2 items).

Scoring System: Responses were evaluated using a three-point Likert scale, with the following scoring: (1 point for disagree), (2 points for neutral), and (3 points for agree). The staff nurses' resilience practice level at the workplace was categorized based on their total scores as follows: a score ranging from 30 to 49 indicated a low level of resilience practice; a score between 50 and 69 represented a moderate level; and a score between 70 and 90 denoted a high level of resilience practice.

Tool IV: Thriving at Work Scale: This tool was adapted from Spreitzer, Sutcliffe, Dutton, Sonenshein, and Grant (2005), as well as Atwater and Carmeli (2009). It consists of 11 items designed to assess staff nurses' feelings of vitality or energy in the workplace. Responses were scored on a three-point Likert scale, with (1) indicating disagreement, (2)

representing neutrality, and (3) signifying agreement.

Scoring System: All the scale's elements were added up to determine the final score. A higher score showed a greater level of thriving at work in the current setting. The scoring categories for thriving at work were as follows: Low thriving at work: Scores ranging from 11 to 18. Moderate thriving at work: Scores between 19 and 26. High thriving at work: Scores ranging from 27 to 33.

Tool V: Maslach's Burnout Inventory Scale

Maslach and Jackson (1981) created this instrument to evaluate staff nurses' levels of burnout. Its 22 items are divided into three categories: Personal Achievement (6 items), Depersonalization (8 items), and Emotional Exhaustion (8 items). The following options are available on a 6-point rating system for responses: 0 = Never First, once a year or less; second, once a month or less; third, once a month; fourth, once a week; fifth, a few times a week; and sixth, every day.

Scoring System: All of the scale's elements were added up to determine the final score. A higher score indicates more degree of burnout in the current work setting. The scoring categories for burnout are as follows: Low burnout: Scores ranging from 0 to 43. Moderate burnout: Scores between 44 and 88. High burnout: Scores ranging from 89 to 132.

Validity and Reliability of the tools

A panel of (5) professors with expertise in administration and psychiatry assessed the face and content validity of the tools. The

evaluation focused on determining whether the tools effectively measured the intended constructs, considering factors such as the items arrangement, simplicity, utilization, relevance, language, terminology, and overall presentation. Based on the experts' feedback, minor modifications were made, including rewording and restructuring certain phrases to enhance clarity and appropriateness. Cronbach's Alpha Coefficient, which gauges the internal consistency of each tool's components, was used to evaluate the study tools' dependability. Strong reliability was shown by the results for each of the four tools. Internal consistency and dependability Cronbach's Alpha values were as follows: 0.919 for tool (1), 0.983 for tool (2), 0.758 for tool (3), and 0.847 for tool (4).

Method and Procedure

The study phases were completed: assessment, planning, implementation, and evaluation.

The assessment and planning phase:

- Before initiating the study, official ethical approval was gained from the Ethical Committee of Scientific Research at the Faculty of Nursing, Minia University, to carry out the proposed research. Additionally, permission was secured from the administrative authorities of the selected hospitals to conduct the study.
- Informed consent was gained from all participants after clearly outlined the purpose and nature of the study, as well as their right to withdraw at any time without

consequences. To assure the clarity, applicability, and feasibility of the items of the tool, a pilot study was conducted on 10% of the participants, which included nine staff nurses. These participants were later not included from the main study sample. Based on the findings of the study pilot, minor modifications were made to improve the tools' clarity and effectiveness.

- A pre-test and a self-assessment questionnaire were administered to staff nurses prior to the commencement of the program. These tools aimed to assess workplace thriving and burnout as pretest phase related to resilience. The knowledge test required 30 to 45 Min to complete, while the self-assessment on resilience practices took approximately 35 minutes. Data collection occurred from the beginning of January to the end of August 2023. Based on the data gathered from the participants, their learning needs were identified. Following this, the program objectives were clearly defined, and the program content was developed to address the identified gaps in knowledge and practice.
- The program was reviewed by experts from the Ethical Scientific Research Committee to ensure its validity and alignment with the study's objectives. The researchers designed the program's schedule, ensuring a structured and organized approach to its implementation. Additionally, the investigators planned the study's administrative

& learning environment, including arranging necessary resources such as conference rooms and equipment like projectors \ data show within the hospital to facilitate effective delivery of the program.

The implementing phase (implement training program):

In this phase, the training program was developed depending on an assessment of relevant literature (e.g., Ang & Abu Bakar, 2023; Roberts & Grubb, 2022). The program included the design of teaching sessions and schedules tailored to address identified needs. The training covered a range of key topics, such as: the description and importance of resilience, characteristics of successful resilience, qualities of resilient individuals, Principles, components, and factors contributing to talent resilience, and Practical strategies for building and enhancing resilience. These elements were incorporated to ensure the program was comprehensive and aligned with the goals of improving resilience among participants.

Five subgroups of 18 staff nurses each were formed from the staff nurses who took part in the study. To guarantee successful engagement and learning, the researchers presented the software to each subgroup independently. To ensure flexibility and convenience, the number of sessions was modified in accordance with the participants' realistic schedules. The hospital's educational facility's classrooms served as the venue for the sessions, offering a suitable setting for instruction and communication.

The researchers provided the staff

nurses with a detailed goals explanation, time table, and program content. The program consisted of 12 sessions, with three sessions held per week, each lasting one hour. All 12 sessions were completed within five months for all groups, starting from January 2023 and concluding by the end of August 2023. **A follow-up was conducted three months after the program for each group to evaluate its long-term impact.**

- The objectives of the session were clearly explained to the participants at the beginning of each session, Feedback on the previous session was collected before starting a new one to ensure continuity and reinforce learning, and a review of the previous session was conducted at the end of each session.
- The training course was carried out at the hospitals under study and utilized a variety of instructional techniques, including lectures, brainstorming, homework assignments, discussions, and small group exercises. Instructional aids such as pamphlets, presentations, videos, and were used to enhance understanding and engagement.
- This structured approach ensured that the program was both comprehensive and adaptable to the needs of the participants while maintaining consistency across all group.

Session 1: Introduction to Resilience and Emotional Awareness (Define resilience and its relevance to nursing practice.

Session 2: Identifying Workplace

Stressors (Discuss common stressors in the nursing field and their impact on resilience, group discussions, and reflective exercises to share personal experiences).

Session 3: The Function of Resilience in the Workplace (task focus, which includes focusing behaviors and paying attention to job tasks and responsibilities; exploration, which stands for experimentation, innovation, risk-taking, and discovery to stretch and grow in new directions; and heedful relating, which means attentively connecting to the social/relational environment by watching out for one another).

Session 4: Understanding the Relationship between Resilience and Burnout (explore how resilience mitigates job burnout (case presentation, and group activities), teach nurses early signs of burnout and the role of resilience in prevention.

Session 5: Teach mindfulness techniques through role play. And conduct guided practice sessions in managing high-pressure situations.

Session 6: Focus on cognitive reframing and emotional flexibility. And Practice emotional regulation in role-play scenarios specific to nursing challenges.

Session 7: Coping Strategies for Adversity (Identify adaptive vs. maladaptive coping strategies, Teach journaling and reflective practices to process workplace adversity, and Develop personalized coping toolkits.

Session 8: Thriving at Work (Cultivating Positive Work Relationships) through (Explore the importance of teamwork,

communication skills, and Conduct activities to build trust, peer support, and positive work environment).

Session 9: Discuss conflict resolution, and practice effective communication strategies through role-plays, and case presentation.

Session 10: Leveraging Strengths and Resources (Teach nurses how to identify personal strengths and professional resources, and Set professional goals using SMART techniques, and strategies for time management).

Session 11: Burnout Prevention and Sustaining Resilience (Educate participants' signs, symptoms, and stages of burnout. efficient time management, communication, problem-solving, and decision-making, and stress management techniques through role play, case analysis and presentation.

Session 12: Recognizing and Addressing Burnout (Discuss organizational support and resources available for burnout prevention, teach nurses how to create individualized action plans to prevent burnout, and develop long-term action plans to integrate resilience practices into daily nursing routines.

Evaluation phase

The immediate impact of a resilience training program on nurses' ability to thrive at work and mitigate job burnout was evaluated using four tools: Maslach's Burnout Inventory scale, Nurses Knowledge of Resilience Scale, Resilience Practice at Workplace Scale, and Thriving at Work Scale. A follow-up research was carried out three months following the program's launch to assess its impact

on burnout prevention. Four tools were employed in this study: Maslach's Burnout Inventory, the Nurses Knowledge of Resilience Scale, the Resilience Practice at Workplace Scale, and the Thriving at Work Scale.

Ethical consideration

Primary official permission was obtained from the Ethical Committee of Scientific Research at the Faculty of Minia to conduct the proposed study. Additionally, official approval was secured from the administrative personnel of the selected hospital to proceed with the research.

Informed consent was gained from all participants after providing a clear clarification of the purpose, benefits, and nature of the study. The staff nurses were informed that their participation was entirely willing and that opting out would have no negative consequences for them. A detailed explanation of the study was provided, including its aims, potential benefits, and the procedures involved. Furthermore, the process for withdrawing from the study was clearly outlined, ensuring that participants understood they could stop participating before, during, or after data collection without any repercussions.

Participants were assured of their right to decline participation and were informed that their personal information and responses would remain private and discreet throughout the duration of the research. This approach ensured that ethical standards were upheld and that participants felt respected and informed throughout the research

process.

Statistical Analysis

Excel and the SPSS statistical software for social sciences (version 24) were used to conduct the statistical analysis of the data. The mean \pm standard deviation (SD) was used to characterize quantitative data, and frequency and percentage were used to summarize qualitative data. The following analysis was done on the data to see if there were any statistically significant differences between the groups: We used the Chi-square test for qualitative data. At the 95% confidence level, a p-value of less than 0.05 was deemed statistically significant. For quantitative data, the same group was compared at several point of time (e.g., before and after the intervention) using a paired sample t-test. These statistical techniques guaranteed proper interpretation of the findings and the ability to derive significant inferences from the information.

Results

Table (1): shows that, the age group 25-35 years constitutes the largest proportion (56.7%) of the sample. Regards to gender, the majority of the sample were female (60.6%), A significant majority of the sample reside in urban areas (63.3%). Approximately half of the sample had less than 10 years of experience (50%), indicating many relatively new nurses. About 94.5% from nurses do not attend any program about resilience.

Table (2) revealed that, before the implementation of the program, the level of satisfactory knowledge was very low (18.8%), while the level of

unsatisfactory knowledge was high (77.7%). Immediately after the implementation of the program, the level of satisfactory knowledge significantly increased to 92.2%. Three months post-program, the level of satisfactory knowledge remained high at 87.8%. The p-values ($P1=0.001^{**}$ and $P2=0.001^{**}$) show statistically significant differences in knowledge levels before and after the implementation of the program.

Table (3) denoted that, before the implementation of the program, the majority of the sample had low resilience (78.9%). Immediately after the program, the level of high resilience significantly increased to 90%. Three months post-program, high resilience remained high at 81.1%. The p-values ($P1=0.001^{**}$ and $P2=0.001^{**}$) indicate statistically significant differences in resilience levels before and after the program.

Table (4) explored that, before the program, 66.6% had low thriving levels. Immediately after the program, 91.1% had high thriving levels. Three months post-program, 78.8% maintained high thriving levels. P1 and P2 values (0.0001^{**} and 0.000^{**}) show significant differences in thriving levels before and after the program.

Table (5) revealed that, before the

program, 87.7% had high burnout levels. Immediately after the program, only 2.2% had high burnout levels. Three months post-program, 6.6% still had high burnout levels. P1 and P2 values (0.001^{**} and 0.00^{**}) indicate significant differences in burnout levels before and after the program

Table (6) examined the significant correlation between resilience knowledge and burnout ($r = -0.597$, $p = 0.001$) as well as the significant positive correlations between resilience knowledge and practice ($r = 0.675$, $p = 0.001$) and thriving at work ($r = 0.668$, $p = 0.001$) prior to program implementation.

Furthermore, following program implementation, there are still considerable favorable connections between thriving at work ($r = 0.752$, $p = 0.001$) and resilience knowledge and practice ($r = 0.732$, $p = 0.001$). Burnout and resilience knowledge have a strong negative connection ($r = -0.516$, $p = 0.001$). Additionally, three months after the program ended, there were still favorable connections between thriving at work ($r = 0.760$, $p = 0.001$) and resilience knowledge and practice ($r = 0.740$, $p = 0.001$). Burnout and resilience knowledge continue to have a substantial negative connection ($r = -0.579$, $p = 0.001$).

Table (1): Personal and work related data of the study subjects at selected hospitals.

Personal characteristics	N= (90 staff nurses)	
	No	%
Age		
- 25-35yrs	51	56.7
- 36-46 yrs.	22	24.4
- <46yrs	17	18.9
Mean ± SD	28.9+1.31	
Gender		
- Male	36	40
- Female	54	60
Residence		
- Urban	57	63.3
- Rural	33	36.7
Experience		
- <10yrs	45	50
- 11-20ys	20	22.3
- >20yrs	25	27.7
Mean ± SD	6.85+1.58	
Do you attend previous training on resilience		
- Yes	5	5.5
- No	85	94.5

Table (2): Distribution of staff nurses' Resilience knowledge throughout the program at selected hospitals (N=90)

Level of nurses Resilience knowledge					
Pre-program implementation		Immediate post program		Three-month post program	
Un satisfactory	Satisfactory	Un satisfactory	Satisfactory	Un satisfactory	Satisfactory
N (%)	N (%)	N (%)	N (%)	N (%)	N(%)
73 (77.7)	17(18.8)	7(7.7)	83(92.2)	11(12.2)	79(87.8)
P ₁ = 0.001** (28.3)			P ₂ =0.001**(2.3)		
Anova test P =467.4(0.001**)					

P₁= pre and immediately post the implementation of the program, P₂= pre and after three months of implementation of the program p≤0.05 (significant)

Table (3): Distribution of staff nurses' resilience at workplace throughout the program at selected hospital (No =90)

Level of Nurses' resilience								
Pre-program implementation			Immediate post program			Three month post program		
Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
N (%)	N (%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
71(78.9)	10(11.1)	9(10)	1(1.1)	8(8.9)	81(90)	5(5.6)	12(13.3)	73(81.1)
P1= 0.001** (35.2)			P2=0.001**(20.8)					
Anova test P =551.5(.001**)								

P₁= pre and immediately post the implementation of the program, P₂= pre and after three months of implementation of the program. *p≤0.05 (significant)

Table (4): Distribution of staff nurses' thriving at work throughout the program at selected hospital (No =90)

Nurses' thriving at work level								
Pre-program implementation			Immediate post program			Three month post program		
Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
60(66.6)	18(20)	12(13.3)	2(2.2)	6(6.6)	82(91.1)	5(5.5)	14(15.5)	71(78.8)
P ₁ = 0.0001** (18.05)			P ₂ =0.000**(17.37)					
Anova test P =359.1(.001**)								

P₁= pre and immediately post the implementation of the program, P₂= pre and after three months of implementation of the program *p ≤0.05 (significant)

Table (5): Distribution of staff nurses' Burnout, throughout the program at selected hospital (No =90)

Burnout mitigation level								
Pre-program implementation			Immediate post- program			3 month post-program		
Low	Moderate	High	Low	Moderate	High	Low	Moderate	High
N(%)	N(%)	N(%)	N(%)	N (%)	N(%)	N(%)	N(%)	N(%)
8(8.9)	4(4.4)	78(86.7)	75(83.4)	13(14.4)	2(2.2)	72(80)	12(13.4)	6(6.6)
P1= 0.001** (23.22)					P2=0.00**(24.97)			
Anova test P =367.7(.001**)								

P₁= pre and immediately post the implementation of the program, P₂= pre and after three months of implementation of the program* $p \leq 0.05$ (significant)

Table (6): Correlation between staff nurses' total resilience practice, knowledge about resilience, thriving at work, and burnout mitigation during different times of testing at selected hospital

Variables	Nurse resilience total knowledge		Nurse resilience practice		Thriving at work		Burnout mitigation	
	r	P	r	P	r	P	r	P
Preprogram implementation								
Nurse resilience total knowledge	1		.675**	.001	.668**	.001	.597-**	.001
Nurse resilience total practice	-	-	1		.664**	.001	.640-**	.001
Thriving at work	-	-	-	-	1		.571-**	.001
Burnout mitigation	-	-	-	-	-	-	1	
Immediate post-program implementation								
Nurse resilience total knowledge	1		.732**	.001	.752**	.001	.516-**	.001
Nurse resilience total practice	-	-	1		.767**	.001	.551-**	.001
Thriving at work	---	-	-	-			.579-**	.001

Variables	Nurse resilience total knowledge		Nurse resilience practice		Thriving at work		Burnout mitigation	
	r	P	r	P	r	P	r	P
Burnout mitigation			-	-	-	-	1	
After three months of the program implementation								
Nurse resilience total knowledge	1		.740**	.001	.760**	.001	.579-**	.001
Nurse resilience total practice			1		.781**	.001	.615-**	.001
Thriving at work	-	-	-	-	1		.601-**	.001
Burnout mitigation	-	-			-	-	1	

Discussion

Staff nurses in healthcare organizations have been facing significant job burnout and psychological distress, which can negatively impact both quality of patient care and their well-being. It is crucial for policymakers and scholars to explore effective strategies to assist nurses manage these adverse psychological states. One promising approach is fostering resilience at work, defined as the ability to adapt to or recover from extremely challenging circumstances, or to positively respond to traumatic or adverse experiences. Resilience not only helps mitigate job burnout but also promotes thriving at work, enabling nurses to keep up a sense of vitality, engagement, and professional satisfaction (Vinkers et al., 2020).

In light of this, designing and implementing resilience-focused interventions is essential. This paper contributes to the existing body of

knowledge by examining the effectiveness of a resilience training program in enhancing thriving at work and reducing job burnout among staff nurses. Such research underscores the importance of equipping nurses with tools and strategies to navigate workplace challenges while cultivating a sustainable and encouraging workplace.

In the present study, the sample size is reasonably large, and the results indicate that the majority of participants fall within the age range of 25–35 years (56.7%), reflecting a productive and active workforce. This demographic profile is consistent with existing evidence on the gender imbalance and younger age distributions commonly observed in nursing samples, particularly in Egypt, where nursing is traditionally viewed as an occupation that is dominated by women. However, recent trends show an rise in the

number of male students enrolling in nursing education programs. This shift may be ascribed to a number of causes, including the abundance of job opportunities in the nursing profession compared to other fields, as well as a gradual change in societal perceptions of nursing as exclusively a female profession. These developments suggest a potential transformation in the gender dynamics of the nursing workforce, highlighting evolving attitudes toward the profession and its growing appeal across genders.

Regarding years of experience, half of the sample had less than 10 years of experience, indicating that they may lack sufficient experience to effectively manage various stressors encountered in clinical settings. As a result, these nurses are likely to benefit from acquiring new concepts and strategies to better cope with workplace challenges. Additionally, 75% of the participants live in urban areas, which suggest that they may have access to more resources compared to their rural counterparts. This access to resources could enhance their ability to implement resilience-related strategies, thereby rise their capacity to thrive or flourishing at work and mitigate job burnout. The availability of supportive environments and resources in urban settings may play a important role in facilitating the successful application of resilience-building techniques.

Regarding resilience knowledge, the results demonstrated a notable improvement immediately following the program implementation. The

majority of participants exhibited satisfactory knowledge levels, a significant increase compared to their pre-program performance. This enhanced knowledge was not only immediate but also sustained three months post-program, with most participants continuing to demonstrate sustained satisfactory knowledge. The statistically significant P-value confirms that these observed improvements are unlikely to be due to chance, underscoring the effectiveness of the intervention. These findings are in the same line with prior research, which highlights that structured resilience training programs can significantly enhance both the knowledge and practical application of resilience strategies among healthcare professionals. Such programs appear to play a crucial role in equipping nurses with the tools they need to better manage stressors and thrive in their work environments.

These results align with the findings of previous resilience programs, which have shown that resilience enhancement training can positively influence resilience levels and psychological well-being among nurses. According to a study published by (Schluter, et al., 2021), most participants found the program beneficial, reporting improvements in self-confidence, patient care quality , and communication skills .Similarly, a study by Mills and Kimbrough (2023) emphasized that resilience training programs significantly improved nurses' understanding of resilience concepts, such as coping strategies and stress management techniques . Participants

demonstrated an increased ability to manage workplace stress effectively and were better equipped with the knowledge needed to prevent burnout. These findings collectively underscore the value of resilience training in empowering nurses to handle workplace challenges while enhancing their overall well-being and professional performance.

On a different note, **Smith and Ward (2021)** found that although resilience training initially enhanced nurses' knowledge of stress management and resilience principles, the retention of this knowledge was limited over time. While participants were able to recall and apply some of the techniques and strategies learned during the program, the long-term impact on their knowledge was less pronounced than anticipated. The study highlighted that without ongoing reinforcement and support, the benefits of resilience training tended to reduce over time. This underscores the importance of incorporating continuous follow-up sessions, refresher courses, or workplace support systems to ensure the sustained application of resilience concepts and maintain their positive effects in the long term.

The program demonstrated a significant positive effect on the resilience practice levels of the nurses. Prior to the intervention, the majority of participants exhibited low resilience levels. However, after completing the program, most participants showed a marked improvement, achieving high resilience levels, which remained relatively stable even three months post-intervention. The statistically

significant P-values confirm that these improvements were not due to chance, highlighting the program's effectiveness. These outcomes can likely be attributed to the training components of the program, which focused on teaching behavioral coping skills that enhance resilience. Techniques such as cognitive flexibility, reframing negative thoughts, physical exercise, fostering positive emotions, and experimenting with adaptive behaviors played a significant role in constructing resilience among the participants. By equipping nurses with practical strategies to manage stress and adversity, the program successfully fostered long-lasting improvements in their ability to thrive in challenging work environments.

These results align with the findings of **Henderson and O'Connor (2021)**, whose study explored how experienced nurses perceived resilience training. Participants reported that resilience programs enabled them to better manage workplace stressors, leading to improved patient care, enhanced professional satisfaction, and better personal well-being. Nurses also highlighted that their ability to maintain composure during challenging situations positively influenced their overall performance, underscoring the practical benefits of such training. Similarly, a systematic review by **Mills and Kimbrough (2023)** concluded that resilience training programs for nurses have sustained effects on mental health and emotional resilience. Nurses who participated in these programs

reported achieving a greater balance between work and life and experiencing reduced levels of emotional exhaustion. These findings collectively emphasize the long-term value of resilience training in fostering not only professional growth but also personal well-being, enabling nurses to thrive in demanding healthcare environments while mitigating the risk of burnout.

While these results are promising, they contradict the findings of **Pehlivan and Güner (2020)**, whose multilevel model analyses revealed no statistically significant difference in the mean resilience scores of nurses in either the short- or long-term experimental groups. This discrepancy highlights the variability in outcomes across different studies and suggests that the effectiveness of resilience training programs may depend on factors such as program design, participant characteristics, or implementation strategies. In contrast, the current program demonstrated a positive impact on nurses' thriving at work. Initially, more than three-quarters of participants exhibited low levels of thriving. However, after completing the program, the majority reported high levels of thriving, with over half maintaining these elevated levels three months post-program. The statistically significant P-values confirm that these improvements were not due to chance, underscoring the program's effectiveness. These positive outcomes may be attributed to the program's focus on activities such as active coping skills, fostering a strong social support system, enhancing communication skills, and

promoting strategies to create a positive work environment. By equipping nurses with these tools, the program likely empowered them to experience greater vitality, engagement, and professional fulfillment, ultimately contributing to their ability to thrive in the workplace. These findings are in similar spirit with the study by **Yun, Zhou, and Zhang (2022)**, who highlighted that resilience at work, was significantly and positively associated with thriving at work. Similarly, the results align with the work of **Tugade and Fredrickson (2022)**, who demonstrated that resilience training programs positively influenced employees' thriving at work by enhancing their emotional regulation and coping strategies. Their study concluded that resilience not only improved individual well-being but also fostered higher levels of thriving, particularly in high-pressure environments like healthcare. On the other hand, these findings contrast with those of **Mayer and Bentley (2020)**, who reported that while resilience training programs had a short-term positive impact on nurses' thriving at work, the effects were not sustained over time. Nurses initially experienced improvements in emotional well-being and job satisfaction immediately following the program. However, these gains diminished over time due to the persistent stressors inherent in clinical environments. This suggests that while resilience training can provide temporary relief and improvement, ongoing support and reinforcement may be necessary to maintain long-

term benefits in highly demanding settings.

In relation to the effect of the resilience training program on burnout mitigation, a key outcome was the significant reduction in burnout levels among participants. Initially, the majority of participants reported experiencing high levels of burnout. However, this decreased dramatically immediately after the program and remained low even three months later. These results may be attributed to the positive impact of the program's sessions, which equipped nurses with techniques to enhance emotional resilience, improve stress management, and develop skills in effective communication, time management, and problem-solving and decision-making. By addressing these critical areas, the program likely empowered nurses to better manage workplace stressors, ultimately reducing their susceptibility to burnout. These findings underscore the potential of resilience training as an effective strategy for mitigating burnout and promoting sustained well-being among nurses in high-pressure healthcare environments.

These results are supported by existing research, which highlights that resilience training can effectively mitigate burnout among healthcare workers (Yun, Zhou & Zhang, 2022). Similarly, Wei, Roberts, Strickler, and Corbett (2019) found that nurse resilience significantly reduced levels of burnout. Furthermore, Kelly and Mason (2022) demonstrated that resilience training led to a significant reduction in burnout among nursing students.

The program in their study focused on enhancing emotional resilience, stress management, and coping strategies, equipping participants with tools to better handle workplace challenges. Participants reported a marked decrease in emotional exhaustion and depersonalization, two critical components of burnout, immediately after the training. These improvements were sustained at follow-up assessments conducted three months later. Collectively, these findings suggest that resilience training can serve as an effective intervention for reducing burnout, offering long-term benefits for nurses and other healthcare professionals working in high-stress environments. Such programs not only address immediate symptoms of burnout but also empower individuals with skills to maintain their well-being over time. On the contrary, these results are contradicted by Pehlivan and Güner (2020), who concluded that short- or long-term programs addressing compassion fatigue resilience had no significant influence on burnout levels among nurses. Similarly, Brown and Davis (2020) found that while resilience training programs can reduce certain symptoms of burnout, they are insufficient as standalone interventions to fully mitigate burnout in healthcare settings.

The authors noted that although nurses reported improved coping strategies and better emotional regulation following resilience training, these benefits were often temporary and failed to prevent burnout from recurring over time. The study emphasized that resilience

training alone is not enough to address systemic issues contributing to burnout. Instead, it should be complemented by organizational changes, such as ensuring adequate staffing levels, reducing workloads, and promoting improved work-life balance. These structural adjustments are crucial for achieving a more sustained and meaningful impact on reducing burnout among healthcare professionals.

Finally, the correlation analysis revealed strong positive relationships between resilience knowledge, resilience practice, and thriving at work, as well as a strong negative relationship between resilience knowledge and burnout. These findings suggest that enhancing resilience knowledge directly contributes to improved resilience practices, which in turn fosters greater thriving at work and better work outcomes. As a result, this reduces work stress, exhaustion, and burnout. These results align with the theoretical framework proposed by **Windle (2011)**, which posits that resilience fosters positive coping mechanisms and enhances overall well-being. Similarly, the study by **Shen et al. (2024)** supports these findings, as their results also revealed significant positive correlations between psychological resilience and thriving or flourishing at work. Together, these studies underscore the crucial role of resilience in promoting professional fulfillment, reducing workplace stressors, and improving mental health outcomes among healthcare professionals. This highlights the importance of integrating resilience

training programs into healthcare settings to not only support individual nurses but also enhance organizational effectiveness and patient care quality.

Conclusion

The current study findings concluded that The findings of this study strongly support the effectiveness of resilience training in enhancing staff nurses' flourishing workplace thriving while significantly reducing burnout. The intervention led to substantial improvements in resilience knowledge, practices, and thriving at work, with sustained positive effects observed three months post-program.

Recommendations

- Hospitals and healthcare institutions should provide continuous resilience training and access to mental health resources to assist nurses in preventing burnout and managing stress.
- Nurse Manager encouraging collaboration, open communication, and peer support in the workplace can further enhance the effectiveness of resilience training and promote long-term well-being for nurses.
- Regularly assess nurses' unique stressors and needs in different settings and adapt the program accordingly to ensure it remains relevant and impactful.
- Encourage healthcare organizations to incorporate resilience training into their broader employee well-being initiatives. Organizational commitment to nurses' mental health and resilience could lead to a culture change that values and

supports staff well-being.

- Equip nurse leaders with resilience knowledge so they can serve as role models and advocates for the mental health of their teams.
- Make resilience and thriving-focused training a recurring part of continuing education to ensure that nurses continuously build and maintain their capacity to handle stress and avoid burnout.

References

- Ang, S. Y., & Abu Bakar, S. H. (2023).** The role of resilience in mitigating burnout among nurses: A systematic review and meta-analysis. *Journal of Advanced Nursing*. DOI:10.1016/j.nedt.2011.09.005
- Arrogante, O., & Aparicio-Zaldivar, E. G. (2020).** Burnout and health among critical care professionals: The mediational role of resilience. *Intensive and Critical Care Nursing*, 59, 102849.
- Atwater, L., & Carmeli, A. (2009).** Leader-member exchange, feelings of energy, and involvement in creative work. *The leadership quarterly*, 20(3), 264-275.
- Bakker, A. B., & van Wingerden, J. (2021).** Resilience interventions to enhance thriving at work: A review and research agenda. *Applied Psychology: Health and Well-Being*, 13(1), 55-77.
- Bonanno, G. A. (2023).** The resilience paradox: Understanding how we cope with adversity. *Annual Review of Clinical Psychology*, 19, 257-281.
- Brown, A. K., & Davis, P. R. (2020).** Resilience training and its effects on nurses: A critical review. *Nursing Outlook*, 68(3), 308-314. <https://doi.org/10.1016/j.outlook.2020.02.009>.
- Connor, K. M., & Davidson, J. R. (2003).** Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and anxiety*, 18(2), 76-82.
- Dall'Ora, C., Ball, J., Recio-Saucedo, A., & Griffiths, P. (2020).** Characteristics of shift work and their impact on employee performance and wellbeing: A literature review. *International Journal of Nursing Studies*, 112, 103745.
- Foster, K., Cuzzillo, C., & Furness, T. (2019).** Strengthening mental health nursing through resilience education: A curriculum enhancement and evaluation. *Nurse Education in Practice*, 38, 27-32.
- Gillespie, B. M., Chaboyer, W., & Wallis, M. (2007).** Development of a theoretically derived model of resilience through concept analysis. *Contemporary Nurse*, 25(1-2), 124-135.
- Hart, P. L., Brannan, J. D., & De Chesnay, M. (2014).** Resilience in nurses: An integrative review. *Journal of Nursing Management*, 22(6), 720-734. <https://doi.org/10.1111/jonm.12084>
- Henderson, S. A., & O'Connor, M. (2021).** The role of resilience in nursing practice: A qualitative study of experienced nurses in

- high-pressure settings. *Journal of Clinical Nursing*, 30(7-8), 1069-1077.
<https://doi.org/10.1111/jocn.15739>.
- Jennings, B. M. (2020).** Work stress and burnout among nurses: Role of the work environment and resilience. *Nursing Outlook*, 68(1), 90-102.
- Kelly, L. A., Gee, P. M., & Butler, R. J. (2021).** Impact of nurse burnout on organizational and position turnover. *Nursing Outlook*, 69(1), 96-102.
- Kelly, L., & Mason, J. (2022).** Evaluating the effectiveness of a resilience training program in reducing burnout among nursing students. *Journal of Nursing Education*, 61(5), 280-287.
<https://doi.org/10.3928/01484834-20220420-08>
- Li, J., & Wang, S. (2020).** Workplace stress, job burnout, and quality of life in nurses: A cross-sectional study in China. *Journal of Nursing Research*, 28(3), e99.
- Maslach, C., & Leiter, M. P. (2023).** Moving Beyond the Disease Framework: The Social Context of Burnout and Mental Health. *The Routledge Companion to Mental Health at Work*, 137-149.
- Mayer, C. M., & Bentley, J. (2020).** Impact of resilience programs on job performance and thriving at work in clinical settings. *Nursing Research*, 69(2), 96-104.
<https://doi.org/10.1097/NNR.0000000000000426>.
- McAllister, M., & McKinnon, J. (2009).** The importance of teaching and learning resilience in the health disciplines: A critical review of the literature. *Nurse Education Today*, 29(4), 371-379.
- Mills, L. M., & Kimbrough, L. (2023).** Resilience training for nurses: A systematic review of its effects on burnout, stress, coping strategies, and knowledge. *Journal of Advanced Nursing*, 79(7), 1491-1503.
<https://doi.org/10.1111/jon.16379>.
- Pehlivan, T., & Guner, P. (2020).** Effect of a compassion fatigue resiliency program on nurses' professional quality of life, perceived stress, resilience: A randomized controlled trial. *Journal of advanced nursing*, 76(12), 3584-3596.
- Schluter, J., Winch, S., Holzhauser, K., & Henderson, A. (2021).** Nurses' moral sensitivity and hospital ethical climate: A literature review. *Nursing Ethics*, 14(3), 304-321.
- Shen, Z. M., Wang, Y. Y., Cai, Y. M., Li, A. Q., Zhang, Y. X., Chen, H. J., ... & Tan, J. (2024).** Thriving at work as a mediator of the relationship between psychological resilience and the work performance of clinical nurses. *BMC nursing*, 23(1), 194.
- Smith, T. G., & Ward, R. J. (2021).** Sustaining knowledge gains from resilience training: A study of nurses in clinical settings. *Journal of Nursing Management*, 29(7), 1386-1393.
<https://doi.org/10.1111/jonm.13163>
- Spirig, R., Bauer, G. F., & Jenny, G. J. (2020).** Strengthening

- resilience and promoting thriving in healthcare workers: Development of a workplace intervention model. *BMC Health Services Research*, 20(1), 1-12.
- Stephens, J. P., Heaphy, E., & Dutton, J. E. (2021).** Thriving at work as part of a dynamic work process: The interplay of resources and demands. *Journal of Applied Psychology*, 106(8), 1304-1323.
- Tugade, M. M., & Fredrickson, B. L. (2022).** Resilience training programs and employee thriving: A meta-analytic review of the literature. *Journal of Organizational Behavior*, 43(5), 738-754.
<https://doi.org/10.1002/job.2675>
- Vinkers, C. H., van Amelsvoort, T., Bisson, J. I., Branchi, I., Cryan, J. F., Domschke, K., ... & van der Wee, N. J. (2020).** Stress resilience during the coronavirus pandemic. *European Neuropsychopharmacology*, 35, 12-16.
- Wei, H., Roberts, P., Strickler, J., & Corbett, R. W. (2019).** Nurse leaders' strategies to foster nurse resilience. *Journal of nursing management*, 27(4), 681-687.
- Windle, G. (2011).** What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology*, 21(2), 152-169.
<https://doi.org/10.1017/S0959259810000420>.
- World Health Organization. (2020).** State of the world's nursing 2020: Investing in education, jobs and leadership. World Health Organization.
<https://www.who.int/publications/i/item/9789240003279>
- Yun, Z., Zhou, P., & Zhang, B. (2022).** High-performance work systems, thriving at work, and job burnout among nurses in Chinese public hospitals: The role of resilience at work. *Healthcare*, 10(10), 1935.
<https://doi.org/10.3390/healthcare10101935>.