

A descriptive correlational study on resilience and professional quality of life among nurses in a mental health hospital

Aisha Mohamed Nasser Al Mawali ¹, Fatma Mohamed Rashid Nasser Al Kaabi ², Ibtisam Mohamed Salim Al Shibli ³, Masoud Said Khamis Al-Souti ⁴, Hamida Al Harthy ⁵ and German M. Verosil Jr. ^{6,*}

¹ Sultan Qaboos University Hospital, Mental Health Department, Sultanate of Oman.

² Al Masarra Hospital. Mental Health Institution, Sultanate of Oman.

³ Al Masarra Hospital, Mental Health Institution, Sultanate of Oman.

⁴ Royal Oman Police, Forensic Department, Sultanate of Oman.

⁵ Oman Medical Specialty Board, Mental Health Program, Sultanate of Oman.

⁶ Oman Medical Specialty Board. Mental Health Program, Sultanate of Oman.

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Abstract

This study explores the relationship between psychological resilience and professional quality of life (ProQOL) among mental health nurses working in a psychiatric hospital in Oman. Nurses in mental health settings are frequently exposed to high levels of emotional stress, compassion fatigue, burnout, and secondary traumatic stress, which can negatively affect their well-being and the quality of care they provide. Despite the increasing demand for psychiatric services in Oman, limited empirical evidence exists to explain how resilience and ProQOL interact in this unique cultural and institutional context.

A descriptive correlational research design was employed, and data were collected from 186 registered mental health nurses using two standardized instruments: the Connor-Davidson Resilience Scale (CD-RISC-10) and the Professional Quality of Life Scale (ProQOL). Descriptive statistics were used to summarize demographic information and scale scores, while correlation and regression analyses examined the relationship between resilience and ProQOL, as well as the influence of demographic and work-related factors.

The results revealed that participating nurses demonstrated moderate to high levels of resilience and balanced levels of ProQOL, with compassion satisfaction generally outweighing burnout and secondary traumatic stress. A statistically significant moderate positive correlation was found between resilience and ProQOL ($r = 0.47$, $p < 0.001$), indicating that nurses with higher resilience are more likely to experience positive aspects of their professional lives. Regression analysis showed that ProQOL was a strong predictor of resilience. Educational level and ward assignment were also significant factors affecting ProQOL, while demographic variables such as age, gender, marital status, and years of experience were not significant predictors.

These findings highlight the significance of providing resilience enhancement through leadership services, organizational strategies, and continued professional development. The research will provide new local data that can inform both training interventions and policy shifts, supporting the mental health of nurses and facilitating high-quality, compassionate mental health care in Oman and other similar contexts. This research can provide healthcare leaders, educators, and decision-makers with theoretical and practical knowledge on building a resilient mental health nursing workforce, addressing an unexplored area in the GCC.

* Corresponding author: German M. Verosil Jr; Email: verosil112011@yahoo.com

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1 Introduction and Background

Quality of professional life refers to the views and contentment of professionals with their working lives (Sacco et al., 2015). Quality of professional life can be defined as the balance of positive and negative influences brought by employment in caring professions. Compassion satisfaction is the first component that encompasses positive feelings associated with interactions and performance. The second component is known as compassion fatigue, which encompasses both burnout and secondary traumatic stress. According to the studies, poor professional life quality significantly burdens healthcare professionals- nurses in particular: up to 50% are subject to burnout, and up to 25% have been suffering from secondary traumatic stress (Kim et al., 2019).

Prolonged work hours, high emotional demands, and chronic shortage of personnel usually result in significant burdens: poor quality of care, high turnover, absenteeism, and an increased risk for mental health problems such as depression and anxiety (Dall'Ora et al., 2020). The work environment becomes toxic, affecting individual workers and further deteriorating team performance and organizational effectiveness. Effective strategies to address these concerns are very important in assuring sustainable caregivers and high-quality healthcare delivery.

The study adopts resilience theory as its guiding framework. Resilience theory posits that individuals can adapt positively to stress. This framework is the foundation for exploring the relationship between resilience and professional quality of life among mental health nurses.

Quality of life tools offer a wide range of benefits across healthcare and research domains. They provide decision-making that offers comprehensive insight into patients' physical, psychological, and social well-being. This emphasis places healthcare providers at the forefront of doing patient-centered care plans (Kim et al., 2019). Besides, these tools are important in monitoring patient outcomes, which enables the timely detection of health problems and the assessment of the effectiveness of care and treatment (Cleary et al., 2018).

In addition, Quality of life tools facilitate better communication between patients and health providers by understanding emotional, physical, and social challenges. It improves patient-provider relationships (Lee & Chen, 2022). They formulate care plans, leading to higher patient satisfaction and improved health outcomes (World Health Organization, 2020). Quality of life tools also find their applications in clinical research, acting as a valid measure for the evaluation of the effects of an intervention, while policy decision-makers use their aggregated data to distribute resources and focus on disparities in healthcare (Kim et al., 2019). Also, such tools extend the circle of affordable healthcare, as early interventions in high-impact areas help reduce cases of hospitalization and, therefore, minimize the long-term cost burden (Lee & Chen, 2022).

Poor quality of life among healthcare workers, specifically nurses, is a widespread issue worldwide. A study showed a high prevalence of poor quality of life among the workforce as a consequence of occupational stress, very long hours of working, inadequate staffing, and emotional exposure to distressing incidents. For example, Zhang et al. (2021) reported that about 35-40% of nurses have moderate to serious impairments in Quality of life due to job-related stress and burnout. (Likewise, Silva et al., 2020) explained that over 30% of the workforce in health is under work-related chronic stress, which detracts from the quality of life.

The studies define burnout as emotional exhaustion, depersonalization, and diminished personal accomplishments. It is expected that 20-50% of employees working in health services suffer from this worldwide (Kim et al., 2019). This burden was increased with the COVID-19 pandemic; over 60% of healthcare workers reported a deteriorated quality of life during the time of the pandemic due to increased workloads and emotional distress, according to the report by Meneguín et al. (2023).

Poor quality of life has far-reaching consequences that go beyond the level of individual suffering in healthcare systems and patient outcomes. From a psychological point of view, strongly linked disorders include depression, anxiety, and PTSD, wherein nurses having poor quality of life proved to be 2.5 times more likely than peers to develop depression, which had been found in a meta-analysis conducted by (Xie et al., 2020). At the professional level, poor quality of life leads to low output at work, failure in patient care, and low decision-making ability; Firth-Cozens and Kornikova, in their work dated 2020, reported that "nurses with low quality of life were 35% more likely to commit clinical errors." Besides, it fosters increased turnover and absenteeism: "WHO says in its report dated 2023 that there is an increase in the global nurses' turnover rate by as high as 25%, mainly due to job dissatisfaction". Other concerns include physical

health deterioration, where Trinkoff et al. (2019) found that there was a relationship between poor quality of life and higher rates of back pain and hypertension, which has a direct effect on patient outcomes. Another study was done by Aiken et al. (2002). They found a strong relationship between nurses' quality of life and patient satisfaction. It was found that poor quality of life among nurses leads to less quality of care, resulting in reduced patient safety and increased mortality rates.

Systemic change will help to address this quality-of-life burden. Organizational support like adequate staffing, reduction in work hours, and mental health support have been shown to improve quality of life (Kim et al., 2019). Skills-based resilience programs for healthcare workers, suggested by Cleary et al. (2018), have also been found to reduce stress and enhance quality of life. Correspondingly, investment in healthcare systems with targeted interventions needs to be headlined by governments and organizations to help alleviate the workload burden and support work environments; these will be vital factors in lessening the burden of quality of life among healthcare workers, which ensures sustainability in healthcare.

Mental health nurses face unique challenges daily, as their work involves not only physical but also significant psychological demands in caring for their patients. This demanding environment raises serious concerns about the mental well-being of these nurses, who are often required to balance heavy workloads and high emotional pressures (Shen et al., 2024). These factors, both physical and psychological, can impact nurses' overall health, resilience, and ability to cope effectively.

There are many factors affecting the healthcare practitioners' quality of professional life (Sukut, 2022). The workplace environment also plays an important role. Toxic work environments characterized by bullying or poor communication will lower the quality of professional life, while positive environments that promote teamwork and collaboration enhance it (Kübra Torlak & Nilgun Goktepe, 2023). Other critical factors include social support both in and out of the workplace. A coworker and managerial support can buffer the effects of workplace stressors, while strong personal relationships enhance emotional resilience (Brough et al., 2018). Leadership and organizational culture also have a strong bearing on the quality of professional life, with transformational styles of leadership decreasing stress and enhancing feelings of purpose and belonging (Wei et al., 2020). Resilience—which is the personal factor or ability to adapt positively under continuous stress and adversity—has a profound enhancement effect on the quality of professional life. Indeed, resilience training programs will enhance emotional regulation and decrease burnout, thus increasing the quality of professional life. This is especially relevant during times of great stress, like the COVID-19 pandemic (Salimi & Ozel, 2023).

Other influencing factors for quality of professional life involve job autonomy, professional development possibilities, work-life balance, economic and policy issues. Job autonomy and greater decision-making power elicit higher satisfaction among nurses since they develop a sense of control and reduce stress (Iliopoulou & While, 2010). Cultural and gender considerations can influence the quality of professional life, particularly in regions where caregiver professions are predominantly female, and gender-specific stressors, such as balancing household and professional responsibilities, disproportionately affect women's quality of professional life (Kim et al., 2019). These factors need to be addressed through a combination of resilience training, supportive work environments, better leadership, and systemic solutions like adequate compensation and proper staffing. Such measures are vital to improving the quality of professional life of health workers and guaranteeing the sustainability of the healthcare workforce.

Resilience refers to the ability to overcome obstacles and maintain mental health in the face of adversity rather than avoiding challenges (Foster et al., 2019). Connor and Davidson (2003) developed the Connor-Davidson Resilience Scale (CD-RISC) as a tool to measure resilience, defined as the ability to adapt to stress and adversity. The CD-RISC consists of 25 items assessing aspects of resilience such as perseverance and adaptability, with higher scores indicating greater resilience. Despite some reported limitations, the scale showed high reliability and validity across clinical and non-clinical populations, including individuals with PTSD, anxiety, and depression.

There are other Resilience Scales. One of the scales was developed by Wagnild and Young, which measures resilience through personal competence and acceptance of self and life; it may be applicable across a wide range of populations. The Brief Resilience Scale assesses one's ability to recover or "bounce back" from stress, with an emphasis on recovery rather than broader coping strategies. ERS-89 addresses the level of adaptability, cognitive flexibility, and emotional regulation in the face of circumstantial change. Further, resilience among children and adolescents has also been measured with the Child and Youth Resilience Measure (CYRM) and its short forms, which emphasize the contribution of social and contextual variables to resilience. Such multifaceted views can thus be taken into consideration for the assessment of particular facets of resilience among diverse populations and settings.

Resilience affects the quality of life through several ways of adapting and thriving with adversities. One of the core mechanisms is through "emotional regulation": resilience that helps an individual manage his or her stress and negative emotions. Another important aspect is that resilient people are better positioned to reframe challenges, identify solutions, and maintain hope, thus sustaining overall well-being through "cognitive flexibility".

Social support also plays a very important role in the resilience-quality of life linkage. Resilient individuals often establish and maintain strong social networks that provide emotional and practical support during difficult times, therefore enhancing their sense of belonging and life satisfaction. Moreover, resilience enhances problem-solving skills and a proactive approach to challenges, thus enabling individuals to handle issues with much effectiveness, reducing stress, and improving their overall life satisfaction.

On a physiological level, resilience may dampen the effects of stress on the body, such as over-activation of the hypothalamic-pituitary-adrenal (HPA) axis, associated with chronic stress and poor health outcomes. By maintaining emotional, cognitive, social, and physiological balance, resilience buffers against adversity, thereby enhancing quality of life.

Psychological resilience is a crucial factor for nurses worldwide due to the significant stress, long working hours, emotional challenges, and responsibilities they face in high-pressure healthcare settings (Oginska-Bulik & Michalska, 2020). The literature suggests that nurses with higher resilience levels experience lower rates of burnout, fatigue, and psychological issues compared to those with lower resilience (Ivan Suazo Galdames et al., 2024). Nurses lacking resilience may struggle with managing work-related stress and personal challenges, which can negatively affect their work-life balance. Conversely, resilience is associated with a healthier balance between work and life responsibilities, contributing to a more positive quality of life (Ivan Suazo Galdames et al., 2024).

Many studies have investigated the effect of resilience on quality of life among health workers in the Middle East. A study carried out in Saudi Arabia during the COVID-19 pandemic found that higher resilience scores were significantly associated with better perceptions of overall quality of life and health, emphasizing the critical role of resilience in enhancing well-being among nurses (Abdualrahman Saeed Alshehry, 2024). A different study conducted two years after the pandemic on healthcare workers in Arab countries established resilience as a strong predictor of quality of life; that is, as the level of resilience increased, so did the quality of life among the participants (Kamal et al., 2022). These findings further provide the significance of resilience-building interventions for improving the overall well-being of healthcare professionals.

1.1 Rationale/ gap of the study

Despite producing valuable insights, the research on the relationship between resilience and quality of life in different countries suffers several gaps and limitations. In this regard, researchers have identified a significant gap in the existing literature, as there is limited research examining the relationship between resilience and quality of professional life among nurses in the mental health field. In addition, most of the related studies focused on a specific setting/country and explored the relationship between resilience and quality of life within that country alone, which is considered a gap in terms of different cultures and different medical settings that may affect the relationship between the two variables. Furthermore, Oman has yet to conduct a comparable study related to this topic. There is a need to explore the connection between professionalism and resilience in Oman in the mental health specialty among nurses.

1.2 Problem statement

Mental health nurses are working in stressful environments. Poor quality of life among nurses is an important public health burden, having broad-based impacts on individuals, health care systems, and ultimately on patient care. Commonly, nurses were exposed to high levels of stress, extensive working hours, and emotional and physical fatigue factors that predispose them to burnout, poor mental health, and dissatisfaction in their jobs.

Poor quality of life among nurses all over the world is characterized by high absenteeism, high rates of turnover, and decreasing quality of care, which also puts additional pressure on already overextended health services. In addition, poor mental health burden and reduced job performance are contributing to a less effective healthcare workforce, probably at the expense of patient outcomes and overall efficiency in the health system. Hence, addressing these issues through focused interventions becomes imperative for any effort toward improvement in the quality of life among nurses to maintain high-quality care in Oman and beyond.

In Oman, there is no research exploring the relationship between psychological resilience and professional quality of life among mental health nurses. However, a study was done on nurses in other departments, such as the emergency

department, surgical wards, daycare, and operating theater. It showed poor quality of life associated with lower resilience and higher levels of stress. This can negatively affect their practice (Journal of Emergency Medical Services). Despite psychological resilience being acknowledged to have a protective role in workplace stress and trauma, the exact nature of this influence on the quality of professional life for mental health nurses hasn't been explored in-depth in some contexts. In addition, the local context, which differs between different populations, limits the generalizability of international studies to local situations. Although a study was conducted in one of the hospitals in Oman on the relationship between resilience and quality of life for nurses, it did not specifically focus on mental health nurses. The study generalized the results across various departments, failing to distinguish specific stressors and resilience mechanisms unique to each. Furthermore, the study solely focuses on the stress, resilience, and well-being of nurses, neglecting other crucial elements such as burnout, job satisfaction, organizational support, and work-life balance. The lack of a gender-based analysis and contextual exploration of cultural and systemic issues, such as societal perception of nursing roles and resource constraints within the Oman healthcare system, further limits the depth of the results (Alya Juma Al-Mashaykhi & Turingan, 2024).

A comprehensive understanding of this relationship is essential for formulating targeted interventions aimed at enhancing the well-being of mental health nurses and decreasing instances of burnout and turnover. The study will attempt to find out how psychological resilience influences the quality of professional life among nurses at Mental Health Hospitals in a quantitative context. In this regard, the effect of resilience on the quality of professional life will be investigated using a quantitative descriptive correlation design. Both key variables will be gathered quantitatively using validated scales. It will help to provide insights that could guide resilience-building initiatives to promote their occupational health and professional achievement.

Aim of the study

The aim of the study is to examine the relationship between psychological resilience and quality of professional life among nurses working in mental health hospital. This study will identify how resilience impacts the quality of life for nurses in a high-stress environment and explore the challenges faced by mental health nurses in Oman.

Research Objectives

1. To describe the demographic characteristics of mental health nurses.
2. To determine the levels of psychological resilience and professional quality of life.
3. To examine the relationship between psychological resilience and professional quality of life.
4. To identify demographic and work-related predictors of resilience and professional quality of life.

Research questions

1. What are the demographic characteristics of mental health nurses in terms of age, gender, years of work experience, educational level, marital status, mental health qualification, and ward assignment?
2. What are the levels of psychological resilience and professional quality of life (ProQOL) among the participants?
3. Is there a significant relationship between psychological resilience and professional quality of life among mental health nurses?
4. Which demographic and work-related factors significantly predict psychological resilience and professional quality of life among mental health nurses?

Hypothesis

1. H_{01} : There is no significant relationship between psychological resilience and professional quality of life among mental health nurses.
2. H_{02} : Demographic and work-related factors (age, gender, years of experience, marital status, educational level, mental health qualification, and ward assignment) do not significantly predict psychological resilience and professional quality of life among mental health nurses.

2 Theoretical framework

Resilience Theory refers to the conceptual understanding of resilience as the ability of individuals to adapt positively to adversity, overcome challenges, and recover from stress while maintaining emotional and psychological stability. This

theory highlights resilience as a dynamic process influenced by internal traits and external support systems, enabling individuals to thrive in the face of adversity (Masten, 2020; Southwick et al., 2021). The theoretical foundation for this study is based on *Resilience Theory*, which posits that individuals possess an innate ability to adapt to adversity, recover from stress, and maintain or return to functional well-being (Foster et al., 2021). Resilience, defined as the capacity to adapt positively to adversity while maintaining psychological and emotional stability (Connor & Davidson, 2021), is particularly crucial in high-stress healthcare settings like mental health hospitals. Professional quality of life (ProQoL) encompasses compassion satisfaction (positive feelings from caregiving), burnout (emotional exhaustion and depersonalization), and secondary traumatic stress (distress from exposure to others' trauma) (Alonazi et al., 2023). Resilience acts as a protective factor by enabling emotional regulation, cognitive flexibility, and strong social support, which buffer the effects of burnout and secondary stress while enhancing compassion satisfaction (Alonazi et al., 2023). For instance, emotional regulation allows nurses to manage stress and avoid exhaustion, while cognitive flexibility helps reframe challenges into growth opportunities (Sukut, 2023). Resilience also fosters stronger social connections that buffer workplace demands and reduce emotional distress (Prakash Kumar Gautam et al., 2024). Physiologically, resilience moderates the activation of the hypothalamic-pituitary-adrenal (HPA) axis, reducing chronic stress and improving overall well-being (Iván Suazo Galdames et al., 2024). In the context of this research proposal, Resilience Theory serves as the central framework for examining the relationship between resilience and professional quality of life (ProQoL) among nurses working in mental health hospitals. The study hypothesizes that nurses with higher levels of resilience tend to experience greater compassion satisfaction and reduced levels of burnout and secondary traumatic stress, thereby enhancing their overall professional quality of life. Through the lens of Resilience Theory, the study will also explore how demographic factors, such as age, gender, and work experience, may influence resilience and, in turn, affect ProQoL outcomes. Given the unique stressors faced by mental health nurses, such as emotional fatigue, exposure to trauma, and chronic staffing shortages, this study aims to identify resilience-building strategies that can buffer these adverse effects. Aligning with the theoretical premise, the findings are expected to inform targeted interventions, including resilience training programs and organizational support systems, to improve nurses' quality of life and, in turn, enhance patient care outcomes. This theoretical lens not only grounds the study but also provides a roadmap for addressing the challenges faced in high-stress healthcare environments.

3 Conceptual of definitions

Resilience: Resilience refers to an individual's ability to sustain or restore psychological stability when confronted with adversity, trauma, or prolonged stress, particularly in demanding healthcare settings. Within the context of this study, resilience denotes the capacity of mental health nurses to respond constructively and adaptively to emotional and occupational stressors. Rather than being considered a static personal attribute, resilience is conceptualized as an evolving and dynamic process (Loft et al., 2024; Aburn et al., 2016).

3.1 Professional Quality of Life (ProQOL)

Professional Quality of Life encompasses the overall sense of fulfillment and psychological well-being derived from one's role in caregiving professions. It reflects both the positive aspects, such as compassion satisfaction, and the adverse effects, including burnout and secondary traumatic stress. In the context of mental health care, ProQOL illustrates how nurses navigate the emotional intensity of patient interactions while maintaining their psychological health (Stamm, 2010; Alharbi et al., 2020).

3.2 Limitations and challenges

The study may face a few limitations and difficulties. We might also go forward with strategies that might overcome such limitations. The cross-sectional design precludes any causal interpretation of association findings, and it cannot capture long-term effects that emphasis a longitudinal study in the future. Response bias because of self-reporting questionnaires is reduced by ensuring anonymity and confidentiality. Non-responsiveness due to participant workload can be reduced by strategies of engagement to be developed in the pilot phase, such as sending regular reminders to the participants. Constraints of time taken, including delays in ethical and administrative approvals, will be addressed with an elaborated timeline and by communicating proactively. Single hospital limitations may affect the generalizability. However, the findings may inform future multisite studies. These measures collectively allow the study to remain robust yet provide insights in refining future research.

3.3 Significance of the study

This study aims to minimize these knowledge gaps, deepen our understanding of the relationship between resilience and quality of professional life in Oman, and ultimately boost workplace productivity. This research will represent valuable insights into how resilience helps mental health nurses improve professional life quality. This will add value

to the cumulative literature. In addition, the results could help training departments and hospital policymakers to give more attention to resilience. This study will be conducted for nurses in mental health hospitals and will help to know how resilience helps nurses in facing obstacles locally. All together, these will help in improving the quality of care and patient safety. This study will be the first study conducted in Oman among nurse specialists in mental health related to resilience and quality of professional life.

In summary, the quality of professional life among nurses is an important aspect that needs more exploration in the local context. A comprehensive understanding of this relationship is essential for formulating targeted local interventions aimed at enhancing the well-being of mental health nurses and decreasing instances of burnout and turnover. The study will attempt to explore the relationship between psychological resilience and the quality of professional life among nurses at mental health hospitals using a quantitative design. The study is expected to be feasible. However, some limitations are acknowledged due to the nature of the survey design. The next chapter elaborates on the literature review comprehensively on the relationship between resilience and quality of professional life among the nursing population.

4 Literature review

Stress coping is a psychological concept referring to a person's capacity to bounce back from stress and, therefore, adapt to demands. Hence, it has been regarded as a very crucial parameter in the nursing profession due to the highly occupational-stressful nature of the career. A review of the existing literature contributes to the broad perspective that resilience plays a major role in improving the mental health of nurses, besides job satisfaction and work engagement. This literature review is intended to bring new insights into the significance of the resilience concept for nursing, to define the ongoing knowledge deficits, and to outline future research prospects. Publishers of this type of work required that a systematic literature review be conducted using different academic databases and search engines to make sure the published literature was not missed; these included PubMed, Google Scholar, and Scopus.

To conduct DES, the following search terms and searching strings have been used to identify relevant studies: resilience, quality of life, nursing, and the respective geographical locations, which are Middle East and Arab nations. The words used to search out the articles were "resilience and quality of life," "nurses' quality of life in the Middle," "resilience among health care professionals," "nursing stress and resilience," "quality of life for health care workers in GCC countries," "and interventions for resilience nursing." Thus, Boolean operators were employed to help maximize or minimize the search terms so that the identified studies involved both the global and the regional context. Furthermore, studies were selected based on the database, with each only including studies published first in 2018 and later to make sure that the information obtained is the most current.

Our research analysis revealed that resilience has a large contribution to offering positive aspects of mental health support and job commitment in the nursing profession. Meng et al. (2023) noted that resilience positively influences work-related factors such as engagement and commitment through occupational identity and a healthy balance between organizational and personal life, which usually improves job satisfaction and health. From the authors' review, it could be found that the kind of training has the possibility of leading to improved purpose and decreased burnout risk. The Balint group meetings center on interventions motivated by the development of resilience; that is why a problematic case and an emotional experience are presented – that is why time is allocated for comradery and emotional support. Yousefzadeh et al. (2024) indicate that, at times, such interventions may have some success differences in fulfilling some incremental objectives. In their view, generalized resilience training is effective in a variable manner. They also advise resisting should be supported by an additional number of mental health interventions, even in specific areas where the level of stress is evidently high, for instance, psychiatric nurses.

An analysis of the same revealed that resilience shields against burnout and enhances coping mechanisms. In their studies, Suazo Galdames et al. (2024) and Rink et al. (2023) define resilience as a psychological protection mechanism that enables nurses to take the burden of work-related stress without the risk of a negative outcome on their psychological state of health; however, its effectiveness is an unknown function of personal and professional elements. For instance, nurses with higher resilience have greater capability for dealing with stress, which can be reflected in successful coping and a decrease in turnover rates. On the other hand, low-resilience persons are more likely to experience difficulties whenever confronted with challenging stress. The literature also connects resilience with social skills and one of the most valued sets of skills in stressful professions, such as psychiatric nursing– empathy.

Dogan and Boyacioglu (2021) pointed out that resilience enhances social and empathetic skills of nurses as they relate to the patients. These skills relieve conditions such as burnout and job dissatisfaction; nonetheless, the research of these two researchers only included one specialty, so other fields of nursing should replicate these findings. The strategies of

resiliency are, therefore, quite useful in preventing workplace violence within high-stress occupations. According to Alenezi (2024), resilience works as a shield against WPS, especially when there is unmanageable pressure, because a nurse can always stay composed and ready for action. Workplace violence-related stressors would be reduced if resilience training involved an assessment of the root causes of the identified stressors. The main topics that should be emphasized by healthcare organizations to nurses are resilience competencies to deal with or respond to some aspects regarding the challenges of the workplace settings. Another is Work-family interface conflict, or WFC. When the level of WFC is high, this occurs with low resilience and higher levels of anxiety. In the study of Qi et al. (2022), it was clear that the anxiety of nurses with work-family responsibilities increased their problems with their mental health. If some flexible policies were implemented in the workplace, then WFC might be lessened, and subsequently, resilience heightened to improve job satisfaction in the nursing workforce.

In their study of psychiatric nursing and resilience published in 2022, the authors defined resilience as a moderator between mental health and occupational stress. They stated that since emotional demands are usually very high, resilience training is highly required in highly stressful jobs such as psychiatric nursing. Resilience promotion interventions increase resilience and self-efficacy for employed psychiatric nurses, resulting in sound mental health free from burnout. Yet, because the data in this present study do not include longitudinal measures of the constructs, it is difficult to determine how resilience may exercise a specific effect on mental health and job satisfaction in the long term. Likewise, Shen et al. (2024) have also pointed out that the evidence was scarce about the context of change of resilience intervention over the long term.

This suggests the lack of research on the trajectory of resilience assessment among the nurses posted in stressful positions. Rink et al. (2023) also described short-term positive affect gains without possible negative effects in the long term and pointed at a significant omission in resilience research. Moral courage has been studied by Abdollahi et al. (2021) to comprehend the correlation between moral courage and resilience in nursing dilemmas, and they found that resilience has a direct positive correlation with the management of ethical dilemmas. There was one weakness with their study in that their sample was specific only to Iranian healthcare and thus may not generalise the role resilience can have in more complicated ethical situations to other cultures or hospitals. Similarly, Meng et al. undertook the study in the cultural context of China, and hence, their findings could be confined to that cultural setting, thus acting as a limitation. This refers to cross-cultural research on resilience, which both studies have recommended for understanding resilience, cross-cultural influence, and the influence of culture.

Gunduz et al.'s cross-sectional survey in 2024 revealed that resilience leads to enhanced compassion satisfaction, which is a part of the professional quality of life in nursing, and also reduces the probability of burnout due to nurses' ability to regulate the emotional effect of patients. The improvement of job satisfaction and mental health about resilience was established, though the personal and institutional factors for the development of resilience, personality characteristics, and workplace resources were not examined in this research. Shen et al. (2024) found that effective organizational support and the organizational climate of the workplace increase the degree of clarity and positive negotiability of resilience in nurses. Their paper does not describe how specifically such an environment would be sustained by an organization; thus, this is where healthcare administrators need direction. Received 4 September 2013. Published online 16 December 2013. Compassion fatigue poses a threat to those in vital services, including psychiatric nursing, which has considerable patient contact.

Sukut et al. (2021) also posit that increased levels of resilience reduce compassion fatigue and enhance job satisfaction among nurses. It has been discussed that resilience can be trained and strengthened so that a nurse can control the process of emotional exhaustion and, in return, burnout. Nevertheless, Sukut conducted the study in a single psychiatric hospital in Turkey only, and that is why the generalization of the findings is limited. Expanding this research to other settings and countries would establish how best to apply resilience in different nursing environments.

However, as valuable as such works are for understanding resilience, research into resilience in the context of nursing raises several important issues. The first concern that needs to be addressed is the cultural and geographical context relevance of many of the studies mentioned above, such as Meng et al. (2023) and Abdollahi et al. (2021), restricting the generalization of outcomes. Although we suggest that the literature points to a promising and heterogeneous picture of the construct, there is a clear and urgent need for culture-sensitive research to deepen our understanding of resilience in different healthcare contexts.

In addition, Yousefzadeh et al. (2024) and Suazo Galdames et al. (2024) present information regarding the poor outcomes related to general resilience training as such, therefore a necessity to develop programs specialized to nursing professions or specific stressors- for example, compassionate fatigue in psychiatric nursing. The variables that need attention in terms of resilience mediations include work-to-family conflict and social support at both personal and

institutional levels. I expected that interventions that seek to decrease WFC would improve employee resilience and job satisfaction, and research on PPS and social support would add the final puzzle to the variation of personal resilience. There is also the usual vast gap, particularly in the resumes of the resilience studies, with a very broad array of general recommendations for specific organizations.

Shen et al. (2024) wrote about supportive environments, but where the authors are calling for actionable measures, there is remarkably little prescriptive advice for healthcare administrators in their argument. This calls for more studies to connect to real-life preventive approaches that institutions can harness toward the promotion of resilience by way of supportive politico-organizational factors, resilience preparatory training, and frameworks. Last of all, “nested” models are necessary that would encompass resilience, burnout, and recovery at the same time. In most organizations, resilience programs are designed to address burnout or improve coping, manifested in a cycle that is far different from a positive cycle of resilience. Building an integrated model of burnout, coping, and resilience as one cycle will yield a far richer understanding of resilience-building strategies. Most of them have concentrated on how these two factors relate to medical workers in the Middle East, particularly the GCC nations.

Accordingly, Peñacoba et al. (2021) successfully and systematically argued that levels of resilience with relation to situational contingencies are positively related to perceived quality of life and health in a cross-sectional online survey of 356 registered nurses during the COVID-19 pandemic. Conversely, lower relational pattern scores represented worse quality of life, stressing the fact that interpersonal relationships play an important role for nurses. Gender, marital status, and direct care to COVID-19 patients also influence the dimensions of the quality of life. As a result, the systematic review conducted on healthcare professionals in the GCC countries revealed that interpersonal and organizational factors are significant predictors of resilience.

4.1 Status in Oman

Several factors are said to affect the healthcare workers, particularly the nurses' quality of life in Oman. These are job stress, hardness, and work environment. This cross-sectional study shall be conducted at a tertiary governmental hospital with the view of capturing self-reported job-related stress, resilience, and well-being of the staff nurses. The alike) The result was found, and found that approximately 59 % of the nurses had moderate levels of stress and 39% low well-being. On the other hand, half of them had low resilience, 53.8% to be precise.

The perceived stress and resilience also differed across age and experience, meaning Omani nurses were seen to have higher levels of stress and lower levels of resilience than non-Omani nurses. The research also established an intermediate-level inversion relationship between job stress and resilience, with higher resilience implying lower stress, hence a resilience life efficiency function (Journal of Education, Management, and Studies, 2022).

The paper was developed regarding the factors that affect the quality of work life in the Dakhiliyah Governorate of Oman in governmental health institutions among nurses. A comparison of the present results with previous findings revealed that the work-life quality of the nurses holding leadership positions and the Omani nurses was comparatively better than that of the general nurses and the non-Omani nurses. In light of these, this paper has revealed that work position and other culturally related factors influence quality of life (Al-Maskari et al., 2020).

In the literature, the relationship between resilience and the demographic factors influencing the quality of life that care workers is also explored. Stress and resilience among nurses: It was identified that stress and resilience among nurses pointed out that a lowering of the level of stress and a rise in resilience by institutes and through specially crafted training and intervention programs would help the well-being and quality of life for nurses, as per the Journal of Education, Management, and Studies, 2022. Besides, more extensive research undertaken to evaluate the care quality and safety across the Omani health organizations demonstrated the elevated estimations of the program's quality care and safety amongst the employees, and therefore, it presupposes a competent system of health care deliveries that advertises good quality of living for the workers. The conclusion is directed toward the efficiency of the conditions and practices within the workplace environment that address stress and resilience as ideas towards more sound well-being in aspects of making care quality sustainable.

In summary, psychological resilience appears to be a very important factor contributing to nurses' quality of professional life across the globe because of the immense pressure, long working hours, emotional demands, as well as roles and responsibilities they are subjected to in demanding healthcare organizations. According to the literature, nurses with higher resilience burnout rates, fatigue, and psychological problems are less compared with those with low resilience. Lack of resilience may, therefore, result in the nurses experiencing a lot of problems in handling their stress both at the work front and when facing personal issues in their working life. However, what is more, the literature on

this relationship is not exempt from certain drawbacks. Moreover, the local context, which differs between different populations, makes it difficult to transfer studies carried out in an international context to local situations. To the researcher's knowledge, there is no published research on the state of QPL and resilience in the specialty of mental health nursing in Oman, long working hours, emotional challenges, and responsibilities they face in high-pressure healthcare settings. The literature suggests that nurses with higher resilience levels experience lower rates of burnout, fatigue, and psychological issues compared to those with lower resilience. Nurses lacking resilience may struggle with managing work-related stress and personal challenges, which can negatively affect their work-life balance. However, the literature on this relationship suffers from some limitations. In addition, the local context, which differs between different populations, limits the generalizability of international studies to local situations. Oman has not conducted a study on the relationship between quality of professional life and resilience within the mental health nursing specialty. As a result, local studies are required. In the next chapter, the design and methodological approaches of the planned survey of our local population are described in detail.

5 Methodology

5.1 Introduction

This chapter describes the methodology used to examine the relationship between psychological resilience and professional quality of life among mental health nurses in Oman. The study investigated how psychological resilience was associated with burnout, compassion satisfaction, and secondary traumatic stress. A quantitative descriptive correlational research design was employed to examine the relationship between psychological resilience and professional quality of life among mental health nurses working in Oman.

This chapter presents the research design, study setting, target population, sampling procedures, study variables, data collection instruments, data collection procedures, data quality management, statistical analysis, and ethical considerations. Data were collected using two standardized and validated instruments: The Connor-Davidson Resilience Scale (CD-RISC-10) and the Professional Quality of Life Scale (ProQOL). The collected data were analyzed using appropriate statistical techniques to address the research objectives.

Ethical approval was obtained from the appropriate ethics committees before data collection commenced. Participation was voluntary, informed consent was obtained from all participants, and confidentiality and anonymity were maintained throughout the study.

This methodology provides a rigorous framework for generating reliable evidence on the relationship between psychological resilience and professional quality of life among mental health nurses and serves as the basis for the findings presented in the succeeding chapter.

5.2 Research Design and Methods

A quantitative descriptive correlational research design was employed to examine the relationship between psychological resilience and professional quality of life among mental health nurses. This design was considered appropriate for investigating the association between the study variables without manipulating the research environment. Although a correlational design does not establish causality, it provides valuable insights into the relationships among variables and serves as a foundation for future longitudinal or experimental research. Study Design

5.3 Setting and Target Population

The study was conducted at a mental health hospital in the Sultanate of Oman. The target population consisted of all registered mental health nurses working in clinical psychiatric wards within the hospital.

5.3.1 Inclusion criteria

Registered mental health nurses who had been working in clinical psychiatric wards for at least one year.

5.3.2 Exclusion criteria

- Nurses with less than one year of clinical experience.
- Nurses assigned to administrative positions (Kilic Barmanpek et al., 2022).
-

5.4 Sampling and Sample Size

A sample size of 186 participants was determined using Slovin's Formula, based on a total population of 346 nurses, a margin of error of 5%, and a confidence level of 95%.

A stratified sampling approach was employed to obtain a representative sample from the target population. The sampling frame was obtained from the hospital administration following ethical approval and included all eligible nurses working in the hospital. Participants were stratified according to relevant characteristics, including ward assignment, years of experience, and educational level. Proportionate sampling was then used to select participants from each stratum, ensuring fair representation of the various subgroups within the nursing workforce. The sampling frame was compiled from hospital human resource and staffing records to ensure inclusion of all eligible participants.

5.5 Variables and Measurements

- Independent Variable
- Psychological resilience, measured using the Connor-Davidson Resilience Scale (CD-RISC-10).
- Dependent Variable
- Professional Quality of Life (ProQOL), measured using the Professional Quality of Life Scale (ProQOL).
- Potential Confounding Variables
- Age
- Gender
- Marital status
- Years of work experience
- Educational level
- Professional diploma in mental health nursing
- Ward allocation

5.6 Data Collection Instrument

Data were collected using a structured online questionnaire consisting of demographic items and two standardized instruments: the Connor-Davidson Resilience Scale (CD-RISC-10) and the Professional Quality of Life Scale (ProQOL).

The demographic section collected information on participants' age, gender, marital status, years of work experience, educational level, possession of a professional diploma in mental health nursing, and ward allocation.

The Connor-Davidson Resilience Scale (CD-RISC-10) was used to measure psychological resilience. The instrument assesses an individual's ability to adapt to stress and adversity and has demonstrated strong psychometric properties, with a Cronbach's alpha coefficient of 0.89 and a test-retest reliability coefficient of 0.87 (Connor & Davidson, 2003). The CD-RISC has been widely used and validated across diverse populations, including healthcare professionals and nurses.

Professional quality of life was measured using the Professional Quality of Life Scale (ProQOL), a 30-item instrument that evaluates three dimensions: Compassion Satisfaction, Burnout, and Secondary Traumatic Stress. The ProQOL has demonstrated good reliability, with Cronbach's alpha coefficients of 0.88 for Compassion Satisfaction, 0.75 for Burnout, and 0.81 for Secondary Traumatic Stress (Yilmaz, 2018). The instrument has established construct validity and has been extensively used among healthcare and caregiving professionals.

Both instruments were selected because of their established reliability, validity, and suitability for assessing psychological resilience and professional quality of life among nurses. While the CD-RISC provides a general measure of resilience, the ProQOL specifically captures occupational experiences relevant to nursing practice, including compassion satisfaction, burnout, and secondary traumatic stress.

The questionnaire was developed using Google Forms and distributed electronically to eligible participants through email and other approved communication channels following institutional permission and ethical approval. Reminder messages were sent periodically to enhance participation and improve the response rate.

6 Pilot Study

A pilot study was conducted before the main study to assess the feasibility, reliability, and validity of the research methodology and study instruments. The pilot study aimed to identify potential issues in the data collection process and survey instruments and to allow necessary modifications before implementing the main study.

The pilot study involved 19 nurses who were representative of the target population. Participants completed the study instruments and provided feedback regarding the clarity, relevance, and comprehensibility of the questionnaire items. Issues related to ambiguous wording, scale format, and participant response burden were identified and addressed to improve the quality of the survey instrument.

The pilot study also provided an estimate of the time required to complete the questionnaire, which helped minimize participant fatigue and enhance data quality. Data obtained from the pilot study were analyzed to assess the reliability and internal consistency of the instruments using Cronbach's alpha coefficient. The results confirmed that the instruments adequately measured the intended constructs and supported their use in the main study.

Based on the findings of the pilot study, minor refinements were made to improve the clarity and administration of the survey instruments. The pilot study contributed to refining the research procedures and enhancing the effectiveness of the data collection process. Participants who took part in the pilot study were excluded from the final sample to avoid potential bias.

7 Data Quality and Management

Several measures were implemented to ensure the quality of the data collected in this study. Standardized and validated instruments, namely the Connor–Davidson Resilience Scale (CD-RISC-10) and the Professional Quality of Life Scale (ProQOL), were used to ensure the reliable and consistent measurement of psychological resilience and professional quality of life. A pilot study was conducted to evaluate the clarity, feasibility, and reliability of the instruments and to refine the data collection procedures before the main study.

Data collection followed standardized procedures under the supervision of the principal investigator to ensure consistency and minimize errors. The collected data were carefully reviewed to identify missing values, outliers, and inconsistencies before statistical analysis. Data entry was cross-checked for accuracy, and electronic backup copies were maintained to prevent data loss.

Continuous monitoring of the data collection and data management processes helped maintain the reliability and integrity of the dataset. These measures contributed to the generation of high-quality data suitable for rigorous statistical analysis and the production of valid and reliable study findings.

8 Data Analysis

Data were entered and analyzed using IBM SPSS Statistics version 29. Descriptive statistics were used to summarize the study variables. Frequencies and percentages were calculated for categorical variables, while means, standard deviations, medians, and ranges were computed for continuous variables.

Normality testing was performed before conducting inferential analyses to determine the appropriate statistical tests for the study variables. Professional Quality of Life (ProQOL), measured using the Professional Quality of Life Scale (ProQOL), served as the dependent variable, while psychological resilience, measured using the Connor–Davidson Resilience Scale (CD-RISC-10), together with selected demographic characteristics, served as the independent variables.

Bivariate relationships between variables were examined using Pearson's product–moment correlation coefficient for normally distributed data. Non-parametric tests, including Spearman's rank correlation coefficient, were considered when the assumptions for parametric testing were not met.

For multivariable analysis, multiple linear regression analysis was performed to identify significant predictors of psychological resilience and professional quality of life while controlling for potential confounding variables. In addition, one-way analysis of variance (ANOVA) was conducted to examine differences in professional quality of life across educational levels and ward allocation. Statistical significance was set at $p < 0.05$.

9 Threats to Internal and External Validity

Several limitations were considered when interpreting the findings of this study. First, the cross-sectional design limited the ability to establish causal relationships between psychological resilience and professional quality of life. Therefore, the findings should be interpreted as associations rather than evidence of causality. Nevertheless, the study provides valuable baseline data that may inform future longitudinal or experimental research.

Second, psychological resilience was measured using the Connor-Davidson Resilience Scale (CD-RISC-10), a widely used and validated instrument. Although some limitations of the scale have been reported in the literature, it remains one of the most frequently used measures of resilience in healthcare research.

Furthermore, not all potential confounding variables were included in the analysis due to practical limitations related to data availability, questionnaire length, and participant response burden. Finally, the study was conducted in a single mental health hospital, which may limit the generalizability of the findings to other healthcare settings. Future multicenter studies are recommended to enhance external validity and confirm the findings across diverse populations and clinical environments.

10 Ethical Considerations

Ethical approval was obtained from the Hospital Ethics Committee and the Higher Institute of Health Specialties Ethics Committee prior to the commencement of the study. Informed consent was obtained from all participants through an information sheet provided at the beginning of the online questionnaire. Completion and submission of the questionnaire were considered evidence of voluntary consent to participate in the study.

Participation was entirely voluntary, and participants had the right to withdraw from the study at any stage without penalty. Anonymity and confidentiality were maintained throughout the research process. No personally identifiable information was collected, and all data were stored securely and used solely for academic and research purposes.

Access to the data was restricted to the principal investigator and research supervisor. Data were not shared with any third party without appropriate ethical approval. In accordance with institutional policies, study data will be retained securely for three years and subsequently destroyed using appropriate data disposal procedures.

11 Results

This chapter presents the results and findings of the study conducted to examine the relationship between psychological resilience and professional quality of life among mental health nurses. Statistical analyses were performed to address the research questions and test the study hypotheses. Descriptive statistics were used to determine the levels of psychological resilience and professional quality of life among the participants, while Pearson's product-moment correlation coefficient was employed to examine the relationship between these variables.

Furthermore, multiple linear regression analyses were conducted to determine the extent to which selected demographic and professional variables, including age, gender, marital status, years of work experience, educational level, possession of a professional diploma in mental health nursing, and ward allocation, contributed to psychological resilience and professional quality of life. Preliminary analyses were also performed to assess the reliability of the study instruments and to examine assumptions related to normality, outliers, linearity, multicollinearity, and homoscedasticity prior to conducting the inferential statistical tests. The assessment of normality guided the selection of the appropriate parametric and non-parametric statistical procedures used in the analysis.

12 Method of Analysis

The analysis commenced with an assessment of the reliability of the Psychological Resilience Scale (CD-RISC-10) and the Professional Quality of Life Scale (ProQOL) using Cronbach's alpha coefficient. Normality of the data distribution was subsequently evaluated using the Kolmogorov-Smirnov test, as the sample size exceeded 50 participants. Histograms, normal Q-Q plots, and z-scores of skewness and kurtosis were also examined to further assess the distribution of the data.

Pearson's product-moment correlation coefficient was used to determine the relationship between psychological resilience and professional quality of life. Multiple linear regression analyses were performed to evaluate the influence

of demographic and professional variables on psychological resilience and professional quality of life. In addition, one-way analysis of variance (ANOVA) was conducted to further examine differences in professional quality of life according to educational level and ward allocation.

13 Data Presentation

- Reliability: The Psychological Resilience Scale demonstrated good internal consistency (Cronbach's $\alpha = 0.85$), while the Professional Quality of Life Scale demonstrated excellent internal consistency (Cronbach's $\alpha = 0.91$).
- Normality: Normality of the data was confirmed through visual inspection of the histogram, normal Q-Q plot, detrended Q-Q plot, and the z-scores for skewness and kurtosis.
- Descriptive statistics: The majority of participants were female (65.1%), aged 25–35 years, and had 2–5 years of work experience.
- Trait levels: Participants demonstrated high levels of psychological resilience and professional quality of life (ProQOL).
- Correlation: A moderate positive correlation was found between psychological resilience and professional quality of life ($r = 0.47$, $p < 0.001$).
- Regression (Psychological Resilience): Professional quality of life (ProQOL) was the only significant predictor of psychological resilience ($\beta = 0.42$, $p < 0.001$).
- Regression (Professional Quality of Life): Psychological resilience ($\beta = 0.39$, $p < 0.001$), educational level ($\beta = 0.21$, $p = 0.004$), and ward allocation ($\beta = 0.18$, $p = 0.008$) were significant predictors of professional quality of life.
- ANOVA (Educational Level): Significant differences in professional quality of life were observed among educational groups ($F(2,183) = 8.43$, $p < 0.001$), with participants having higher educational attainment demonstrating higher professional quality of life.
- ANOVA (Ward Allocation): Significant differences in professional quality of life were observed among nurses from different wards ($F(10,175) = 2.27$, $p = 0.020$).

The demographic characteristics of the study participants are presented in Table 3. Most participants were female (65.1%), aged between 25 and 35 years, and had 2 to 5 years of work experience. The sample also varied in terms of marital status, educational level, professional qualifications in mental health nursing, and ward allocation. Similar demographic characteristics have been reported in previous studies that examined resilience and professional quality of life among nurses (Al-Mashaykhi & Turingan, 2024; Al Yahyaei et al., 2025).

Table 1 Reliability Analysis of the Study Instruments

Instrument	Cronbach's α	Standardized α	Number of Items
Psychological Resilience Scale (CD-RISC-10)	0.850	0.853	10
Professional Quality of Life Scale (ProQOL)	0.908	0.910	30

The reliability analysis demonstrated that both the Psychological Resilience Scale (CD-RISC-10) and the Professional Quality of Life Scale (ProQOL) exhibited good internal consistency. The Cronbach's alpha coefficients obtained in the present study were comparable to those reported in previous validation studies of the CD-RISC and ProQOL instruments, supporting their reliability for measuring psychological resilience and professional quality of life among mental health nurses (Connor & Davidson, 2003; Stamm, 2010).

14 Normality of the Data

Table 2 presents the results of the normality tests for the total scores obtained from the Psychological Resilience Scale and the Professional Quality of Life Scale.

The results presented in Table 2 indicate that the total data were approximately normally distributed, as confirmed by visual inspection of the histogram (Figure 1). Assessment of the histogram is recommended when evaluating normality in large samples (Field, 2013; Pallant, 2016).

The Kolmogorov–Smirnov test indicated a statistically significant departure from normality ($p = 0.009$). However, this finding is common in large samples ($N = 186$), where normality tests are highly sensitive to minor deviations from a

normal distribution (Field, 2013; Pallant, 2016). Therefore, normality was further assessed through visual inspection of the histogram, normal Q-Q plot, detrended Q-Q plot, and the z-scores of skewness and kurtosis.

Table 1 Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Total Collected Data Normality	0.077	186	0.009	0.981	186	0.014
a. Lilliefors Significance Correction						

Although the normality tests were statistically significant, visual inspection of the histogram, normal Q-Q plot, detrended Q-Q plot, and the skewness and kurtosis values indicated that the data were approximately normally distributed. This pattern is commonly observed in large samples, where formal significance tests may detect trivial departures from normality that are not practically meaningful (Field, 2013; Pallant, 2016).

The histogram illustrating the distribution of the total collected data is presented in Figure 1.

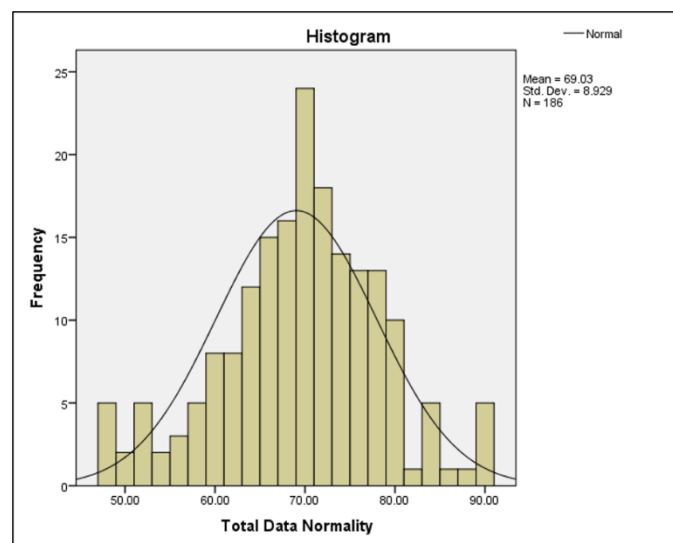


Figure 1 Histogram of the Total Data Distribution

From Table A1 in Appendix A, the z-scores for skewness and kurtosis of the total data distribution were 1.24 and 0.53, respectively, both of which were within the acceptable range of ± 1.96 , indicating no violation of the normality assumption.

The results of the normality assessment are summarized in Table 2.

The normal Q-Q plot used to assess data normality is shown in Figure .2.

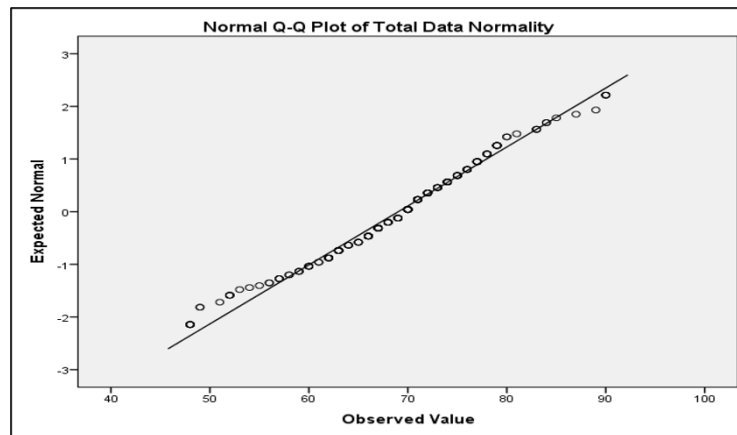


Figure 1 Normal Q-Q plot of total collected data normality

The standard Q-Q plot of total collected data is given in Figure 2 . The observed values are near to the reference line, suggesting that the data were approximately regularly distributed. Q-Q plots are the most common visual tool to examine the normalcy in statistical analysis (Field, 2013; Pallant, 2016).

The detrended normal Q-Q plot presented in Figure 3 further confirms the normality of the collected data.

The demographic characteristics of the study participants are summarized in Table 3.

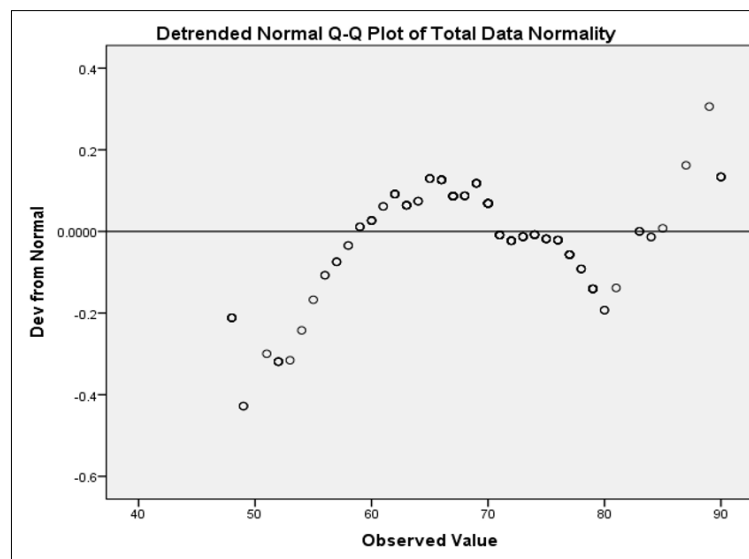


Figure 2 Detrended Normal Q-Q plot of total collected data normality

Figure 3 shows the detrended normal Q-Q plot where the data points are scattered about the reference line without major deviations. This indicates that the assumption of normality was sufficiently met to proceed with further parametric analysis (Field, 2013; Pallant, 2016).

In summary, the histograms, the z-scores of skewness and kurtosis, the normal Q-Q plot, and the detrended normal Q-Q plot all indicate a normal distribution of the total collected data. Due to meeting the normality assumption, parametric tests were utilized for testing the research hypotheses formed around the target research questions (Pallant, 2016).

The descriptive statistics for psychological resilience and professional life quality are presented in Table 4.

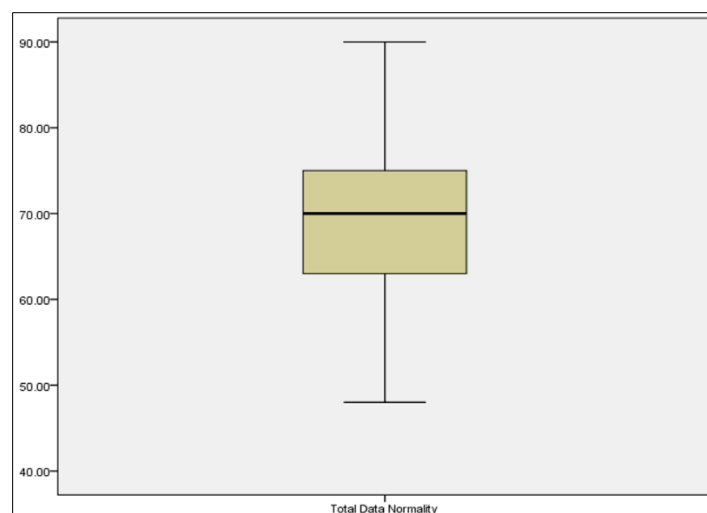


Figure 3 Outliers

From Figure 3 above, there are also no outliers in the total data collected supporting the suitability of the data for parametric statistical analyses (Field, 2013; Pallant, 2016).

The corresponding classification levels for the study variables are presented in Table 4.

14.1 Research Questions

This section aims to provide statistical answers to the current report's research questions.

14.1.1 What are the demographic profiles of the participants in terms of age, gender, and years of experience?

Table 3 Descriptive Statistics for the study sample

			Frequency	Percent	Valid Percent	Cumulative Percent
Age	Valid	25 to 30 years	85	45.7	45.7	45.7
		31 to 35 years	69	37.1	37.1	82.8
		36 to 40 years	23	12.4	12.4	95.2
		41 to 45 years	4	2.2	2.2	97.3
		Above 46 years	5	2.7	2.7	100.0
		Total	186	100.0	100.0	
Gender	Valid	Male	65	34.9	34.9	34.9
		Female	121	65.1	65.1	100.0
		Total	186	100.0	100.0	
Years of work experience	Valid	2 - 5 years	86	46.2	46.2	46.2
		6 - 10 years	44	23.7	23.7	69.9
		More than 10 years	56	30.1	30.1	100.0
		Total	186	100.0	100.0	

From **Error! Reference source not found.** above, a total of 186 nurses participated in this study, distributed as 65 males and 121 females (34.9 & 65.1% respectively), with younger respondents constituting larger numbers in the study

sample. Younger nurses constituted the largest proportion of the sample. Describing participants' demographic characteristics is valuable, since variables such as age, gender, educational level, and length of nursing experience may shape nurses' workplace experiences and their professional well-being. Similar demographic patterns have been documented among nurses in Oman (Al-Mashaykhi & Turingan, 2024; Al Yahyaei et al., 2025).

14.1.2 What are the levels of participants' perceived psychological resilience and professional life quality?

Table 2 Descriptive statistics for the levels of continuous variables under study

		Resilience	Professional Life Quality
N	Valid	186	186
	Missing	0	0
Mean		30.0699	38.8817
Median		30.0000	40.0000
Mode		30.00	40.00
Std. Deviation		4.23377	6.33625
Range		30.00	31.00
Minimum		10.00	19.00
Maximum		40.00	50.00
Sum		5593.00	7232.00

Psychological resilience and professional quality of life (PQL) were reported as being relatively high (see Table 4). These results are consistent with previous studies showing that resilience has a positive impact on the well-being and professional performance of nurses in challenging healthcare settings (Ivan Suazo Galdames et al., 2024).

Table 5 Corresponding Levels of continuous variables Under Study

Trait	Low	Medium	High
Overall Quality of Professional Life	0-16	17-33	34-50
Overall Resilience	0-13	14-27	28-40

The scale provided in **Error! Reference source not found.** above was created by dividing the maximum scores presented in Table 2 above to represent the three levels presented in **Error! Reference source not found.**

Consistent with the pattern observed in Table 5, participants demonstrated high levels of psychological resilience and professional quality of life. These results correspond with earlier studies indicating that resilience fosters positive professional experiences and supports nurses' well-being within stressful healthcare settings (Ivan Suazo Galdames et al., 2024).

By matching the mean scores presented in Table 2 with the numbers presented in **Error! Reference source not found.**, it can be found that the respondents maintained high levels of psychological resilience and quality of professional life.

14.1.3 Correlation between Psychological Resilience and Quality of Professional Life

The relationship between participants' psychological resilience and their professional quality of life was examined using the Pearson product-moment correlation coefficient. As shown in Table 4.6, a moderate positive correlation was found between the two variables, $r = 0.47$, $n = 186$, $p < 0.001$, indicating that higher levels of psychological resilience are associated with greater professional quality of life, and vice versa.

The results of the Pearson correlation analysis between psychological resilience and professional quality of life are presented in Table 6.

Table 3 Correlation between participants' psychological resilience and their professional life quality

		Psychological Resilience	Professional Life Quality
Psychological Resilience	Pearson Correlations	1	0.470
	Sig Tailed		0.000
	Sum of Square and Cross products	3316.091	2330.538
	Covariance	17.925	12.598
	N	186	186
Professional Life Quality	Pearson Correlations	0.470**	1
	Sig Tailed	0.000	
	Sum of Square and Cross products	2330.538	7427.398
	Covariance	12.598	40.148
	N	186	186
** Correlation is significant at the 0.01 level (2 tailed)			

Table 6 presents the correlation between psychological resilience and professional quality of life among the participants. Pearson's product-moment correlation analysis revealed a moderate positive correlation between psychological resilience and professional quality of life ($r = 0.470$, $p < 0.001$), indicating that higher levels of psychological resilience were associated with higher levels of professional quality of life. This finding is consistent with previous studies reporting that resilient nurses tend to experience greater professional well-being, higher compassion satisfaction, and lower levels of burnout and secondary traumatic stress (Alshehry, 2024; Alonazi et al., 2023).

14.2 The Contribution of Study Factors to Participants' Psychological Resilience

This section examines the contribution of the study variables—professional quality of life, years of work experience, gender, marital status, possession of a professional diploma in mental health nursing, ward allocation, educational level, and age—to participants' psychological resilience using multiple linear regression analysis. Before performing the regression analysis, preliminary diagnostic tests were conducted to ensure that the assumptions of normality, linearity, multicollinearity, homoscedasticity, and the absence of influential outliers were satisfied.

As shown in Table A2 (Appendix A), the independent variables (gender, age, marital status, educational level, possession of a professional diploma in mental health nursing, ward allocation, years of work experience, and professional quality of life) demonstrated correlations with psychological resilience ($r = 0.14, 0.16, 0.11, 0.19, 0.01, 0.16, 0.11$, and 0.47 , respectively). In addition, the correlations among the independent variables did not exceed 0.70 , indicating that the assumption of multicollinearity was not violated. Therefore, all variables were retained in the regression model.

As presented in Table 7, the multicollinearity diagnostics further confirmed that the assumptions for multiple linear regression were satisfied. The Variance Inflation Factor (VIF) values ranged from 1.13 to 1.93 , well below the recommended threshold of 10 , while the tolerance values ranged from 0.51 to 0.88 , all exceeding the minimum acceptable value of 0.10 (Field, 2013; Pallant, 2016). These findings indicate that multicollinearity was not a concern in the regression model.

This part examines the extent of contribution of study variables (professional life quality, years of work experience,

The regression coefficients for factors contributing to psychological resilience are presented in Table 7.

Table 7 Professional quality of life was the only significant predictor of psychological resilience.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.							
	B	Std. Error				Lower bound	Upper bound	Zero Order	Partial	Part	Tolerance	VIF
constant	14.728	3.030		4.862	0.000	8.750	20.707					
Gender	-0.527	0.637	-0.059	-0.826	0.410	-1.785	0.751	-0.143	-0.062	-	0.802	1.248
Age	0.201	0.382	0.044	0.526	0.599	0.533	0.955	0.163	0.040	0.034	0.587	1.702
Marital Status	0.969	0.649	0.102	1.493	0.137	-0.312	2.250	-0.113	0.111	0.096	0.884	1.131
Educational Attainment	0.969	0.600	0.117	1.548	0.123	-0.265	2.112	0.191	0.116	0.100	0.730	1.369
With/Without post Graduate Diploma in mental health nursing	0.327	0.699	0.033	0.466	0.641	-1.0052	1.709	0.009	0.035	0.030	0.654	1.171
Allocated ward/Dept.	0.051	0.107	0.036	0.482	0.631	-0.159	0.168	0.036	0.031	0.802	1.246	
Years of work experience	0.555	0.441	0.113	1.256	0.210	-0.316	1.425	0.117	0.094	0.081	0.517	1.935
Professional quality life	0.278	0.047	0.416	5.908	0.000	0.185	0.371	0.470	0.406	0.381	0.838	1.193
Dependent variables : Total Psychological Resilience												

This finding suggests that nurses with higher levels of professional quality of life are more likely to exhibit greater psychological resilience. This result is consistent with previous studies that identified professional quality of life as a significant correlate of resilience among healthcare workers (Ivan Suazo Galdames et al., 2024).

Assessment of normality further supported the suitability of the regression model. The approximately straight diagonal line observed in the Normal P-P Plot (Figure B1, Appendix B) and the symmetrical bell-shaped histogram (Figure B2, Appendix B) indicated that the normality assumption was satisfied.

As shown in Figure B3 (Appendix B), the standardized residuals were randomly and evenly dispersed around zero, forming an approximately rectangular pattern. This finding indicates that the assumptions of linearity and homoscedasticity were met (Field, 2013; Pallant, 2016). Furthermore, the standardized residuals were within the acceptable range of ± 3.3 , indicating the absence of significant outliers. This observation was further supported by the absence of cases in the casewise diagnostics output (Pallant, 2016).

Before conducting the regression analysis, the assumption of independent errors was examined using the Durbin–Watson statistic. As shown in Table 8, the Durbin–Watson value was 1.72, which is close to the ideal value of 2.0 and falls within the acceptable range of 1 to 3, indicating that the assumption of independent errors was satisfied (Field, 2013; Pallant, 2016).

The model summary for the multiple linear regression analysis predicting psychological resilience is presented in Table 8.

Table 8 Model Summary for Multiple Linear Regression Predicting Psychological Resilience

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.514 ^a	0.264	0.231	3.71283	0.264	7.944	8	177	0.000	1.715
a. Predictors: (Constant), Professional Life Quality, Years of Work Experience, Gender, Marital Status, With/Without Postgraduate Diploma In Mental Health Nursing, Allocated Ward/Department, Educational Level, Age										
b. Dependent Variable: Psychological Resilience										

As shown in Table 8, the regression model accounted for a substantial proportion of the variance in psychological resilience. This indicates that professional quality of life is an important predictor of resilience among mental health nurses, which corresponds with previous studies reporting a positive association between resilience and quality of life (Alshehry, 2024; Ivan Suazo Galdames et al., 2024).

The ANOVA results for the psychological resilience regression model are presented in Table 9.

Table 9 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	876.121	8	109.515	7.944	0.000 ^b
	Residual	2439.970	177	13.785		
	Total	3316.091	185			
a. Dependent Variable: Psychological Resilience						
b. Predictors: (Constant), Professional Life Quality, Years of Work Experience, Gender, Marital Status, With/Without Postgraduate Diploma In Mental Health Nursing, Allocated Ward/Department: Educational Level, Age						

Table 9 presents the ANOVA results for the regression model predicting psychological resilience. The significant model indicates that professional quality of life explains a considerable share of the variation in nurses' resilience. This finding accords with earlier research documenting a positive relationship between higher professional quality of life and stronger resilience, as well as improved psychological well-being, among healthcare workers (Ivan Suazo Galdames et al., 2024).

As shown in Tables 8 and 9, the eight-predictor regression model explained 26.4% of the variance in participants' psychological resilience ($R^2 = 0.264$; Adjusted $R^2 = 0.231$) and was statistically significant ($F(8, 177) = 7.94$, $p < 0.001$). The overall findings indicate that the set of predictor variables collectively contributed significantly to explaining variations in psychological resilience among the participants.

The regression coefficients are presented in Table 10. The results showed that professional quality of life was the only statistically significant predictor of psychological resilience ($\beta = 0.42$, $p < 0.001$), uniquely explaining approximately 14.52% of the variance in psychological resilience. In contrast, gender ($\beta = 0.05$, $p = 0.41$), age ($\beta = 0.04$, $p = 0.59$), marital status ($\beta = 0.10$, $p = 0.13$), educational level ($\beta = 0.11$, $p = 0.12$), possession of a professional diploma in mental health nursing ($\beta = 0.03$, $p = 0.64$), ward allocation ($\beta = 0.03$, $p = 0.63$), and years of work experience ($\beta = 0.11$, $p = 0.21$) did not make statistically significant unique contributions to the prediction of psychological resilience.

These findings indicate that professional quality of life was the only significant predictor of psychological resilience after controlling for demographic and professional characteristics. None of the remaining study variables demonstrated a statistically significant unique contribution to psychological resilience.

14.3 Contribution of Study Factors to Professional Quality of Life

This section examines the contribution of the study variables—psychological resilience, years of work experience, gender, marital status, possession of a professional diploma in mental health nursing, ward allocation, educational level, and age—to participants' professional quality of life using multiple linear regression analysis. Before conducting the regression analysis, preliminary diagnostic tests were performed to ensure that the assumptions of normality, linearity, multicollinearity, homoscedasticity, and the absence of influential outliers were satisfied.

As shown in Table A3 (Appendix A), psychological resilience, gender, age, marital status, educational level, possession of a professional diploma in mental health nursing, ward allocation, and years of work experience demonstrated correlations with professional quality of life ($r = 0.47, 0.09, 0.09, 0.02, 0.29, 0.06, 0.24,$ and 0.01 , respectively). Furthermore, the correlations among the eight predictor variables did not exceed 0.70, indicating that the assumption of multicollinearity was not violated. Therefore, all eight variables were retained in the regression model.

As presented in Table 10, the multicollinearity diagnostics confirmed that the assumptions for multiple linear regression were satisfied. The Variance Inflation Factor (VIF) values ranged from 1.13 to 1.95, all well below the recommended threshold of 10, while the tolerance values ranged from 0.51 to 0.88, all exceeding the minimum acceptable value of 0.10 (Field, 2013; Pallant, 2016). These findings indicate that multicollinearity was not a concern in the regression model.

The regression coefficients for factors contributing to professional quality of life are presented in Table 10.

Table 4 Coefficients of Study Variables in the Contribution of Overall Professional Life Quality

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero Order	Partial	Part	Tolerance	VIF
Constant	9.956	4.464		2.062	0.041	0.412	18.780					
Total Psychological Resilience	0.593	0.100	0.396	5.908	0.000	0.395	0.790	0.470	0.406	0.372	0.881	11.135
Gender	1.142	0.928	0.086	1.230	0.220	-0.690	2.794	-0.094	0.092	0.077	0.806	1.241
Age	0.067	0.556	0.098	1.200	0.232	-0.430	1.764	0.097	0.090	0.075	0.591	1.691
Marital Status	-0.542	0.953	-0.038	-0.569	0.570	-2.432	1.338	-0.017	-0.043	-	0.875	1.143
With/Without post Graduate Diploma in	1.72	1.016	0.85	1.251	0.212	-0.734	3.277	0.064	0.094	0.079	0.861	1.162

	mental health nursing												
	Allocated ward/Dept .	0.408	0.153	0.184	2.668	0.008	0.106	0.709	0.243	0.197	0.168	0.834	1.200
	Years of work experience	0.152	0.647	0.021	0.235	0.814	-1.124	1.428	0.009	0.18	0.15	0.512	1.952
a .	Dependent variables : Total Professional Quality of life												

Table 10 presents the multiple linear regression coefficients for factors associated with professional quality of life. The results showed that psychological resilience ($\beta = 0.396$, $p < 0.001$), educational level ($\beta = 0.210$, $p = 0.004$), and ward allocation ($\beta = 0.184$, $p = 0.008$) were significant predictors of professional quality of life. In contrast, gender, age, marital status, possession of a professional diploma in mental health nursing, and years of work experience were not statistically significant predictors ($p > 0.05$). These findings are consistent with previous studies demonstrating that psychological resilience and work-related characteristics contribute positively to nurses' professional quality of life (Alshehry, 2024).

14.3.1 Assumption testing

For the assessment of normality, the approximately straight diagonal line observed in the Normal P-P Plot (Figure B4, Appendix B) and the symmetrical bell-shaped histogram (Figure B5, Appendix B) indicated that the normality assumption was satisfied (Pallant, 2016).

As shown in Figure B6 (Appendix B), the standardized residuals were randomly and evenly dispersed around zero, forming an approximately rectangular pattern. This finding indicates that the assumptions of linearity and homoscedasticity were met (Field, 2013; Pallant, 2016). Furthermore, the standardized residuals were within the acceptable range of ± 3.3 , indicating the absence of significant outliers. This observation was further supported by the absence of cases in the casewise diagnostics output (Pallant, 2016).

The assumption of independent errors was assessed using the Durbin-Watson statistic. As shown in Table 11, the Durbin-Watson value was 1.29, which falls within the acceptable range of 1 to 3, indicating that the assumption of independent errors was satisfied.

The model summary for the multiple linear regression analysis predicting professional quality of life is presented in Table 11.

The model summary for the multiple linear regression analysis predicting professional quality of life is presented in Table 11.

Table 11 Model Summary for Multiple Linear Regression Predicting Professional Quality of Life

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.547 ^a	0.300	0.268	5.42073	0.300	9.471	8	177	0.000	1.290
a. Predictors: (Constant), Years of Work Experience, Allocated Ward/Department, Psychological Resilience, Marital Status, Gender, With/Without Postgraduate Diploma In Mental Health Nursing, Educational Level, Age										
b. Dependent Variable: Professional Life Quality										

As presented in Table 11, the multiple linear regression model explained 30.0% of the variance in professional quality of life ($R^2 = 0.300$; Adjusted $R^2 = 0.268$). The overall regression model was statistically significant ($F(8, 177) = 9.471$, $p < 0.001$), indicating that the independent variables collectively predicted professional quality of life among the participants.

These findings are consistent with previous studies demonstrating that psychological resilience and work-related characteristics contribute significantly to nurses' professional quality of life and overall professional well-being (Alshehry, 2024).

The ANOVA results for the professional life quality regression model are presented in Table 12.

Table 12 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2226.384	8	278.298	9.471	0.000 ^b
	Residual	5201.014	177	29.384		
	Total	7427.398	185			
a. Dependent Variable: Professional Life Quality						
b. Predictors: (Constant), Years of Work Experience, Allocated Ward/Department, Psychological Resilience, Marital Status, Gender, With/Without Postgraduate Diploma In Mental Health Nursing, Educational Level, Age						

Table 12 presents the ANOVA results for the multiple linear regression model predicting professional quality of life. The overall regression model was statistically significant ($F(8, 177) = 9.471$, $p < 0.001$), indicating that the predictor variables collectively explained a significant proportion of the variance in professional quality of life. These findings are consistent with previous studies demonstrating that psychological resilience and work-related characteristics positively influence nurses' professional quality of life and overall professional well-being (Alshehry, 2024).

As shown in Tables 11 and 12, the eight-predictor regression model explained 30.0% of the variance in professional quality of life ($R^2 = 0.300$; Adjusted $R^2 = 0.268$) and was statistically significant ($F(8, 177) = 9.47$, $p < 0.001$).

The regression coefficients are presented in Table 10. The results showed that psychological resilience was the strongest significant predictor of professional quality of life ($\beta = 0.39$, $p < 0.001$), uniquely explaining approximately 13.84% of the variance in professional quality of life. Educational level was the second strongest significant predictor ($\beta = 0.21$, $p = 0.004$), uniquely explaining approximately 3.39% of the variance, while ward allocation was the third strongest significant predictor ($\beta = 0.18$, $p = 0.008$), uniquely explaining approximately 2.82% of the variance.

In contrast, gender ($\beta = 0.08$, $p = 0.22$), age ($\beta = 0.09$, $p = 0.23$), marital status ($\beta = 0.03$, $p = 0.57$), possession of a professional diploma in mental health nursing ($\beta = 0.08$, $p = 0.21$), and years of work experience ($\beta = 0.02$, $p = 0.81$) did not make statistically significant unique contributions to professional quality of life.

These findings indicate that professional quality of life was primarily predicted by nurses' psychological resilience, followed by their educational level and ward allocation, whereas gender, age, marital status, possession of a professional diploma in mental health nursing, and years of work experience were not significant predictors.

14.4 Impact of Educational Level on Professional Quality of Life

To further investigate the influence of educational level on professional quality of life, a one-way analysis of variance (ANOVA) was conducted. Participants were classified into three educational groups: Diploma (Group 1), Bachelor's degree (Group 2), and Master's degree (Group 3).

The analysis revealed a statistically significant difference in professional quality of life among the three educational groups ($F(2, 183) = 8.43$, $p < 0.001$) (see Table 13). Although the difference was statistically significant, the effect size was moderate ($\eta^2 = 0.08$) according to Cohen's guidelines (Pallant, 2016).

Post hoc comparisons using Tukey's Honestly Significant Difference (HSD) test (Table 14) showed that the mean professional quality of life score for nurses with a Bachelor's degree ($M = 40.54$, $SD = 5.23$) was significantly higher than that of nurses with a Diploma ($M = 37.19$, $SD = 6.67$). Although nurses with a Master's degree had the highest mean score ($M = 45.00$, $SD = 4.58$), the differences between the Master's degree group and the other two groups were not statistically significant.

As illustrated in Figure 5, professional quality of life generally increased with higher educational attainment.



Figure 5 Relationship Between Educational Level and Professional Quality of Life

The results presented in Figure 5 demonstrate a positive relationship between educational level and professional quality of life. Nurses with higher educational attainment tended to report higher professional quality of life scores. This finding suggests that advanced education may enhance professional competence, confidence, critical thinking, and job satisfaction, thereby contributing to better professional quality of life. These findings are consistent with previous studies reporting that higher educational attainment is associated with improved professional well-being among nurses (Alshehry, 2024; Alonazi et al., 2023).

Figure 6 illustrates the distribution of educational attainment among the 186 nurses who participated in the study.

The majority of participants ($n = 96$; 51.6%) held a Diploma, representing the largest educational group in the sample. Participants with a Bachelor's degree comprised 87 (46.8%) of the sample, while only 3 (1.6%) participants held a Master's degree.

The distribution indicates that most participants possessed diploma- or bachelor's-level qualifications, with relatively few having postgraduate education. This distribution provides important context for interpreting the observed relationship between educational level and professional quality of life presented in the preceding analyses.

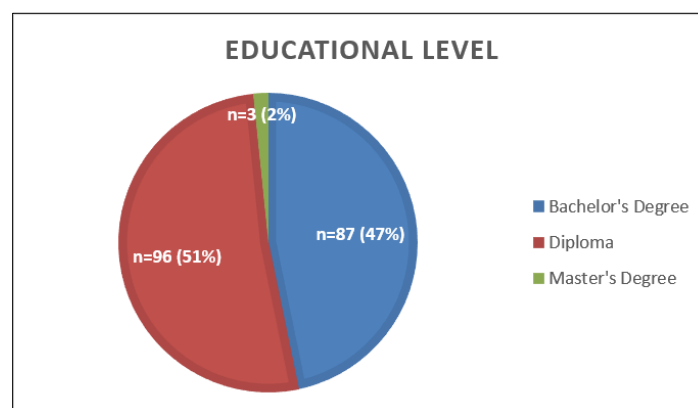


Figure 4 Interpretation of the Educational Level Chart

The pie chart presents the distribution of educational attainment among the 186 participants involved in the current study on psychological resilience.

The majority of participants ($n = 96$; 51%) hold a diploma, representing the largest educational subgroup in the sample. This suggests that over half of the study population possesses mid-level academic qualifications, highlighting a common educational profile within the target population. Given existing literature linking educational attainment with enhanced psychological resilience, this subgroup serves as a critical baseline for examining resilience in individuals with diploma-level education.

Participants with a bachelor's degree constitute a substantial portion of the sample ($n = 87$; 47%). This indicates a significant representation of individuals with undergraduate qualifications, a group often associated with improved problem-solving skills, coping mechanisms, and access to psychosocial resources. The presence of this group allows for meaningful comparisons between mid- and higher-level educational attainment in relation to psychological resilience.

Only a small fraction of participants ($n = 3$; 2%) reported holding a master's degree. Although limited in number, this subgroup is noteworthy for exploring whether advanced academic achievement is linked to even greater levels of psychological resilience.

14.5 Significance to the Study**Differences in Professional Quality of Life According to Educational Level**

Educational level was examined to determine whether professional quality of life differed among nurses with different academic qualifications. Participants were classified into three educational groups: Diploma, Bachelor's degree, and Master's degree.

The results of the one-way analysis of variance (ANOVA) are presented in Table 13. Table 13. One-Way ANOVA Comparing Professional Quality of Life Across Educational Levels

Table 13 ANOVA for the relationship between educational level and professional life quality

Total Professional Life Quality					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	627.164	2	313.582	8.439	0.000
Within Groups	6800.234	183	37.160		
Total	7427.398	185			

As shown in Table 13, there was a statistically significant difference in professional quality of life across the three educational groups ($F(2, 183) = 8.44$, $p < 0.001$). These findings indicate that professional quality of life varied significantly according to educational attainment.

To determine which educational groups differed significantly, Tukey's Honestly Significant Difference (HSD) post hoc test was performed. The results of the post hoc analysis are presented in Table 14.

The findings suggest that nurses with higher educational attainment generally reported higher professional quality of life scores. This observation is consistent with previous studies indicating that continuing education and professional development contribute positively to nurses' professional well-being and job satisfaction (Alshehry, 2024; Alonazi et al., 2023).

The post-hoc Tukey HSD multiple comparison results for educational level and professional life quality are shown in Table 14

Table 14 Multiple Comparisons for the relationship between educational level and professional life quality

Dependent Variable: Total Professional Life Quality						
Tukey HSD						
(I) Educational Level: Diploma, Bachelor's Degree, Master's Degree	(J) Educational Level: Diploma, Bachelor's Degree, Master's Degree	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Diploma	Bachelor's Degree	-3.35273*	.90233	0.001	-5.4849	-1.2206
	Master's Degree	-7.81250	3.57403	0.076	-16.2577	.6327
Bachelor's Degree	Diploma	3.35273*	.90233	0.001	1.2206	5.4849
	Master's Degree	-4.45977	3.57962	0.428	-12.9182	3.9987
Master's Degree	Diploma	7.81250	3.57403	0.076	-.6327	16.2577
	Bachelor's Degree	4.45977	3.57962	0.428	-3.9987	12.9182

*. The mean difference is significant at the 0.05 level.

Table 14 presents the results of the Tukey HSD post hoc analysis comparing professional quality of life across the three educational groups. A statistically significant difference was observed between nurses with a Diploma and those with a Bachelor's degree (mean difference = -3.35, $p = 0.001$), indicating that nurses holding a Bachelor's degree reported significantly higher professional quality of life than those with a Diploma.

Although nurses with a Master's degree had higher mean professional quality of life scores than those with a Diploma or Bachelor's degree, these differences were not statistically significant ($p = 0.076$ and $p = 0.428$, respectively). This lack of statistical significance may be attributable to the very small number of participants with a Master's degree ($n = 3$), which limited the statistical power to detect group differences.

Overall, these findings suggest that higher educational attainment is associated with improved professional quality of life, particularly among nurses with a Bachelor's degree. This finding is consistent with previous studies demonstrating that continuing education and professional development contribute positively to nurses' professional well-being and job satisfaction (Alshehry, 2024; Alonazi et al., 2023).

The descriptive statistics for professional quality of life across educational levels are presented in Table 15.

Table 15 Descriptives for the relationship between educational level and professional life quality

Total Professional Life Quality									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Diploma	96	37.1875	6.66856	.68061	35.8363	38.5387	19.00	50.00	
Bachelor's Degree	87	40.5402	5.42776	.58192	39.3834	41.6970	27.00	50.00	
Master's Degree	3	45.0000	4.58258	2.64575	33.6163	56.3837	41.00	50.00	
Total	186	38.8817	6.33625	.46460	37.9651	39.7983	19.00	50.00	

Model	Fixed Effects			6.09588	.44697	37.9998	39.7636			
	Random Effects				1.73314	31.4246	46.3388			5.77626

Table 15 presents the descriptive statistics for professional quality of life according to educational level. Nurses with higher educational attainment generally demonstrated higher mean professional quality of life scores. This finding is consistent with previous studies suggesting that continuing education and professional development contribute positively to nurses' professional well-being and job satisfaction (Alshehry, 2024; Alonazi et al., 2023).

15 Impact of Ward Allocation on Professional Quality of Life

To further examine the influence of ward allocation on professional quality of life, a one-way analysis of variance (ANOVA) was conducted. Participants were assigned to 11 clinical wards/departments: Accident and Emergency Department, Child Ward, Female Forensic Ward 1, Female Ward 1, Female Ward 2, Male Forensic Ward 1, Male Ward 1, Male Ward 2, Male Ward 3, Male Ward 4, and the Outpatient Department.

The analysis revealed a statistically significant difference in professional quality of life among the 11 ward groups ($F(10, 175) = 2.27, p = 0.016$) (see Table 16). The effect size was moderate ($\eta^2 = 0.11$) according to Cohen's guidelines (Pallant, 2016).

Table 16 ANOVA for the relationship between allocated ward/department and professional life quality

Total Professional Life Quality					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	853.684	10	85.368	2.273	0.016
Within Groups	6573.713	175	37.564		
Total	7427.398	185			

Table 16 shows that professional quality of life differed significantly across ward allocations ($F(10, 175) = 2.27, p = 0.016$). These findings suggest that workplace characteristics—including patient acuity, workload, work environment, and organizational support—may differ across clinical areas and influence nurses' professional quality of life. This observation is consistent with previous studies highlighting the important role of the work environment and organizational factors in shaping nurses' professional well-being (Alonazi et al., 2023).

Post hoc comparisons using Tukey's Honestly Significant Difference (HSD) test (Table A4, Appendix A) indicated that nurses assigned to Male Ward 2 ($M = 40.66, SD = 5.35$) had significantly higher professional quality of life scores than nurses assigned to Female Forensic Ward 1 ($M = 34.92, SD = 6.73$). No statistically significant differences were observed between the remaining ward pairs.

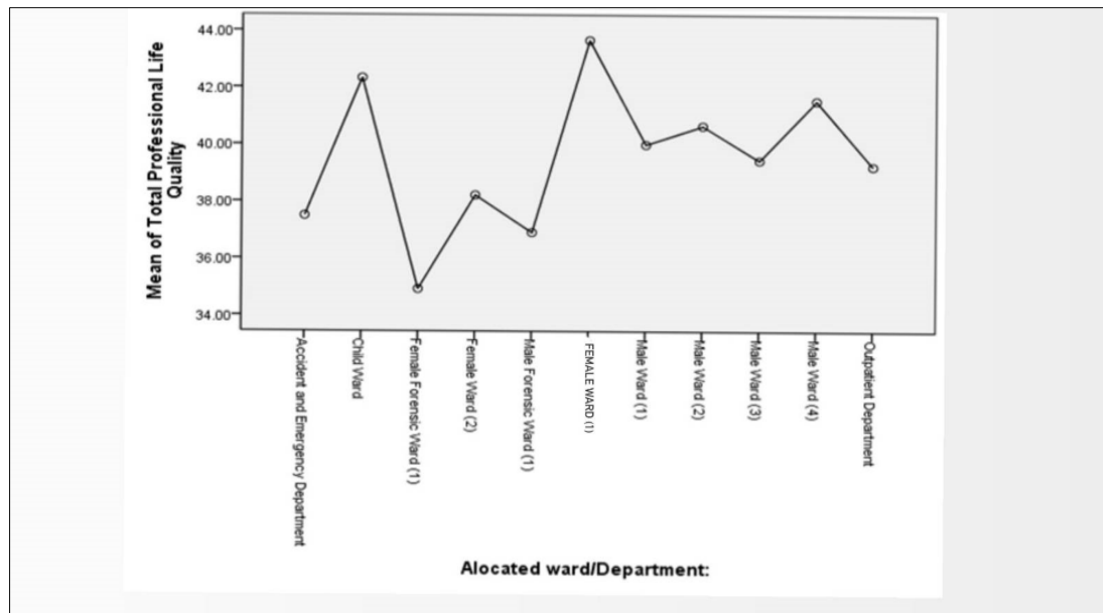


Figure 5 The relationship between allocated ward/department and professional life quality

Figure 7 illustrates the variation in professional quality of life scores across the different wards and departments included in the study. The findings indicate that professional quality of life differed among nurses working in different clinical areas, supporting the significant differences identified by the one-way ANOVA.

Among the participating wards, Female Ward 1 demonstrated the highest mean professional quality of life score, whereas Female Forensic Ward 1 and the Accident and Emergency Department reported comparatively lower mean scores. These findings suggest that the clinical work environment may influence nurses' professional quality of life.

The observed differences may reflect variations in workplace characteristics, including patient acuity, workload, teamwork, organizational support, and the psychological demands of different clinical settings. Similar findings have been reported in previous studies demonstrating that workplace environment and organizational factors are important determinants of nurses' professional quality of life and occupational well-being (Alreshidi et al., 2024; Rushton et al., 2015; Xie et al., 2019; Alonazi et al., 2023).

Overall, Figure 7 supports the finding that ward allocation is associated with differences in professional quality of life among mental health nurses.

The summary of hypothesis testing results is presented in Table 16.

15.1 Research Hypotheses testing results

Table 57 Research Hypotheses Testing Results

Interpretation	Result	P-value	Statistical test	Hypothesis
There is a significant positive relationship between psychological resilience and professional quality of life.	Rejected	$P < 0.001$	Pearson Correlation	Ho1: There is no significant relationship between psychological resilience and professional quality of life
Education level and ward affect professional quality of life.	Partially Rejected	Mixed: (Education level) $P < .001$, (Ward) $P < 0.02$	Multiple Regression, ANOVA.	Ho2: Demographics do not significantly affect resilience or professional quality of life.

The results of the hypothesis testing are summarized in Table 17. Pearson's product-moment correlation analysis demonstrated a statistically significant moderate positive relationship between psychological resilience and professional quality of life ($r = 0.47$, $p < 0.001$). Therefore, the first null hypothesis (H_{01}) was rejected.

Multiple linear regression and one-way ANOVA further demonstrated that educational level ($p < 0.001$) and ward allocation ($p = 0.016$) were significant predictors of professional quality of life, whereas gender, age, marital status, possession of a professional diploma in mental health nursing, and years of work experience were not statistically significant predictors. Consequently, the second null hypothesis (H_{02}) was partially rejected.

Overall, these findings indicate that higher psychological resilience is associated with better professional quality of life among mental health nurses. In addition, educational attainment and ward allocation were significant factors influencing professional quality of life. These findings are consistent with previous studies highlighting the importance of resilience and workplace characteristics in promoting nurses' professional well-being (Sukut et al., 2021; Alshehry, 2024).

16 Conclusion

This study investigated the relationship between psychological resilience and professional quality of life among 186 mental health nurses and examined the extent to which demographic and work-related factors influenced these two outcomes.

The findings demonstrated a moderate positive relationship between psychological resilience and professional quality of life, indicating that nurses with higher levels of psychological resilience tended to report higher professional quality of life. Overall, the participants demonstrated high levels of psychological resilience and professional quality of life.

Professional quality of life was the only significant predictor of psychological resilience. In contrast, gender, age, marital status, educational level, possession of a professional diploma in mental health nursing, ward allocation, and years of work experience did not significantly predict psychological resilience.

Conversely, psychological resilience was the strongest predictor of professional quality of life, followed by educational level and ward allocation. Nurses with higher levels of psychological resilience and higher educational attainment generally reported better professional quality of life. Furthermore, significant differences in professional quality of life were observed across ward allocations, suggesting that workplace characteristics may influence nurses' professional well-being. In contrast, gender, age, marital status, possession of a professional diploma in mental health nursing, and years of work experience were not significant predictors of professional quality of life.

Overall, these findings highlight the importance of fostering psychological resilience and creating supportive work environments to enhance the professional quality of life of mental health nurses. Interventions aimed at strengthening resilience, promoting continuing professional development, and improving workplace conditions may contribute to better nurse well-being and, ultimately, higher quality patient care.

17 Interpretation of Results/Findings

The findings of this study demonstrated a statistically significant moderate positive relationship between psychological resilience and professional quality of life among mental health nurses. Nurses with higher levels of psychological resilience tended to report higher professional quality of life. Furthermore, professional quality of life was identified as the strongest predictor of psychological resilience, whereas psychological resilience, educational level, and ward allocation were significant predictors of professional quality of life. In contrast, gender, age, marital status, possession of a professional diploma in mental health nursing, and years of work experience were not significant predictors in either regression model.

The positive association between psychological resilience and professional quality of life is consistent with the findings of Hart et al. (2014), who reported that resilient nurses are better equipped to cope with the emotional demands of patient care, resulting in greater job satisfaction and reduced burnout. The moderate positive correlation observed in the present study ($r = 0.47$, $p < 0.001$) further supports the view that psychological resilience and professional well-being are closely related among healthcare professionals.

Regression analysis also demonstrated that professional quality of life was the strongest predictor of psychological resilience ($\beta = 0.42$, $p < 0.001$). This finding suggests that nurses who experience greater professional satisfaction, compassion satisfaction, and positive workplace experiences are more likely to demonstrate higher levels of resilience. Similar findings have been reported by Yu et al. (2019), who emphasized that supportive work environments and professional recognition strengthen nurses' psychological resources and resilience. These results highlight the importance of workplace interventions aimed at improving professional quality of life as a strategy for enhancing psychological resilience among mental health nurses.

Conversely, psychological resilience emerged as the strongest predictor of professional quality of life ($\beta = 0.39$, $p < 0.001$), followed by educational level ($\beta = 0.21$, $p = 0.004$) and ward allocation ($\beta = 0.18$, $p = 0.008$). These findings support those of Gillespie et al. (2007), who reported that resilient nurses experience greater work engagement and fewer symptoms of emotional exhaustion. Likewise, Zhang et al. (2018) suggested that higher educational attainment enhances nurses' critical thinking, coping abilities, and professional self-efficacy, which may contribute to improved professional quality of life.

The significant influence of ward allocation on professional quality of life suggests that workplace environment plays an important role in shaping nurses' professional experiences. Nurses assigned to different clinical areas reported varying levels of professional quality of life, possibly reflecting differences in workload, patient acuity, emotional demands, and organizational support. Similar observations have been reported by Kim and Chang (2022), who emphasized that characteristics of the work environment substantially influence nurses' occupational well-being. These findings suggest that interventions to improve professional quality of life may need to be tailored to the specific challenges encountered in different clinical settings.

In contrast, gender, age, marital status, possession of a professional diploma in mental health nursing, and years of work experience were not significant predictors of either psychological resilience or professional quality of life. These findings are consistent with those of Foureur et al. (2013), who reported that organizational culture and individual psychological characteristics exert a greater influence on resilience than demographic characteristics. It is possible that shared workplace experiences and institutional factors reduce differences attributable to demographic characteristics among mental health nurses.

Overall, the findings suggest that organizational and professional factors, including psychological resilience, educational attainment, and workplace environment, have a greater influence on nurses' professional quality of life than demographic characteristics. These results support the recommendations of McAllister and McKinnon (2009), who emphasized that interventions focusing on professional development, supportive work environments, and staff empowerment are likely to be more effective than strategies directed solely at individual demographic characteristics.

Future research should explore whether psychological resilience moderates the relationship between workplace characteristics, educational attainment, and professional quality of life. Longitudinal and qualitative studies may also provide a deeper understanding of the complex experiences underlying nurses' resilience and professional well-being, including moral distress, professional recognition, and team dynamics, which cannot be fully captured through quantitative methods alone (Jackson et al., 2007).

Limitations

- Data collection was limited to self-reported measures, which may introduce bias.
- The sample was from a single institution, limiting generalizability.
- Small sample sizes in some subgroups (e.g., Master's degree holders) may have affected statistical power.
- The initial plan was to implement stratified sampling, but the research team utilized convenience sampling due to low response rates during initial contact and time constraints. Questionnaire was sent out via WhatsApp with Google Forms. Despite allowing rapid gathering of data, it might have resulted in sampling bias, since the sample could not represent the entire population of nurses.

Recommendations:

- Recommendations for practice

Interventional Studies Future research should examine the effectiveness of cognitive behavioral therapy (CBT), mindfulness-based stress reduction (MBSR), and peer support programs in strengthening psychological resilience. These approaches have been associated with reduced burnout and increased self-efficacy among nurses who undergo psychological skills training (Rahman et al., 2021).

- Implement resilience training programs

Healthcare institutions are encouraged to design and implement resilience-focused workshops aimed at enhancing nurses' ability to manage workplace stress. Such initiatives can serve as proactive strategies to support nurses' psychological well-being in high-stress environments (Kamal et al., 2022).

Study Organizational Factors Future research should investigate the influence of organizational elements such as leadership quality, trust in the workplace, and shift scheduling on professional quality of life (ProQOL). Existing evidence highlights that organizational culture plays a critical role in shaping job satisfaction and emotional well-being, particularly in high-stress clinical settings (Kamal et al., 2022).

- Recommendations for future research

Future research: Future studies should consider employing larger, multi-center samples and longitudinal designs to better establish causal relationships and observe changes over time. Moreover, adopting a mixed-methods approach is recommended to incorporate qualitative perspectives, which can offer richer insight into nurses' lived experiences and the contextual factors influencing their resilience and professional quality of life.

18 Summary and Conclusion

In conclusion, the study established a medium positive correlation between psychological resilience and professional quality of life among nurses.

While professional life quality significantly predicted resilience, resilience itself, along with educational level and ward allocation, were significant predictors of professional life quality.

These findings suggest that fostering professional quality of life and resilience through

targeted interventions may enhance mental well-being among nurses. Future research should involve broader samples and longitudinal designs to explore causality and changes over time. These results serve as the foundation for the discussion presented in the following chapter, which interprets the findings in the context of the study's objectives and relevant literature.

19 Discussion

The findings of the present research, which examined the relationship between psychological resilience and professional quality of life (ProQOL) among nurses at a mental health institution in Oman, are comprehensively analyzed in this chapter. The psychological well-being and resilience of 186 registered mental health nurses were assessed using validated and standardized instruments, specifically the Professional Quality of Life Scale (ProQOL) and the 10-item Connor-Davidson Resilience Scale (CD-RISC-10), within the context of a descriptive correlational research study.

This chapter presents the key findings of the study and explores their meaning concerning the research questions and existing literature. It begins with a summary and interpretation of the results, followed by a discussion of unexpected findings. The strengths and limitations of the study are then outlined, and the chapter concludes by highlighting the implications of the results for practice, education, leadership, and policy, as well as providing suggestions for future research. The rationale for this study was based on the growing recognition of the psychological impact that mental health care settings, particularly those with elevated stress levels and high-emotion events, have on nurses. With an increasing number of mental health facilities in Oman, there has been scant research with empirical evidence regarding the work of nurses in coping with stress and maintaining health at work. To direct attempts aimed at targeted therapies, enhanced retention, and ensure high-quality psychiatric care, it is among the fundamental necessities to understand the influence resilience has on such outcomes as compassion satisfaction, burnout, and secondary traumatic stress. Through its local, context-based information on the issue of resilience and ProQOL in psychiatric nursing, this chapter aims to contribute to the body of knowledge at both national and global levels.

The research also fills a considerable research gap in the Gulf Cooperation Council (GCC) region, besides exhibiting how the sustainability of the mental health workforce is increasingly gaining relevance worldwide. As most people know, resilience and ProQOL are prophylactic and stimulating features that influence not only the well-being of individuals

but also the relationships between the members of the teams, patient safety, and the general performance of a given institution (Southwick et al., 2021). The technical and complex nature of emotional work in psychiatric nursing requires adaptive psychological processes and institutional assistance, as practitioners often encounter trauma, behavioural dysregulation, and stigmatization. The development of new psychiatric departments, the implementation of mental care in regular care, and the change in the attitude towards the disease of the mind in Oman testify to the urgency of such a study. Considering the lived experiences of mental health nurses working in culturally diverse and work-related environments, this inquiry offers an opportunity to inform policy decisions and learning efforts. Thus, along with the presentation of statistical correlations, the chapter will also be concerned with the theoretical and practical consequences that can affect workforce movements in the future.

20 Synthesis of Results

The quantitative results of the study provide valuable insight into the situation of the mental health nursing staff at the selected Oman hospital. The mental health of the participants was also in good mood, as indicated by the relatively high mean scores of the psychological resilience and professional quality of life (ProQOL). The moderate to high level of the CD-RISC-10 scale of psychological resilience signified that the nurses were endowed with a good ability to endure interpersonal stresses, emotional weariness, and work challenges. Such findings support international standards of emotionally intense medical environments and produce a positive influence on their coping mechanisms.

Nevertheless, there was no ProQOL rate above average. Specifically, secondary traumatic stress levels and burnout indicators were within any possible limits, as well as compassion satisfaction, which refers to the pleasure of doing the job properly. These results suggest that the focus of this study demonstrates the apparent ability of nurses to balance and work on professional commitments and emotional well-being despite the emotionally challenging atmosphere of psychiatric treatment.

One of the most interesting results of the study was a statistically significant, relatively strong positive correlation ($r = 0.47$, $p < 0.001$) between professional quality of life and psychological resilience. This correlation shows that there is high evidence that more resilient nurses are more likely to state that they have good work experience and are also less likely to experience work stress. This association is backed by previous studies that discovered that resilience is an essential protective attribute towards emotionally demanding and stressful healthcare jobs (Foureur et al., 2013). Consequently, the work in question contributes to the available information base by testing these ideas empirically in the specific cultural-institutional context of the unique Omani region, where no localized data were available beforehand.

Moreover, resilience was statistically predicted by ProQOL, as demonstrated by regression analysis. The present discovery is especially noteworthy given the predominant direction and the assertion that the elements of ProQOL, including compassion satisfaction, may, as a matter of fact, enhance the resiliency of a nurse. This implies that approaches in organizations used to boost ProQOL can be beneficial to individuals in two dimensions: directly (improving well-being) and indirectly (increasing coping). This is confirmed by claims by Mealer et al. (2012), who opined that resilience is not only a product of a support network and job satisfaction but also an inborn trait.

It has also been discovered that ward assignment and educational background also had a significant role to play in the ProQOL outcomes. Graduates with postgraduate degrees had a higher ProQOL score, which indicates that higher education can support psychological preparedness, clinical competence, and emotional intelligence as well. The conclusion is in line with the findings of Delgado et al. (2017), who concluded that continued learning results in an improvement in technical skills and readiness in emotional and psychological terms to deal with complex patient needs.

Assignment to the ward was very crucial as well. Nurses working in rehabilitation or low-acuity wards had higher proQOL scores compared to those in acute or emergency psychiatric units. This difference could be because the former has a less aggressive population of patients and fewer levels of stress. These findings are consistent with those of Bowers et al. (2009), who reported that staff working in acute psychiatric inpatient wards experienced significantly higher levels of conflict, stress, and burnout, indicating that the ward environment plays a central role in shaping staff well-being.

However, astonishingly, the study did not find any considerable relationship between ProQOL or resilience with some pertinent demographic variables such as age, marital status, years of experience, and gender. This absence of association begs the assumption that these personal characteristics greatly affect the well-being of the place of work. However, it bridges a major literature gap, especially when placed in the case of Oman. According to this study, measures of organization and environmental conditions can have a greater influence in more homogeneous, centrally dominated

institutional environments, such as those in Oman, despite the results of various studies located in Western contexts, which demonstrate that such environments influence resilience and ProQOL (Bowers et al., 2009).

As a matter of fact, more uniformity in professional experience between demographics could be due to the centralized workforce rotation and professional development policy conducted in Oman. Such homogeneity highlights the importance of systematic and environmental factors to reduce the effect of individual variations, such as age or experience. Thus, not being predetermined characteristics or mere demographic determinants, the results of the study further support the emerging consensus that workplace culture, organizational design, and leadership support are closely connected to resilience and professional well-being.

Besides, though in case the intensity ($r = 0.47$) of the identified correlation was moderate instead of high, there is still practical significance. Seeing that ProQOL ratings are generally lower in high-demand environments, such as an acute mental ward, it means that the interventions geared towards stimulating resiliency must be given priority. Such a perspective is used to advocate comprehensive, multi-faceted solutions which focus on organizational solutions, such as reduced workloads, improved support of supervisors, promulgation of an appreciation culture, and individual resiliency training.

Altogether, the research not only proves the importance of resilience as the precondition of the enhancement of ProQOL but also contributes to introducing context-specific awareness regarding the Omani mental healthcare environment. The study is useful as it helps address a major gap in the current regional literature by pointing out the dominating impact of education and working environment, as well as the comparatively small impact of demographics. It also confirms international research and provides them with new policy and intervention routes with respect to localities. The findings can assist administrators, policymakers, and educators in creating specific initiatives that foster resilience and promote well-being regarding the particular issues faced by mental health nurses in Oman and similar scenarios.

21 Importance of the Study

This study is critical because it directly addresses a significant gap in the empirical literature on psychological resilience and professional quality of life (ProQOL) among mental health nurses within Oman and the broader Gulf region. While international research has explored these constructs in various contexts, localized studies that reflect the unique cultural, institutional, and workforce dynamics of Oman have remained scarce. By providing context-specific insights, this research enhances the understanding of how resilience and ProQOL interact in a Middle Eastern mental health setting where cultural norms, hierarchical structures, and evolving psychiatric services present unique challenges and opportunities.

The findings prioritize the theoretical idea that the organizational setting, leadership ideology, and the possibility of pursuing continued professional development also play tremendous roles in affecting resilience, which is not merely a personal trait. This further establishes the notion that resilience is a dynamic phenomenon with a changeable process, and it is objective, which can be developed through evidence-based interventions and favorable working conditions.

In real life, the research focuses on the significance of education, ward assignment, and helpful institute processes on job satisfaction and the overall life of nurses. This evidence is crucial for nurse managers, educators, and legislators who aim to implement intensive resilience-strengthening programs, improve staff retention, and foster humane, high-quality psychiatric care.

By demonstrating that demographic variables were less predictive than workplace factors, the study emphasizes that institutional policies, leadership commitment, and continuous education are more impactful levers for change than static personal attributes alone. This insight shifts the focus from blaming individual weaknesses to designing systems that enable mental health nurses to thrive even in high-stress environments.

Furthermore, this study's importance extends to nursing education by providing a rationale for embedding resilience, emotional intelligence, and psychosocial skills into undergraduate and postgraduate nursing curricula. It provides an evidence base for developing continuing professional development (CPD) modules that address burnout prevention, stress management, and healthy coping strategies.

Ultimately, by bridging the local research gap, aligning with international best practices, and presenting practical recommendations, this study contributes to the sustainable development of a resilient, well-supported mental health nursing workforce. It lays the foundation for future research, policy formulation, and education reform that prioritizes

nurses' psychological well-being as a key pillar of safe and effective psychiatric care in Oman and comparable healthcare systems.

22 Interpretation of Findings in the Context of Literature

The fact that there is a significant and positive relationship between resilience and ProQOL confirms a growing body of research across different contexts. Abdel-Aziz and Adam (2020) reported similar findings among psychiatric nurses in Egypt, where higher resilience scores were associated with increased compassion satisfaction and reduced burnout. The study also supports the paradigm that was offered by Southwick et al. (2021); according to it, resilience is regarded as an interactive process that is both impacted by leadership and the environment. The low number of ProQOL and resilience at the study location could be explained by the paradise-like work environment and support of a peer group. The relationship between education and ProQOL is corroborated by the study done by Al-Maqbali and Khudari (2024) and Iliopoulou and While (2010), who found the results that the positive form of motivation, communication, and emotional competence was enhanced with the degree of education. The outcomes of Ward allocation are in line with the investigations of environmental aspects. Lykins et al. (2021) emphasized that burnout was more prevalent among nurses working in high-intensity units, highlighting the influence of ward type, workload, and staffing levels on psychological outcomes.

Similarly, Atay et al. (2021) found that psychological resilience is positively associated with professional quality of life among nurses. These findings align with the current study, which also demonstrated a strong positive correlation between ProQOL and resilience. Their study lays emphasis on the observation that nursing resilience is an important strategy to safeguard the mental health of nurses and maintain the delivery of quality medical services. A systematic study by Pehlivan and Güner (2020) demonstrated that with increased compassion satisfaction and reduced burnout, the resiliency-in-compassion-fatigue program increased significantly with ProQOL among nurses. Their findings contribute to the findings of the current study that resilience-based treatments, such as cognitive behavioural therapy and mindfulness, can be effectively used to increase ProQOL among nurses who work in emotionally demanding environments. In contrast to the findings of Duarte et al. (2020) and Alsulami and Alotaibi (2024), the present study did not identify significant correlations between ProQOL or resilience and demographic variables such as experience, gender, or age. This divergence may be attributed to cultural factors influencing self-reporting practices in the Omani context, such as modesty and emotional restraint, or to the relative homogeneity of the sample, with participants sharing similar age ranges, gender distribution, and professional backgrounds. Moreover, the results of the regression model align with the reciprocal resilience hypothesis proposed by Rushton et al. (2015), which posits that resilience is strengthened through supportive and positive work environments. These findings are further underpinned by Ungar's (2011) ecological model of resilience, which emphasizes that resilience is shaped not only by the availability of external resources but also by individuals' ability to navigate their environment and access those resources effectively.

Institutional structures with high priorities on the concepts of psychological safety, inclusive leadership, and development of education in Omani healthcare settings may reinforce the inner resilience of a nurse by ensuring that external supports are available and effective. This two-fold route might explain the extent of the moderate yet not negligible association in the current investigation. In the same regard, Sisto et al. (2019) argue that the integration of human resilience and organizational resilience, defined as the capacity of institutions to withstand stress while maintaining essential functioning, can significantly enhance adaptability in the workplace. In line with this perspective, Surzykiewicz et al. (2022) emphasize that religious coping mechanisms, particularly in collectivist cultures, play a mediating role in shaping how resilience is expressed and sustained. This suggests that local cultural dimensions in Oman, such as strong family structures, a communal sense of identity, and religion-based coping, may influence the development and manifestation of resilience among healthcare professionals. This body of information indicates that system-level solutions requiring deliberate efforts to manipulate both structures and cultures to increase resilience are required. The findings of the current research confirm the global trends and shed some light on the multifaceted reality of mental health nursing in the Middle Eastern context.

23 Explanation of Unexpected Findings

In contrast to much of the previous literature, demographic characteristics in the current study did not significantly predict levels of professional quality of life or psychological resilience. This finding is consistent with the results reported by Alsulami and Alotaibi (2024), who found no significant associations between demographic variables, such as age, gender, and years of experience, and ProQOL outcomes among psychiatric nurses in Jeddah. One possible explanation for this consistency lies in the homogeneity of the present sample, as approximately 70% of participants were female, aged between 25 and 40, and had comparable professional backgrounds. Additionally, cultural and

institutional factors within the Omani context may have contributed to this uniformity. It is also important to consider the potential role of self-reporting biases, particularly within cultures that value modesty and emotional restraint, which may lead individuals to underreport stress, emotional fatigue, or other signs of distress. The other unexpected finding was the enormous disparity of ProQOL based on the wards assigned. This may be due to the therapeutic nature of rehabilitation wards, where the long-lasting relationships between patients can be affected by staffing ratios or a support mechanism. These findings suggest that demographic characteristics might not have the same effect on resilience and ProQOL as institutional and organizational ones do. Another way of explaining this is the effect of the collectivist cultural orientation, which is predominant in Oman and the greater GCC. To many such civilizations, group identity, as opposed to individual achievement, often becomes the source of identity. Consequently, some considerations such as years of experience or even marital status may prove psychologically less important when compared to team relationships, support by the managers, as well as harmony at the institution. The high degree of power distance and strong collectivist orientation common in Arab cultures, particularly within groups that emphasize centralized decision-making, can diminish perceived autonomy, reinforcing the idea that systemic and environmental factors often shape psychological outcomes more powerfully than individual demographics (Obeidat et al., 2012).

Moreover, the absence of significant gender-related differences may be an indicator of the similar professional criteria that the hierarchical structure of Oman healthcare organizations proposes to nurses of both sexes. Previous research suggests that gender disparities in emotional expression and coping are likely to be narrowed in regimented, protocol-driven institutions such as hospitals (Taylor et al., 2000). Moreover, the self-report measures could have introduced some poor scholarship in terms of measurement bias, even more so in a culture where it could be socially stigmatizing to confess to active psychiatric distress. There is a chance that respondents might have understated the indicators of strain or burnout to comply with the endurance and resilience norms of their job. Future mixed-methods research could identify latent stressors or protective measures that are not identified using quantitative tools alone. The depth of these nuances shows the complex interactions of organizational and human-related factors that are influential on the psychological outcomes of nurses in each situation.

24 Strengths of the Study

The paper can be characterized by several important strengths that enhance its precision, scholarship, and value. First, it addresses a significant research gap in its contribution to the existing body of literature by focusing on the psychological resilience and professional quality of life (ProQOL) of Psychiatric nurses in Oman. This piece of work also makes a valuable contribution to the national debate that exists regarding the well-being of the mental health workforce because little local research has been carried out on this subject matter. The utilization of well-established assessment tools of international repute, like the Professional Quality of Life Scale (ProQOL) and Connor-Davidson Resilience Scale (CD-RISC-10), is also an advantage.

As all these tools have been widely used in international research, the outcomes are more consistent and similar. Also, there are 186 registered nurses in the sample size, which will be adequate to perform regression and correlation analysis that enhances the statistical power of the findings. Moreover, the high response rate exceeding 90% indicates that the participants became involved and reduced the chances of response bias. The study involved multivariate analysis, which provided greater depth and strength to the findings by providing a greater understanding of the relationship between significant factors. The research process also upheld academic integrity in that there was scrupulous observance of ethical principles in the form of seeking institutional approval and keeping confidentiality. Finally, the research has a wide practical value, particularly in such fields as clinical supervision, workforce planning, and continuing professional education, so that it can be used as a valuable source of psychiatric nurse policy and management practices.

Moreover, the context-specific approach to studying in the context of culture is a plus. By exploring the topic of mental health nurses in the healthcare system of Oman, a country with its own unique set of sociocultural dynamics, the research offers knowledge that can inform the establishment of the policies and interventions to be used, ones that would suit the environment. Such a geographical focus is aligned with the growing calls in global nursing publications to conduct methodologically acceptable and socioculturally significant research (Kaya & Şenyuva, 2017). Another aspect that proved the rigor of the methodology of the study is the standard operating procedures that had to be adhered to when collecting and analyzing data. The personal, anonymous nature of the questionnaires likely stimulated honest responses. In contrast, the consistency and credibility provided by the implementation of psychometric tests were ensured by the sound psychometric tools. Such methodological rigour boosts the legitimacy and applicability of the study findings regardless of the context in Oman, even in other similar regional healthcare systems in and around the Middle East.

Moreover, the research could present a complex examination of the factors that affected ProQOL and resilience using the synthesis of various variables, not only the ones related to work, but also education and demography. It has a broader vision of the phenomenon under investigation, giving greater use of the phenomenon at various levels of nursing management and education. The translation value of the study to the stakeholders is also enhanced by the fact that it serves as a bridge between the empirical data and real nursing issues.

25 Limitations of the Study

Despite these merits, this study has a few limitations that have to be considered in the analysis of findings. A notable limitation is the cross-sectional research design since it does not allow the conclusion that there is a causal relationship between ProQOL and psychological resilience. It is, however, not clear how the variables can relate in time and direction, even though we can have correlations and make predictions. Another weakness is the use of self-report surveys that are, in many aspects, biased, including social desirability and recollection errors. This matter can be particularly relevant in culturally conservative environments such as Oman, since social expectations can affect the nature of emotional disclosure and illustration.

Due to wide variations in organizational cultures and resources, the single-site design of the study also limits the use of the results to other healthcare institutions or regions. Additionally, it has omitted relevant organizational factors that would have provided a comprehensive factual insight into the mechanisms promoting resilience and ProQOL factors, such as shift patterns, team spirit, and leadership style. The second limitation is the inability to get qualitative data, and that makes the recording of the feelings, lived experiences, and difficult vantage points of mental health nurses more challenging. These limitations show there is a need to conduct more comprehensive future research and suggest that the findings should be viewed with caution. Besides, they can be seen as a ground on which the ideas given in the following section are based.

Furthermore, the cross-sectional design overlooks potential changes in resilience or ProQOL over time, particularly in response to significant institutional, social, or personal events, such as organizational changes, life events, or exposure to a public health crisis. A longitudinal design may be more accurate in predicting how resilience varies with work experience, or it might do so after certain types of interventions. Additionally, and more importantly, this analysis did not examine interaction effects between factors. A better understanding could have been drawn, such as in an interaction between resilience and the incidence of a traumatic event or between educational level and ward type. Without such inconspicuous interactions, we would have missed some complex connections or not investigated them in the same way.

The fact that personality traits and informal coping strategies are not assessed is another disadvantage that significantly influences ProQOL and resilience. Other variables that are pretty significant in the Omani and the overall Arab cultures, such as the locus of control, optimism, and religious or spiritual coping, could possess a more profound explanatory potential. Their rejection limits the scope of psychosocial interpretation. Finally, the researchers could have influenced the responses given by the participants because of the time of conducting the study (it was conducted during non-peak stress or not during times of significant public health crisis, being a possible example). The chronological context of the study can affect its applicability to more stressful periods of the working calendar or overall, during systemic crises, since resilience and burnout are often contextual and episodic.

26 Implications for Practice, Education, Leadership, and Policy

The implications of the conclusions reached in the study are significant to several key areas, namely, health policy, nursing education, clinical practice leadership, and workforce management. A positive correlation between resilience and ProQOL in the clinical arena highlights the need to conduct periodic assessments of psychological well-being among nurses by applying specific instruments like the ProQOL scale. Such consequences of early detection of emotional discomfort may include prompt interventions such as peer support, counselling, and debriefing. The ability of nurses to control their emotions and cope effectively with adverse situations can be enhanced through the introduction of systematic resilience training to ordinary staff development programs, such as CBT-based and MBSR-based programs. Such interventions should be incorporated into ongoing clinical supervision and assessment procedures rather than being confined to responsive mechanisms. Also, mandatory breaks established on long shifts, zoning of high-acuity areas, and wellness rooms could contribute to recovery and reduce mental fatigue in high-acuity settings.

The research further highlights the importance of incorporating psychosocial skills in the undergraduate and graduate nursing curriculum perspective in terms of education. Experiential learning techniques such as reflective journaling,

simulation, and mentorship programs should be integrated with courses in emotional intelligence, self-care, and resilience theory. To increase nursing students' understanding of a holistic state of well-being, the curriculum must also facilitate interdisciplinary learning. One way to achieve this is by connecting them to modules in psychology, behavioural health, and sociology. In order to ensure that resilience-building is not only theoretical but also implemented and evaluated during the clinical rotations, universities are recommended to cooperate with the clinical training hospitals. Such topics as the strategy for preventing burnout, communication principles in high-stress environments, and trauma-informed practices should have high relevance to the CPD program. The mechanisms of delivery of CPD should also be diversified to cover modalities through peer-led workshops, online learning, and interprofessional symposiums as part of guaranteeing accessibility and relevance.

The article promotes the use of leadership theories, particularly transformational and servant leadership theories, which form the foundation of psychological safety in managing the workforce and leadership. The leaders ought to embrace and motivate nurses emotionally, offer them inclusive decision-making space, and appreciate the efforts made by nurses. Emotional Intelligence training, training in conflict resolution, and mentoring could improve the ability of the nurse manager to assist others. Moreover, by introducing regular psychological safety audits and morale tests, leadership would have the opportunity to identify potential problems and develop preemptive solutions. The institutions should also develop rotation plans, which consider the psychological requirements of any given ward and ensure high acuity units do not run short-staffed. Retention and team resilience will also be supported by the set-up of mentorship programmes to include early-career nurses and by the promotion of open and responsive systems of feedback.

On a policy level, attempts need to be made to ensure that policies to improve the well-being of the staff are relevant to workforce planning, hospital accreditation policies, and national performance evaluations. Legislators should make it a mandatory requirement that mental health professionals have access to psychological support services, including peer support groups, confidential hotlines, and on-site mental health institutions. It is important to incorporate mental health assessment into occupational health check-ups and ensure that nurses who require psychological intervention are entitled by law (including anti-stigma measures and confidentiality policies). Moreover, the continued development of a positive and strong nursing workforce capable of meeting the needs of psychiatric care will be ensured with the support of postgraduate nursing programs and incentives for further professional growth, especially in underserved areas of mental health. Such policy goals would be enhanced, and a national culture of psychosocial safety in healthcare would be cultivated by means of acquiring government subsidies for workforce mental health initiatives and strengthening public-private affiliation.

27 Relevance to Clinical Practice

The findings of this study have direct relevance to mental health nursing practice. The positive association between psychological resilience and professional quality of life suggests that resilience serves as a protective factor against workplace stress and burnout. Mental health nurses who demonstrate higher resilience are more likely to experience greater professional satisfaction and maintain effective therapeutic relationships with patients.

Healthcare organizations should consider implementing resilience-building interventions such as mentorship programs, stress management workshops, reflective practice sessions, and employee wellness initiatives. Nurse leaders may also use these findings to identify nurses at risk of burnout and develop supportive workplace strategies that enhance staff well-being, retention, and job satisfaction.

Strengthening resilience among mental health nurses may ultimately contribute to improved patient safety, quality of care, therapeutic outcomes, and organizational effectiveness within psychiatric healthcare settings.

Recommendations for Future Research

Some of the study's limitations and findings can serve as recommendations to inform future research on the topic of resilience and the issue of professional quality of life among mental health nurses. To assess the longitudinal changes in the measure of personal resilience and ProQOL in response to changes in the face of personal circumstances or the workplace environment, longitudinal studies rank first in the recommendation list. This study would help in enriching causal chains and implementing anticipatory mental health care measures. In particular, a comparison of pre-and post-intervention measures that occur over months or years can provide valuable insights into the long-term sustainability and impact of resilience-building programs.

Second, mixed-methods designs could provide a deeper understanding of the phenomenon under study. Qualitative methods, such as focus groups or interviews, will be capable of capturing the emotional nuances and contextual nature of nurses, whereas quantitative tools will provide quantitative data. Both ethnographic research and narrative inquiry can better explain how cultural values, gender norms, and religious practices influence the perceptions and experiences of resilience in nurses. Qualitative research in the future would add the element of depth and richness when a greater variety of opinions is included by those in senior and early professional nursing career periods.

Third, in the multicultural environment in which organizations exist, such as Oman, there is a need in the future to study how organizational and cultural factors can be treated as communication variables, including trust in the workplace, management style, and religious adaptation responses. It would also be worthwhile to consider the issues of a sociopolitical factor and ProQOL levels in psychiatric facilities, including the staffing laws or narrative changes, or the cultural stigma of mental illness. Moreover, interventional research using randomized controlled trials or quasi-experimental designs could be employed to determine the effects of certain tactics, such as mindfulness training, peer support groups, and modified patterns of shifts, on improving ProQOL and increasing resiliency. Technological interventions, such as teletherapy support groups or mobile health apps, should be considered as potential candidates for scalable and low-cost models to promote nurse well-being.

As future evaluations would be far more sensitive and accurate, the culture-specific instruments should be developed and validated within the context of the Omani healthcare culture. These instruments should undergo psychometric evaluations of validity, reliability, and cultural relevance to ensure they align with the experiences of regional healthcare practitioners. Finally, it would be helpful to expand the research to encompass a few other facilities dealing with mental health in different regions and sectors, both governmental and commercial, to compare the results and further generalize them. Varying ProQOL scores may be attributed to regional healthcare facilities, the ratio of personnel, and mental health awareness, which can provide insight into the issue. Additionally, collaboration with international organizations would promote good practices and facilitate cross-cultural comparisons. When synthesized, the above are potential areas of investigation to expand our knowledge and strengthen evidence-based approaches, thereby enhancing the psychological well-being of mental health nurses.

28 Conclusion

This study examined the relationship between professional quality of life (ProQOL) and psychological resilience among mental health nurses in Oman. The results showed a significant positive association between the two, indicating that nurses with higher resilience tend to report better overall quality of work life. Ward assignment and level of education were found to influence ProQOL, while demographic factors such as age, gender, and years of experience showed no significant impact. This suggests that workplace conditions and institutional structures may play a greater role in shaping nurses' well-being than personal characteristics.

By focusing on a population and setting that has received little prior research attention, this study contributes important context-specific insights to both Omani and broader regional literature. The findings reinforce the idea that resilience is not just an individual trait but also a product of the work environment, leadership support, and professional development opportunities. As such, integrating resilience-building strategies into healthcare systems can help strengthen the mental health nursing workforce, supporting retention, reducing burnout, and promoting compassionate care.

Although the study was limited by its single-site design and reliance on self-reported data, its strong sample size, validated instruments, and high response rate add credibility to the findings. Future research, particularly longitudinal and qualitative studies, would be valuable in capturing how resilience and ProQOL evolve over time and in response to specific interventions or system changes.

In conclusion, this study highlights the need for healthcare institutions to view resilience as a critical component of workforce sustainability. By embedding mental health support, leadership training, and professional development into everyday practice and policy, organizations can better equip nurses to thrive in challenging clinical environments. These insights offer a foundation for targeted improvements in nursing education, leadership, and healthcare policy, both in Oman and in similar contexts across the region.

Summary table

Variable	Key Findings
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Psychological Resilience	Moderate to high levels among nurses
ProQOL (Overall)	Balanced scores across CS, STS, and Burnout
Resilience ↔ ProQOL	Strong positive correlation ($r = 0.47$, $p < 0.001$)
Ward Assignment	Rehabilitation units linked to higher ProQOL
Educational Background	Higher education correlated with higher ProQOL
Demographics (age, gender)	No significant effect

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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Appendices

Appendix A: Tables

Table 1 Descriptives

			Statistic	Std. Error
Total Data Normality	Mean		69.0269	.65469
	95% Confidence Interval for Mean	Lower Bound	67.7353	
		Upper Bound	70.3185	
	5% Trimmed Mean		69.1069	
	Median		70.0000	
	Variance		79.724	
	Std. Deviation		8.92881	
	Minimum		48.00	

	Maximum	90.00	
	Range	42.00	
	Interquartile Range	12.00	
	Skewness	-.222	.178
	Kurtosis	.190	.355

Table 2 Correlations among study variables

		Psychol ogical Resilien ce	Gen der	Ag e	Mari tal Stat us	Educati onal level	With/wi thout Post graduat e diploma in mental health nursing	Allocated ward/Depa rtment	Years of work Experi ence	Profess ional Life Quality
Pearso n Correlat ion	Psychologic al Resilience	1.000	-.143	.163	.113	.191	.009	.168	.117	.470
	Gender	-.143	1.000	-.177	-.021	-.223	-.027	-.317	.033	-.094
	Age	.163	-.177	1.000	.250	-.169	-.083	-.052	.584	.097
	Marital Status	.113	-.021	.250	1.000	-.193	-.166	.013	.292	-.017
	Educational Level	.191	-.223	-.169	-.193	1.000	.060	.183	-.365	.290
	With/witho ut Post graduate diploma in mental health nursing	.009	-.027	-.083	-.166	.060	1.000	-.144	-.296	.064
	Allocated ward/Depa rtment	.168	-.317	-.052	.013	.183	-.144	1.000	-.023	.243
	Years of work Experience	.117	.033	.584	.292	-.365	-.296	-.023	1.000	.009
	Professiona l Life Quality	.470	-.094	.097	-.017	.290	.064	.243	.009	1.000

Sig. (1-tailed)	Psychological Resilience	.	.026	.013	.062	.005	.451	.011	.055	.000
	Gender	.026	.	.008	.389	.001	.355	.000	.327	.101
	Age	.013	.008	.	.000	.011	.131	.239	.000	.093
	Marital Status	.062	.389	.000	.	.004	.012	.429	.000	.408
	Educational Level	.005	.001	.011	.004	.	.208	.006	.000	.000
	With/without Post graduate diploma in mental health nursing	.451	.355	.131	.012	.208	.	.025	.000	.191
	Allocated ward/Department	.011	.000	.239	.429	.006	.025	.	.376	.000
	Years of work Experience	.055	.327	.000	.000	.000	.000	.376	.	.450
	Professional Life Quality	.000	.101	.093	.408	.000	.191	.000	.450	.
N	Psychological Resilience	186	186	186	186	186	186	186	186	186
	Gender	186	186	186	186	186	186	186	186	186
	Age	186	186	186	186	186	186	186	186	186
	Marital Status	186	186	186	186	186	186	186	186	186
	Educational Level	186	186	186	186	186	186	186	186	186
	With/without Post graduate diploma in mental health nursing	186	186	186	186	186	186	186	186	186
	Allocated ward/Department	186	186	186	186	186	186	186	186	186
	Years of work Experience	186	186	186	186	186	186	186	186	186

	Professional Life Quality	186	186	186	186	186	186	186	186	186
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Table 3 Correlations among the study variables

		Professional Life Quality	Psychological Resilience	Gender	Age	Marital Status	educational Level	With/without Postgraduate diploma in mental health nursing	Allocated ward/Department	Years of work experience
Pearson Correlation	Professional Life Quality	1.000	.470	-.094	.097	-.017	.290	.064	.243	.009
	Psychological Resilience	.470	1.000	-.143	.163	.113	.191	.009	.168	.117
	Gender	-.094	-.143	1.000	-.177	-.021	-.223	-.027	-.317	.033
	Age	.097	.163	-.177	1.000	.250	-.169	-.083	-.052	.584
	Marital Status	-.017	.113	-.021	.250	1.000	-.193	-.166	.013	.292
	Educational Level	.290	.191	-.223	-.169	-.193	1.000	.060	.183	-.365
	With/without Postgraduate diploma in mental health nursing	.064	.009	-.027	-.083	-.166	.060	1.000	-.144	-.296
	Allocated ward/Department	.243	.168	-.317	-.052	.013	.183	-.144	1.000	-.023
	Years of work experience	.009	.117	.033	.584	.292	-.365	-.296	-.023	1.000
Sig. (1-tailed)	Professional Life Quality	.	.000	.101	.093	.408	.000	.191	.000	.450
	Psychological Resilience	.000	.	.026	.013	.062	.005	.451	.011	.055

	Gende	.101	.026	.	.008	.389	.001	.355	.000	.327
	Age	.093	.013	.008	.	.000	.011	.131	.239	.000
	Marital Status	.408	.062	.389	.000	.	.004	.012	.429	.000
	Educational Level	.000	.005	.001	.011	.004	.	.208	.006	.000
	With/without Postgraduate diploma in mental health nursing	.191	.451	.355	.131	.012	.208	.	.025	.000
	Allocated ward/Department	.000	.011	.000	.239	.429	.006	.025	.	.376
	Years of work experience	.450	.055	.327	.000	.000	.000	.000	.376	.
N	Professional Life Quality	186	186	186	186	186	186	186	186	186
	Psychological Resilience	186	186	186	186	186	186	186	186	186
	Gende	186	186	186	186	186	186	186	186	186
	Age	186	186	186	186	186	186	186	186	186
	Marital Status	186	186	186	186	186	186	186	186	186
	Educational Level	186	186	186	186	186	186	186	186	186
	With/without Postgraduate diploma in mental health nursing	186	186	186	186	186	186	186	186	186
	Allocated ward/Department	186	186	186	186	186	186	186	186	186
	Years of work experience	186	186	186	186	186	186	186	186	186

Table 4 Multiple Comparisons for the relationship between allocated ward/department and professional life quality

Dependent Variable: Total Professional Life Quality						
Tukey HSD						
(I) Allocated ward/Department:	(J) Allocated ward/Department:	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Accident and Emergency Department	Child Ward	-4.83333	4.68107	.994	-20.1021	10.4354
	Female Forensic Ward (1)	2.57692	3.29178	.999	-8.1602	13.3141
	Female Ward (2)	-.72222	3.38791	1.000	-11.7729	10.3285
	Male Forensic Ward (1)	.58696	3.32028	1.000	-10.2432	11.4171
	Female Ward (1)	-6.16667	4.68107	.965	-21.4354	9.1021
	Male Ward (1)	-2.50000	3.50436	1.000	-13.9306	8.9306
	Male Ward (2)	-3.15854	3.21049	.996	-13.6305	7.3135
	Male Ward (3)	-1.95000	3.21405	1.000	-12.4336	8.5336
	Male Ward (4)	-4.04545	3.57854	.988	-15.7180	7.6271
	Outpatient Department	-1.75000	4.33382	1.000	-15.8861	12.3861
Child Ward	Accident and Emergency Department	4.83333	4.68107	.994	-10.4354	20.1021
	Female Forensic Ward (1)	7.41026	3.73713	.661	-4.7796	19.6001
	Female Ward (2)	4.11111	3.82207	.992	-8.3558	16.5780
	Male Forensic Ward (1)	5.42029	3.76226	.936	-6.8515	17.6921
	Female Ward (1)	-1.33333	5.00427	1.000	-17.6563	14.9897
	Male Ward (1)	2.33333	3.92567	1.000	-10.4715	15.1381
	Male Ward (2)	1.67480	3.66573	1.000	-10.2821	13.6317
	Male Ward (3)	2.88333	3.66885	.999	-9.0838	14.8504
	Male Ward (4)	.78788	3.99203	1.000	-12.2334	13.8091
	Outpatient Department	3.08333	4.68107	1.000	-12.1854	18.3521
Female Forensic Ward (1)	Accident and Emergency Department	-2.57692	3.29178	.999	-13.3141	8.1602
	Child Ward	-7.41026	3.73713	.661	-19.6001	4.7796
	Female Ward (2)	-3.29915	1.87927	.804	-9.4290	2.8307
	Male Forensic Ward (1)	-1.98997	1.75442	.988	-7.7126	3.7326
	Female Ward (1)	-8.74359	3.73713	.412	-20.9334	3.4462
	Male Ward (1)	-5.07692	2.08190	.349	-11.8677	1.7138
	Male Ward (2)	-5.73546*	1.53654	.011	-10.7474	-.7235
	Male Ward (3)	-4.52692	1.54398	.122	-9.5631	.5092
	Male Ward (4)	-6.62238	2.20447	.101	-13.8129	.5682
	Outpatient Department	-4.32692	3.29178	.965	-15.0641	6.4102

Female Ward (2)	Accident and Emergency Department	.72222	3.38791	1.000	-10.3285	11.7729
	Child Ward	-4.11111	3.82207	.992	-16.5780	8.3558
	Female Forensic Ward (1)	3.29915	1.87927	.804	-2.8307	9.4290
	Male Forensic Ward (1)	1.30918	1.92876	1.000	-4.9821	7.6004
	Female Ward (1)	-5.44444	3.82207	.941	-17.9113	7.0224
	Male Ward (1)	-1.77778	2.23079	.999	-9.0542	5.4986
	Male Ward (2)	-2.43631	1.73294	.946	-8.0888	3.2162
	Male Ward (3)	-1.22778	1.73954	1.000	-6.9018	4.4463
	Male Ward (4)	-3.32323	2.34559	.943	-10.9741	4.3277
	Outpatient Department	-1.02778	3.38791	1.000	-12.0785	10.0229
Male Forensic Ward (1)	Accident and Emergency Department	-.58696	3.32028	1.000	-11.4171	10.2432
	Child Ward	-5.42029	3.76226	.936	-17.6921	6.8515
	Female Forensic Ward (1)	1.98997	1.75442	.988	-3.7326	7.7126
	Female Ward (2)	-1.30918	1.92876	1.000	-7.6004	4.9821
	Female Ward (1)	-6.75362	3.76226	.782	-19.0254	5.5182
	Male Ward (1)	-3.08696	2.12668	.933	-10.0238	3.8499
	Male Ward (2)	-3.74549	1.59669	.408	-8.9536	1.4626
	Male Ward (3)	-2.53696	1.60385	.888	-7.7684	2.6945
	Male Ward (4)	-4.63241	2.24681	.606	-11.9611	2.6962
	Outpatient Department	-2.33696	3.32028	1.000	-13.1671	8.4932
Female Ward (1)	Accident and Emergency Department	6.16667	4.68107	.965	-9.1021	21.4354
	Child Ward	1.33333	5.00427	1.000	-14.9897	17.6563
	Female Forensic Ward (1)	8.74359	3.73713	.412	-3.4462	20.9334
	Female Ward (2)	5.44444	3.82207	.941	-7.0224	17.9113
	Male Forensic Ward (1)	6.75362	3.76226	.782	-5.5182	19.0254
	Male Ward (1)	3.66667	3.92567	.997	-9.1381	16.4715
	Male Ward (2)	3.00813	3.66573	.999	-8.9488	14.9650
	Male Ward (3)	4.21667	3.66885	.987	-7.7504	16.1838
	Male Ward (4)	2.12121	3.99203	1.000	-10.9000	15.1424
	Outpatient Department	4.41667	4.68107	.997	-10.8521	19.6854
Male Ward (1)	Accident and Emergency Department	2.50000	3.50436	1.000	-8.9306	13.9306
	Child Ward	-2.33333	3.92567	1.000	-15.1381	10.4715
	Female Forensic Ward (1)	5.07692	2.08190	.349	-1.7138	11.8677
	Female Ward (2)	1.77778	2.23079	.999	-5.4986	9.0542
	Male Forensic Ward (1)	3.08696	2.12668	.933	-3.8499	10.0238

	Female Ward (1)	-3.66667	3.92567	.997	-16.4715	9.1381
	Male Ward (2)	-.65854	1.95083	1.000	-7.0218	5.7047
	Male Ward (3)	.55000	1.95669	1.000	-5.8324	6.9324
	Male Ward (4)	-1.54545	2.51087	1.000	-9.7354	6.6445
	Outpatient Department	.75000	3.50436	1.000	-10.6806	12.1806
Male Ward (2)	Accident and Emergency Department	3.15854	3.21049	.996	-7.3135	13.6305
	Child Ward	-1.67480	3.66573	1.000	-13.6317	10.2821
	Female Forensic Ward (1)	5.73546*	1.53654	.011	.7235	10.7474
	Female Ward (2)	2.43631	1.73294	.946	-3.2162	8.0888
	Male Forensic Ward (1)	3.74549	1.59669	.408	-1.4626	8.9536
	Female Ward (1)	-3.00813	3.66573	.999	-14.9650	8.9488
	Male Ward (1)	.65854	1.95083	1.000	-5.7047	7.0218
	Male Ward (3)	1.20854	1.36209	.998	-3.2344	5.6514
	Male Ward (4)	-.88692	2.08113	1.000	-7.6752	5.9013
	Outpatient Department	1.40854	3.21049	1.000	-9.0635	11.8805
Male Ward (3)	Accident and Emergency Department	1.95000	3.21405	1.000	-8.5336	12.4336
	Child Ward	-2.88333	3.66885	.999	-14.8504	9.0838
	Female Forensic Ward (1)	4.52692	1.54398	.122	-.5092	9.5631
	Female Ward (2)	1.22778	1.73954	1.000	-4.4463	6.9018
	Male Forensic Ward (1)	2.53696	1.60385	.888	-2.6945	7.7684
	Female Ward (1)	-4.21667	3.66885	.987	-16.1838	7.7504
	Male Ward (1)	-.55000	1.95669	1.000	-6.9324	5.8324
	Male Ward (2)	-1.20854	1.36209	.998	-5.6514	3.2344
	Male Ward (4)	-2.09545	2.08663	.995	-8.9016	4.7107
	Outpatient Department	.20000	3.21405	1.000	-10.2836	10.6836
Male Ward (4)	Accident and Emergency Department	4.04545	3.57854	.988	-7.6271	15.7180
	Child Ward	-.78788	3.99203	1.000	-13.8091	12.2334
	Female Forensic Ward (1)	6.62238	2.20447	.101	-.5682	13.8129
	Female Ward (2)	3.32323	2.34559	.943	-4.3277	10.9741
	Male Forensic Ward (1)	4.63241	2.24681	.606	-2.6962	11.9611
	Female Ward (1)	-2.12121	3.99203	1.000	-15.1424	10.9000
	Male Ward (1)	1.54545	2.51087	1.000	-6.6445	9.7354
	Male Ward (2)	.88692	2.08113	1.000	-5.9013	7.6752
	Male Ward (3)	2.09545	2.08663	.995	-4.7107	8.9016
	Outpatient Department	2.29545	3.57854	1.000	-9.3771	13.9680

Outpatient Department	Accident and Emergency Department	1.75000	4.33382	1.000	-12.3861	15.8861
	Child Ward	-3.08333	4.68107	1.000	-18.3521	12.1854
	Female Forensic Ward (1)	4.32692	3.29178	.965	-6.4102	15.0641
	Female Ward (2)	1.02778	3.38791	1.000	-10.0229	12.0785
	Male Forensic Ward (1)	2.33696	3.32028	1.000	-8.4932	13.1671
	Female Ward (1)	-4.41667	4.68107	.997	-19.6854	10.8521
	Male Ward (1)	-.75000	3.50436	1.000	-12.1806	10.6806
	Male Ward (2)	-1.40854	3.21049	1.000	-11.8805	9.0635
	Male Ward (3)	-.20000	3.21405	1.000	-10.6836	10.2836
	Male Ward (4)	-2.29545	3.57854	1.000	-13.9680	9.3771

*. The mean difference is significant at the 0.05 level.

Table 5 Descriptives for the relationship between allocated ward/department and professional life quality

Total Professional Life Quality									
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	Between-Component Variance
					Lower Bound	Upper Bound			
Accident and Emergency Department	4	37.5000	3.31662	1.65831	32.2225	42.7775	35.00	42.00	
Child Ward	3	42.3333	4.04145	2.33333	32.2938	52.3729	40.00	47.00	
Female Forensic Ward (1)	26	34.9231	6.72858	1.31958	32.2053	37.6408	19.00	44.00	
Female Ward (2)	18	38.2222	5.41844	1.27714	35.5277	40.9167	30.00	50.00	
Male Forensic Ward (1)	23	36.9130	7.66879	1.59905	33.5968	40.2293	21.00	50.00	
Female Ward (1)	3	43.6667	3.21455	1.85592	35.6813	51.6521	40.00	46.00	
Male Ward (1)	13	40.0000	6.80686	1.88788	35.8867	44.1133	28.00	49.00	
Male Ward (2)	41	40.6585	5.34607	.83492	38.9711	42.3460	30.00	50.00	
Male Ward (3)	40	39.4500	6.09729	.96407	37.5000	41.4000	23.00	50.00	
Male Ward (4)	11	41.5455	4.98726	1.50371	38.1950	44.8959	30.00	50.00	

Outpatient Department		4	39.2500	7.41058	3.70529	27.4581	51.0419	30.00	47.00	
Total		186	38.8817	6.33625	.46460	37.9651	39.7983	19.00	50.00	
Model	Fixed Effects			6.12895	.44940	37.9948	39.7687			
	Random Effects				.80713	37.0833	40.6801			3.01963

Appendix B: Figures

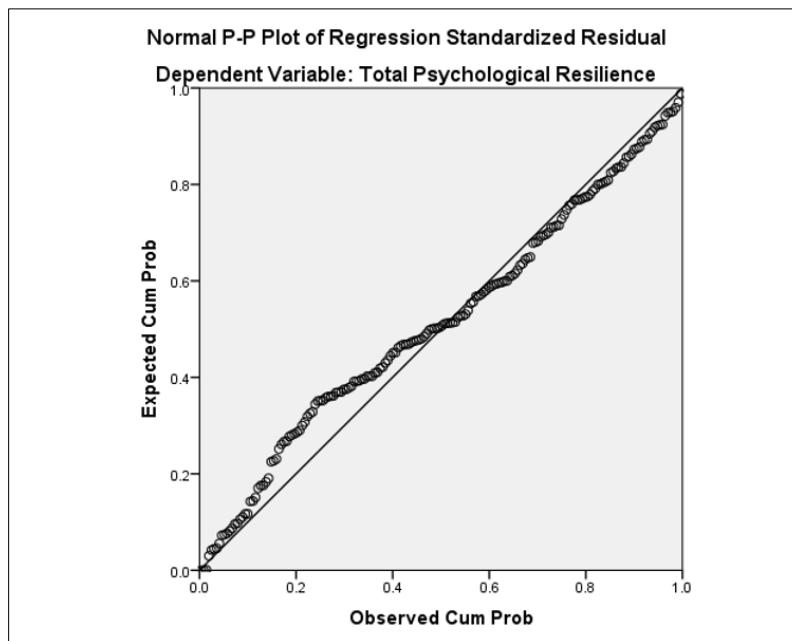


Figure 1 Normal P-P plot of regression standardised residual of total psychological resilience

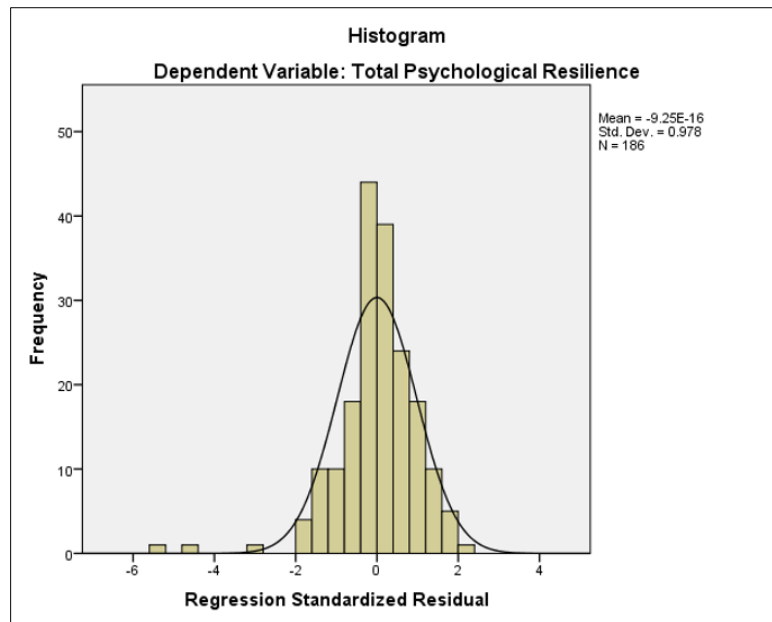


Figure 2 Histogram of psychological resilience

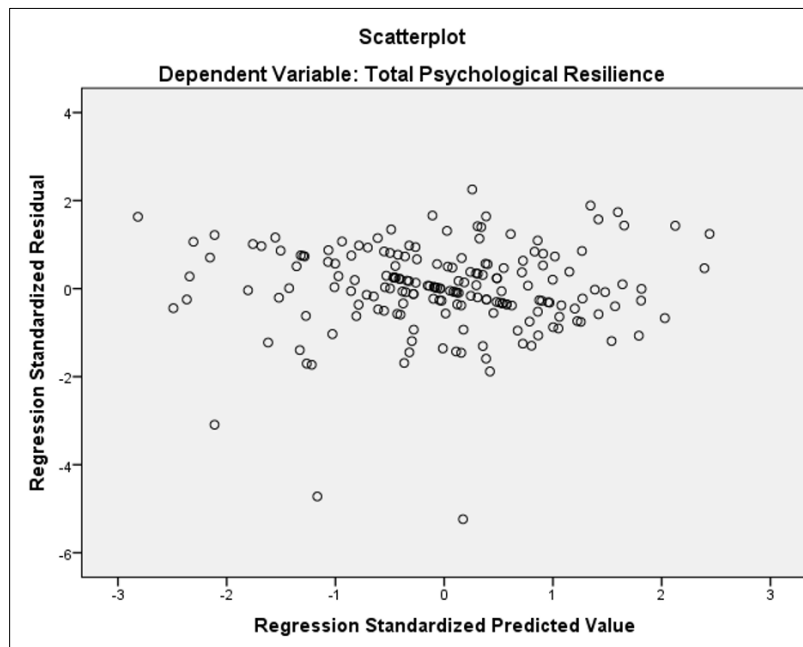


Figure 3 Scatterplot of psychological resilience

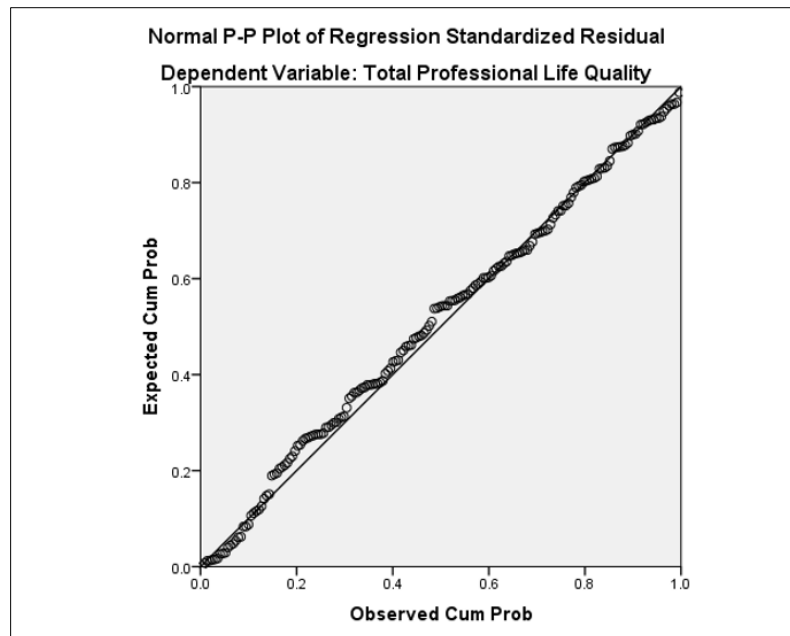


Figure 4 Normal P-P plot of regression standardised residual of professional life quality

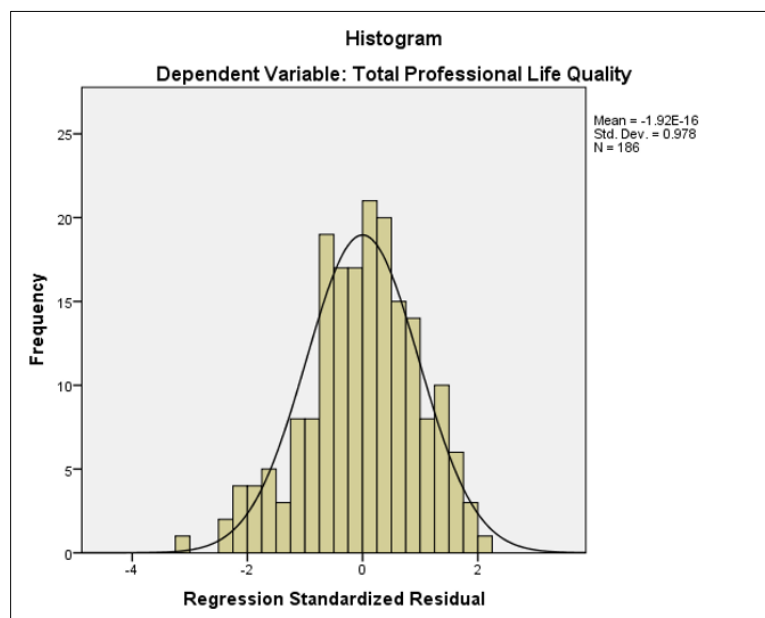


Figure 5 Histogram of professional life quality

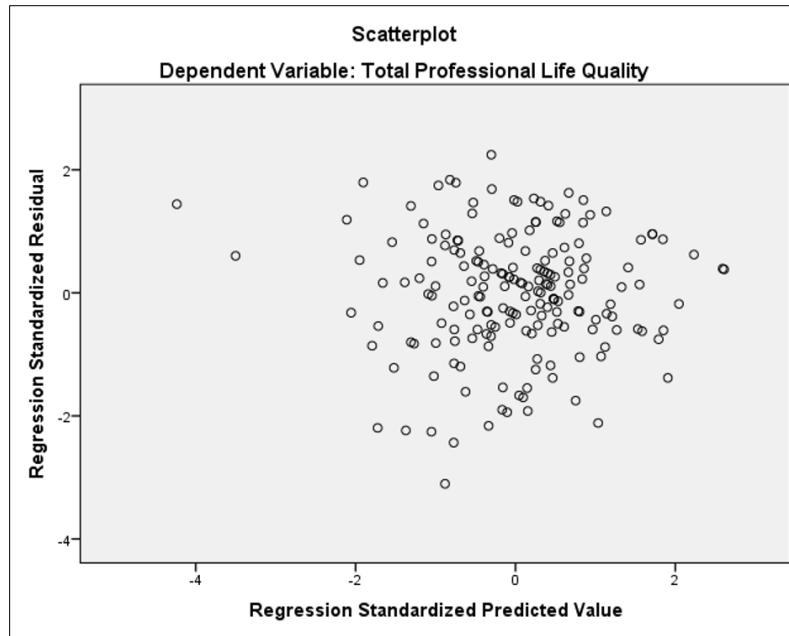


Figure 6 Scatterplot of professional life quality

Appendix C: Research Instruments

10-Item Professional Life Quality Scale

Instructions

Please indicate how often each statement applies to you by selecting one of the following options:

1 = Strongly Disagree 2 = Disagree 3 = Agree 4 = Strongly Agree

Item no.	Item	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1	I am happy in my nursing profession.	1	2	3	4
2	I get satisfaction from being able to help people.	1	2	3	4
3	My work makes me feel satisfied.	1	2	3	4
4	I feel connected to others.	1	2	3	4
5	I feel invigorated after working with those I help.	1	2	3	4
6	I have happy thoughts and feelings about those I help and how I could help them.	1	2	3	4
7	I have beliefs that sustain me.	1	2	3	4

8	I am pleased with how I am able to keep up with helping techniques and protocols.	1	2	3	4
9	I am the person I always wanted to be.	1	2	3	4
10	I believe I can make a difference through my work.	1	2	3	4

10-Item Connor-Davidson Resilience Scale Instructions: Please indicate how often each statement applies to you by selecting one of the following options: 1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Very Often
--

Item no.	Item	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Very Often (5)
1	I adapt quickly to changing workloads and staffing shortages.	1	2	3	4	5
2	I'm able to manage emotionally charged situations with patients.	1	2	3	4	5
3	I try to see the humorous side of things when I am faced with problems.	1	2	3	4	5

4	Having to cope with stress can make me stronger.	1	2	3	4	5
5	I tend to bounce back after illness, injury or other hardships.	1	2	3	4	5
6	I believe I can achieve my goals, even if there are obstacles.	1	2	3	4	5
7	Under pressure, I stay focused and think clearly.	1	2	3	4	5
8	I seek social or professional support when handling workplace stress.	1	2	3	4	5
9	I think of myself as a strong person when dealing with life's challenges and difficulties.	1	2	3	4	5
10	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	1	2	3	4	5