An-Najah National University

Faculty of Graduate Studies

ASSOCIATION BETWEEN NURSES' QUALITY OF WORK LIFE AND COMPLIANCE WITH STANDARD PRECAUTIONS: A CROSS-SECTIONAL STUDY FROM PALESTINE

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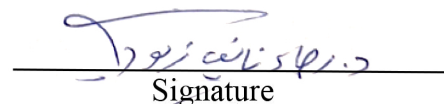

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Dedication

الى من قاد قلوب البشرية وعقولهم الى مرفأ الأمان معلم البشرية الأول سيدنا وحبيبنا وشفيعنا محمد عليه افضل الصلاة والسلام

الى الشهداء الابرار والاسرى البواسل والجرحى الميامين واهلهم الصابرين المناضلين

الى من بذلا الغالي والنفيس في سبيل وصولي لدرجة علمية ورحلا قبل ان يريا ثمرة غرسهما الى روح والداي الطاهرتان رحمهما الله

الى السند والعضد والساعد اخواني واخواتي وابنائهم جميعا

الى زوجي ورفيق درب الذي تحمل معي مشقة الطريق والوصول وما زال

الى كل من علمني حرفا من اساتذتي منذ الابتدائية حتى هذه الدرجة العلمية

الى كل هؤلاء اهدي هذه الرسالة راجيا من الله ان تكون نافذة علم وبطاقة معرفة..... وان ينفعنا وينفع بنا

ابنتكم واختكم سلوى محمد اسعد

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قال تعالى (يَرْفَعِ اللَّهُ الَّذِينَ آمَنُوا مِنكم والَّذِينَ أُوتُوا العِلْمَ دَرَجاتٍ واللَّهُ بِما تَعْمَلُونَ خَبِيرٌ﴾ (المجادلة ، آية 11)

وقال تعالى أيضا: (أَنِ اشْكُرْ لِلَّهِ وَمَنْ يَشْكُرْ فَإِنَّمَا يَشْكُرُ لِنَفْسِهِ) (لقمان :12)

وقال رسول الله صلى الله عليه وسلم: من لم يشكر الناس لم يشكر الله عز وجل

احمد الله تعالى حمدا كثيرا طيبا مباركا ملء السماوات و ملء الأرض على ما اكرمني به من إتمام هذه الدراسة التي ارجو ان تنال رضاه

ثم أتوجه بجزيل الشكر والامتنان الى كل من:

الى عمادة وإدارة ودكاترة وأساتذة جامعتي الحبيبة جامعة النجاح الوطنية وفقهم الله لما يحبه ويرضاه

الدكتور الفاضل سائد زيود (مشرف اول)حفظه الله وبارك في عمره وعمله وعلمه وأهله لتفضله الكريم بالإشراف على هذه الرسالة وتكرمه بنصحي وتوجيهي حتى إتمام هذه الرسالة

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أعضاء لجنة المناقشة الكرام: الدكتور الفاضل .... مناقشا وممتحنا داخليا, والدكتور الفاضل .... مناقشا وممتحنا خارجيا

الباحثة سلوى محمد علي اسعد

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

ASSOCIATION BETWEEN NURSES' QUALITY OF WORK LIFE AND COMPLIANCE WITH STANDARD PRECAUTIONS: A CROSS-SECTIONAL STUDY FROM PALESTINE

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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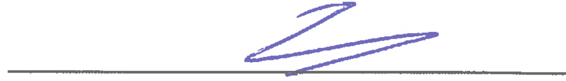
Signature: 

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Abstract

In nearly all healthcare facilities globally, nurses constitute the most populous cadre of healthcare practitioners. The quality of nursing work life and adherence to the standard precautions were less than optimal.

The objective of this investigation was to evaluate the degree to which nurses in governmental healthcare institutions in Palestine adhere to established guidelines for universal precautions and to assess the quality of their professional livelihood.

This study was carried out in a descriptive cross-sectional design in six government hospitals in the West Bank. The questionnaire contained compliance with the standard precautions scale (CSPS) and the Brooks Quality of nursing work life (BQNWL) survey.

A total of 257 nurses participated in this study and returned completed questionnaires. The mean percentage of ideal compliance was 77.1% ± 9.8% and 10 (3.9%) nurses had a CSPS % of ideal compliance of < 60%. Nurses in obstetrics, operations room, incubator unit, internal medicine, surgery, and renal unit were more likely to score ≥ 60% of ideal compliance. The BQNWL total score mean was found to be 177.0 ± 30.2. In detail, the mean scores were 28.5 ± 6.5, 43.2 ± 7.8, 88.5 ± 17.3, and 16.8 ± 5.5 in the work life-home life, work design, work context, and work world domains, correspondingly. Moreover, a statistically significant weak positive association was observed between CSPS scores and BQNWL scores, with a Pearson's r of 0.16 and p-value of 0.011. Furthermore, a significantly low positive correlation was identified between CSPS scores and work context scores, with a Pearson's r of 0.19 and p-value of 0.003.

Nurses working in different hospitals in Palestine reported moderate adherence to standard precautions. Conversely, the nurses who participated in the study reported a moderately elevated quality of professional nursing livelihood. Specifically, female

nurses reported a greater degree of compliance with universal precautions and a higher caliber of nursing work in comparison to their male counterparts. Additionally, a statistically significant weak positive correlation was detected between CSPS and BQNWL scores. In light of these results, healthcare policymakers and administrators may benefit from taking these findings into account to enhance nurses' adherence to established protocols and to improve the quality of their professional work life.

Keywords: Infection control; Nursing; Quality of nursing work; Standard precautions.

Chapter One

Introduction and Theoretical Background

Hospital-acquired infections have been recognized as an important public health issue in almost all healthcare systems worldwide (Ayobami et al., 2019). Hospital-acquired infections are infections that patients acquire during their hospitalization period. These hospital-acquired infections can cause harm to patients who could be fragile due to their illnesses and to healthcare providers who might acquire these infections while caring for infected patients (Dhedhi, Ashraf, & Jiwani, 2021). In addition, the work environments in different hospitals worldwide have long been described as complex and risky, where patients and healthcare providers are exposed to different infectious pathogens (Zeb, Muhammad, & Khan, 2019).

It should be noted that patients and healthcare providers can be the source of hospital-acquired infections (Boev & Kiss, 2017). Healthcare providers can be an important source of hospital-acquired infections, particularly for patients with open wounds, immunosuppressed patients, and intensive care units. In addition, healthcare providers could become infected and spread the infectious pathogens to their colleagues and families. Therefore, healthcare providers must strictly adhere to standard precautions and recommendations to minimize the risk of hospital-acquired infections (Curtis, 2008). Lack of compliance with standard precautions and recommendations during contact and care provision to infected patients can present opportunities for transmission of infections to healthcare providers, who can then transmit these infections to other patients. Transmission opportunities increase significantly when healthcare providers do not wear personal protective equipment and return (recap) used needles.

1.1 Prevalence of healthcare-acquired infections

Previous studies have reported that the prevalence rates of hospital-acquired infections vary by healthcare setting, hospital type, and methodology used. For example, the overall prevalence of hospital-acquired infections in a teaching hospital in Morocco was 10.3% (Razine et al., 2012). The study showed that the health-acquired infections varied by ward and the prevalence rate of hospital-acquired infections were higher in the intensive care unit. According to recent estimates, more than 1.4 million people worldwide are affected by hospital-acquired infections (Dhedhi et al., 2021). It should be noted that vaccines are

not currently available for many bloodborne infections. This increases the risk of infection transmission from patients to healthcare providers and from healthcare providers to other patients. For example, previous studies have shown that healthcare providers have a risk of 1.2% to 10% more of acquiring the hepatitis C virus once pricked by a positive patient catches it (Moorman et al., 2020). Therefore, the Centers for Disease Control and Prevention (CDC) recommended that healthcare providers use standard measures to prevent infection transmission (Dhedhi et al., 2021). Due to resource limitations, developing countries' healthcare settings are particularly vulnerable to the harm caused by acquired health infections (Haque, Sartelli, McKimm, & Abu Bakar, 2018).

1.2 Development of Standard Precautions

Healthcare providers are at risk of contracting infectious diseases due to their direct contact with blood and other bodily fluids. In the 1980s, the CDC developed universal precautions as useful guidelines that can be used to protect healthcare providers from contracting and spreading infections in different healthcare settings (CDC, 1985; Molinari, 2003). These precautions were developed notably because many blood-borne infections could be asymptomatic and infected people could be unaware of their infectious status. Therefore, in 1985, the CDC developed and introduced the concept that blood and other bodily fluids could be contaminated with infectious pathogens and should be treated as potential sources of infections (CDC, 1985). Indeed, the primary motive for introducing these precautions was the widespread spread of the human immunodeficiency virus (HIV), an epidemic in the 1980s. Over the years, these precautions have been continuously reviewed and updated. Over time, these precautions were known as universal precautions. These universal precautions were devised to prevent the transmission of HIV, hepatitis, and other blood-borne pathogens. Over time, healthcare providers and decision-makers realized that universal precautions do not cover other body fluids secreted or excreted from patients. These bodily fluids contain pathogens that can cause community- and healthcare-acquired infections.

Therefore, body substance isolation guidelines were developed to include blood, urine, sputum, saliva, feces, wound drainage, and other bodily fluids (Molinari, 2003). When isolating these fluids, healthcare professionals should wear gloves. At the time, there was a need for precautions and guidelines that cover the transmission of pathogens through droplets, direct and indirect contact, skin transmission, environmental sources, and long-

distance airborne transmission of infections through the droplet nuclei that float in the air. Therefore, the CDC replaced the concept of universal precautions with standard precautions in 1996 (Garner, 1996). In addition, standard precautions were introduced in the Guidelines for Isolation Precautions in Hospitals (Kohn et al., 2004). The newly developed standard precautions combined and extended the components included in both the body substance isolation guidelines and universal precautions. These newly developed standard precautions were devised to protect healthcare providers and patients from pathogens transmitted by contact with blood and other bodily fluids (Kohn et al., 2004; Siegel, Rhinehart, Jackson, & Chiarello, 2007). The components of standard precautions are shown in Figure 1.

Figure 1

Components of standard precautions

Elements of Standard Precautions.*

ELEMENT	REPRESENTATIVE EXAMPLES
Hand Hygiene	Hand washing or using hand antisepsis or surgical hand antisepsis to reduce potential pathogens on the hands
Using PPE†	Wearing gloves, mask, eye protection with solid side shields and protective clothing to protect the skin and the mucous membranes of the eyes, nose and mouth from exposure to blood or other potentially infectious materials (for example, saliva)
Handling Contaminated Materials or Equipment to Prevent Cross-contamination	Cleaning and heat sterilizing instruments before reuse on patients; cleaning and disinfecting environmental surfaces; using appropriate PPE; and containing heavily soiled items or areas to prevent cross-contamination
Using Engineering and Work Practice Controls	Examples may include, but are not limited to, minimizing or eliminating employee exposure by using sharps containers, not using two hands to recap needles, or not bending or breaking needles before disposal
Respiratory Hygiene and Cough Etiquette	Applying measures at the first point of contact with a potentially infected patient to minimize the transmission of respiratory infections, including influenza, in health care settings
Safe Injection Practices	Using aseptic technique (box) when handling parenteral medications and associated items to avoid contamination of sterile injection equipment and supplies

* For a complete discussion of the elements of Standard Precautions, refer to Kohn and colleagues[1] and Siegel and colleagues.[8]

† PPE: Personal protective equipment.

It should be noted that standard precautions apply when healthcare care providers make contact with blood or other bodily fluids that could be secreted or excreted from the body (except sweat), regardless of whether these bodily fluids contain blood or not. The same precautions also apply when contacting mucous membranes and nonintact skin.

1.3 Importance of adherence to the standard precautions

In today's clinical practice, the term standard precautions had emerged as a term that expanded the concept of universal precautions. Using standard precautions, healthcare providers should assume that the body fluids of all patients might carry infectious microorganisms. Conforming to universal precautions entails the suitable employment of personal protective equipment, such as gowns, gloves, aprons, and protective barrier masks. Such measures are aimed at mitigating the likelihood of healthcare providers being exposed to infectious pathogens (Anuar, Samsudin, Rasudin, & Zain, 2021).

In general, adherence to standard precautions has been recommended to control infections in different healthcare institutions regardless of the infection status of the patients receiving healthcare services. These standard precautions were designed to protect healthcare providers from contracting infections while providing healthcare services to infected patients and preventing the infections in other patients. Standard precautions imply treating every patient as an infected patient (Zeb et al., 2019).

Healthcare providers, including nurses, have stressed the importance of adherence to standard precautions as an effective approach to preventing and protecting against healthcare-associated infections. Standard precautions are believed to protect patients, healthcare providers, and the environment. Despite this wide belief, studies have shown that adherence to standard precautions, including hand washing, was less than 50%. The reasons for the lack of adherence that healthcare providers stated include irritation, distant washing facilities, and lack of time to do so (Younis & Ahmed, 2014). Recently, there has been an increasing tendency to adhere to standard precautions to reduce the transmission of infectious diseases among patients and healthcare providers (Ibrahim Al-Faouri, Suhib Hussein Okour, Nemeh Ahmad Alakour, & Nasr Alrabadi, 2021).

The CDC published standard precautions that could be applied in all circumstances and where healthcare providers contact patients. These standard precautions are key components in all control strategies used to prevent healthcare-associated infections,

notably blood-borne infections. Standard precautions include the appropriate use of personal protective equipment, hand hygiene, safe disposal of needles used, safe use of injections, placement of patients, removal of contaminated equipment, protection of the environment, and management of textiles and waste.

Previous epidemics such as Middle East Respiratory Syndrome (MERS) have encouraged decision-makers to devise recommendations to control healthcare-acquired infections (Abolfotouh et al., 2017). Additionally, adherence to these recommendations is being considered seriously by health accreditation systems. Therefore, hospital management often recommends that healthcare providers adhere strictly to standard precautions.

Towards the end of 2019, a novel coronavirus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was identified as the causative pathogen of severe acute respiratory syndrome in Wuhan, China (Dhar, Samanta, & Kochhar, 2020). Subsequently, the widespread emergence of Corona Virus Disease-19 (COVID-19) in 2020 prompted the World Health Organization (WHO) to declare this pandemic a global health emergency. During the ongoing COVID-19 pandemic, healthcare providers were on the front lines dealing with devastating numbers of cases in all hospitals across the world (Turale, Meechamnan, & Kunaviktikul, 2020). Therefore, healthcare providers, including nurses, were among the first victims of this deadly virus (Soto-Rubio, Giménez-Espert, & Prado-Gascó, 2020). It is widely accepted that adherence to standard precautions decreases the transmission of the virus to healthcare providers and other patients while receiving care in different facilities (Su Jung Kim & Eun Ju Lee, 2021).

1.4 Quality of work life

Due to the imbalance in demand and supply, different healthcare systems around the world are experiencing shortages of skilled nurses (Chan, Tam, Lung, Wong, & Chau, 2013). Due to these shortages, all hospitals must retain skilled nurses to maintain the provision of quality healthcare services to patients. Therefore, many hospitals are keen to evaluate and assess the quality of nursing work life. Studying the quality of nursing work life entails understanding how work and home life balance, work environment, societal influences, and work design affect the quality of work life (Suleiman, Hijazi, Al Kalaldeh, & Abu Sharour, 2019). In addition, studying the quality of nursing work life could help understand how this might affect the organizational productivity of nurses.

Previous studies have suggested that about one-third of the variance in job satisfaction surveys could be a function of personality that decision-makers can do little to change (Agho, 1993; Brooks et al., 2007). Therefore, researchers believe that job satisfaction is not a satisfactory construct to use. It has been argued that assessing life in the quality of nursing work can be used as an alternative approach. The WHO defines the quality of work life as the perception of individuals of their places in life in the context of the culture and value systems in which they live. This considers individuals' relationships, aims, expectations, standards, and interests (Leite, Gomes, da Silva, & de Lima, 2021). Due to the subjectivity that could be inherently rooted in the culture, society, and environmental context, the quality of work life can be related to occupational stress. The quality of nursing work life remains unaffected by individual personalities and is devoid of conceptual, theoretical, or methodological ambiguity. Investigation of the quality of nursing work life illuminates the interplay between nurses and their professional and personal lives. As such, evaluating the quality of nursing work life can facilitate the identification of specific areas that require attention and intervention to enhance overall nursing job satisfaction and well-being (Brooks & Anderson, 2005; Brooks et al., 2007). Books et al. developed their survey, which is known as Brooks' quality of nursing work life survey (BQNWLS), which can assess the quality of nursing work life (Brooks & Anderson, 2005; Brooks et al., 2007).

1.5 Relationship between quality of nursing work life and adherence to standard precautions

Previous studies have shown that nurses reported moderate levels of quality work life (Moradi, Maghaminejad, & Azizi-Fini, 2014). Consequently, scholars have urged policymakers to take action to enhance the quality of nursing work. Employers must create work environments and conditions that foster and promote nursing job satisfaction, by offering incentives, job stability, and avenues for both personal and professional advancement. The satisfaction of nurses could be promoted by meeting their personal needs and organizational demands, providing growth opportunities and ensure job security and personal safety (Suaib, Syahrul, & Tahir, 2019).

Previous studies have shown that poor quality of nursing work life can lead to poor performance (Geiger-Brown et al., 2012; Khamisa, Oldenburg, Peltzer, & Ilic, 2015; D.

Rosa, Terzoni, Dellafiore, & Destrebecq, 2019; Turchi et al., 2019). Poor performance could be seen as an increase in errors, a lack of adherence to standard precautions, and the provision of poor-quality healthcare services (Al-Faouri, Okour, Alakour, Alrabadi, & Surgery, 2021).

1.6 Adherence to standard precautions reported in the literature

In Palestine, Fashafsheh et al. investigated how nurses and midwives in Palestinian hospitals adhered to established protocols for taking standard precautions (Fashafsheh, Ayed, Koni, Hussein, & Thultheen, 2016). The study was carried out in a cross-sectional design and included 81 nurses and midwives working in Palestinian hospitals' labor and postpartum departments. The findings indicated that the average level of knowledge about standard precautions was 74.6% and compliance with these measures was 83.8%. The study found that education level, age, and work experience were correlated with adherence to standard precautions among the participating nurses and midwives. However, no significant relationship was observed between training sessions and compliance with standard precautions. The research concluded that the participants exhibited a high level of knowledge and adherence to standard precautions. Furthermore, compliance with standard precautions was linked to factors such as age, education level, and professional experience. The authors of the study recommended that midwives and nurses should be exposed to the latest evidence-based infection control practices, and more training programs and continuing education opportunities should be made available to improve their knowledge and practice.

Park et al. (2021) conducted a study to assess the level of knowledge, awareness, and adherence to standard precautions among psychiatric nurses, as well as investigate the individual factors that influenced compliance during the COVID-19 pandemic (Park, Yang, & Song, 2021). A total of 134 nurses completed the study questionnaire, and results indicated that knowledge and awareness were significantly associated with compliance to standard precautions. Additionally, awareness showed a significant correlation with compliance. The study concluded that the COVID-19 pandemic had an impact on psychiatric nurses and recommended that they remain updated on the recommended guidelines and adhere to standard precautions.

In another study, Kim and Lee (2021) conducted a cross-sectional study to assess the compliance of nurses working in emergency departments with standard precautions (S. J. Kim & E. J. Lee, 2021). The study investigated individual and organizational factors influencing compliance with standard precautions among nurses working in emergency departments. A survey comprising self-reporting questionnaires was administered to 140 registered nurses working in nine emergency departments in South Korea. The questionnaires covered questions related to awareness and self-efficacy of standard precautions at the individual level and the organizational culture for infection control, safety environment, and compliance with standard precautions at the organizational level. Multilevel analysis was employed to identify individual and organizational predictors of compliance. The results indicated that individual factors accounted for 81.1% of nurses' compliance with standard precautions, while organizational factors accounted for only 18.9% of the variance. At the individual level, awareness and self-efficacy of standard precautions predicted compliance, while at the organizational level, a culture that prioritizes infection control predicted compliance. The findings highlight the need to improve both facility and human resource management and the organization's culture to better control infections.

In Jordan, Al-Faouri et al. (2021) conducted a study to determine the level of knowledge among registered nurses in the north of Jordan, as well as their level of compliance with standard precautions and the factors that are associated with that level of compliance (I. Al-Faouri, S. H. Okour, N. A. Alakour, & N. Alrabadi, 2021). The cross-sectional study was conducted in three hospitals: two public hospitals and a university-affiliated hospital. Two hundred and sixty-six out of 300 registered nurses were allowed to respond to a questionnaire assessing their familiarity and adherence to the standard precaution guidelines. The overall response rate to the questionnaire was 88.7%. The general score for knowledge was 16.27 (standard deviation = 3.15), and the overall score for compliance was 49.15 (standard deviation = 12.36). A moderately positive correlation was found in the study between the levels of knowledge, experience in years and compliance with standard precautions ($r = 0.387$, $p = 0.01$) and ($r = 0.341$, $p = 0.01$), respectively. The study concluded that the participants had satisfactory knowledge levels and compliance. However, educational institutions must provide more training programs for nurses and place greater emphasis on standard precautions for nurses to improve their

knowledge of infection control protocols and their level of compliance with those protocols.

In South Africa, Gina et al. (2021) conducted a study to determine the extent to which student nurses at an Eswatini university adhere to the standard precautions recommended for the prevention of tuberculosis and HIV (Gina, Rasweswe, & Moagi, 2021). Using questionnaires, a survey was carried out at Eswatini University on all the senior nursing students studying there using a quantitative method. The study findings indicated that only 51.4% (n = 54) of the 105 student nurses who were polled in the study confirmed that they always used personal protective equipment. On the other hand, they complied with the regulations regarding sharps disposal, as 92.4% of them (n = 97) stated that they always used designated containers. In the clinical setting, student nurses required a high level of close supervision from licensed nurses. The study suggested that student nurses should always have a clinical facilitator with them when they are in the clinical area and that preceptors should be excused from their other nursing responsibilities when there are student nurses present in the hospital so that they can act as mentors to students.

Donati et al. (2020) conducted a cluster randomized controlled trial using a pretest-posttest design to determine the effectiveness of implementing link nurses and audits and feedback to improve nurses' compliance with the standard precautions (Donati et al., 2020). The study involved 121 clinical nurses who worked in different wards of a university hospital. A placebo was administered to all participants at the start of the study. The intervention group consisted of 61 nurses who were designated as infection control link nurses and received systematic audits and feedback. The control group consisted of 60 nurses who received the standard multimodal approach used in the hospital. Compliance with standard precautions was evaluated before and after the study using the Italian version of the CSPS and an observational hand hygiene form developed by the WHO. The post-test results showed that the nurses in the intervention group had a significantly higher compliance with hand hygiene than the control group. Both groups showed significant increases in their CSPS scores, but the intervention group had a significantly higher increase. The findings suggest that using infection control link nurses in combination with systematic audits and feedback can effectively improve compliance with standard precautions among nurses.

Zhu et al. (2019) conducted a descriptive-comparative study to examine nurses' knowledge, attitudes, and practices in China and Ethiopia with standard precautions and to compare the two countries (Zhu, Kahsay, & Gui, 2019). A questionnaire was utilized as the main research instrument for this study, which involved 357 nurses from China (237) and Ethiopia (120) as respondents. The research findings showed that the nurses from both countries had a satisfactory understanding of standard precautions. However, the Ethiopian nurses were less compliant with the hospital policies regarding the prevention of hospital-acquired infections, probably due to limited medical resources in their country. Specifically, the study revealed that the usage of personal protective equipment among the Ethiopian nurses was notably lower than that of their Chinese counterparts, except for aprons and goggles. The study concluded that although nurses in both countries demonstrated positive attitudes toward standard precautions, Chinese nurses had better knowledge and practices than the Ethiopian nurses. To enhance infection control in Ethiopia, it is necessary to enhance formal and on-site training for nurses and implement specific infection prevention strategies while providing adequate medical supplies. The study provided insights into some of the factors contributing to low compliance with standard precautions in both China and Ethiopia, which could aid in the development of appropriate infection prevention and control strategies for countries with limited resources.

In Thailand, Lim et al. (2021) conducted a descriptive study to assess the level of preparedness of acute care nurses for infection prevention and control (S. H. Lim, Bouchoucha, Aloweni, & Bte Suhari, 2021). The study aimed to identify the factors that influence adherence to standard precautions among 241 nurses working in acute care hospitals. The Compliance with Standard Precautions Scale (CSPS) and the Factors Influencing Adherence to Standard Precautions Scale (FIASPS) were used as study tools. The findings showed that leadership, judgment, and culture/practice had a moderate influence, whereas justification had a low score and contextual cues had a high score. The mean score on the CSPS was 76.68%, and justification had a negative relationship with nurses' adherence to standard precautions. Conversely, there was a positive relationship between the leadership factor, the cultural practice factor in FIASPS, and nurses' adherence to standard precautions. The study highlighted the importance of adhering to infection control guidelines, regular training for nurses, encouraging nurses to act as role models, and rigorous policy enforcement and monitoring by organizations.

In another study in Thailand, van Gulik et al. (2021) investigated the compliance and attitudes of nursing students toward standard precautions (van Gulik, Bouchoucha, Apivanich, Lucas, & Hutchinson, 2021). The study's objective was to identify factors that could enhance adherence to standard precautions, infection prevention, and control measures among nursing students. The study utilized a questionnaire that included the CSPS and FIASPS. The results showed that nursing students' compliance with standard precautions was, on average, 68.5%. Furthermore, the majority of students (91.2%) only used water to wash their hands, and over half (57.2%) reused surgical masks. Fourth-year students demonstrated higher compliance in preventing cross-infection from person to person, while second-year students had higher compliance in the proper disposal of sharps.

The study found that contextual cues had the most significant influence on adherence, while practicing culture and justification had the least influence. Fourth-year students identified "Leadership" as an important influence on adherence to standard precautions. The study concluded that it is necessary to emphasize the importance of standard precautions during theoretical sessions and to monitor and provide feedback on students' performance during clinical placement. An emphasis on visible organizational leadership and maintaining high levels of compliance with standard precautions can also help students translate their theoretical knowledge into practice.

1.7 Quality of nursing work life reported in the literature

In Jordan, Suleiman et al. (2019) conducted a study to evaluate the quality of nursing work life and the factors that were related to it among nurses who work in emergency rooms. (Suleiman et al., 2019). he study aimed to investigate the quality of nursing work-life and its associated factors using the BQNWL questionnaire. A total of 186 registered nurses working in emergency departments participated in the study. The results showed that the nurses reported moderate levels of BQNWL with mean scores in the moderate range on all subscales. The study found a significant improvement in the mean BQNWL score for nurses who had training courses in the emergency department. However, no other demographic or work-related variables showed a significant difference in the BQNWL scores. The study highlights the need for further interventional research studies to determine effective methods to improve the quality of nursing work-life. By improving

the quality of nursing work-life, the quality of nursing care provided to patients and their families may also improve.

In Saudi Arabia, Alharbi et al. (2019) conducted a study to determine the levels of quality of nursing work life (Alharbi, Alahmadi, Alali, & Alsaedi, 2019). The study aimed to investigate the quality of nursing work life and its relationship with personal, family, and work shift factors that nurses experienced. The findings showed that the quality of nursing work-life was relatively low overall, with a mean of 165 and a standard deviation of 26.8. The results of a bivariate analysis showed that certain factors were significantly associated with higher quality of nursing work-life scores. These factors included not being of Saudi nationality, being of higher age, having more work experience, being married, being employed full-time, working rotating shifts, and working in specialty units. The study's findings provide a foundational understanding of the quality of work life experienced by registered nurses in the Madinah region and could be useful for all levels of management in supporting nurses through adequate staffing and defined criteria for the nurse-patient ratio to ensure adequate quality nurse-patient care.

In Singapore, Kowitlawkul et al. (2019) conducted a study to investigate the main factors influencing nurses' quality of life and their ability to maintain a healthy work-life balance at a tertiary hospital (Kowitlawkul et al., 2019). The study aimed to investigate the relationship between nurses' quality of life, job satisfaction, and the time they spend on work and private life. The findings revealed that social support and a sense of coherence were strong predictors of high quality of life for nurses. Despite spending more time at work, there was no significant difference in job satisfaction among the nurses who participated in the study. The study concluded that developing nursing policies to promote physical health and healthy working environments, as well as implementing health promotion programs, such as physical exercise and mindfulness interventions, can improve nurses' well-being and quality of life.

Chang and Jang (2019) conducted a study to investigate social jetlag and chronotype categories among nursing students (Chang & Jang, 2019). Another objective was to establish associations between rhythm asynchrony and the psychological and physical health of the participants, quality of life, and academic performance (Chang & Jang, 2019). The study was carried out at two universities in Korea with a total sample size of 346 nursing students. The study showed that the average amount of social jetlag was 1

hour and 36 minutes. An inverse relationship was found between social jetlag and chronotype, academic performance, and overall quality of life. According to the multiple regression analysis findings, students' quality of life was affected by factors such as positive emotional state, social jetlag, depressive symptoms, and recovery resilience. These factors explained 41.7% of the overall variability in quality of life measures. The findings suggested that improvements in student quality of life can be achieved through reductions in depressive symptoms and social jetlag. In addition, there were improvements in recovery resilience and positive emotional state.

Tanaka et al. (2021) conducted a study to assess the association between the work-life balance gap and quality of life among acute care ward nurses (Tanaka, Koga, Nagashima, & Kuroda, 2021). The study was conducted among 228 nurses in three acute care hospitals in Japan. The study showed that nurses who lived alone had significantly higher work gap scores and significantly lower family gap scores than nurses who lived with their families. These differences were statistically significant. In addition, the quality-of-life score for nurses dropped as the gap between their work and personal lives widened. The findings indicated that the workload of nurses who lived alone was significantly higher than that of nurses who lived with their families.

In contrast, nurses who reside with their families can provide crucial assistance to their loved ones. The study found a correlation between the discrepancy in work-life balance and the quality of life. To enhance the quality of life and work-life balance, it is essential for nursing management to prioritize the reduction of this gap between the desired and actual work-life balance. This can be achieved by implementing flexible working options and policy changes.

Ruiz-Fernández et al. (2020) conducted a study to investigate the relationship between the quality of life experienced by nursing professionals and the sociodemographic factors and working conditions of the participants (Ruiz-Fernández, Pérez-García, & Ortega-Galán Á, 2020). In this multicenter study, 1521 registered nurses working for the Andalusian Public Health System in Spain received questionnaires to fill out. The professional quality of life and a large number of sociodemographic and work-related factors were evaluated. To achieve the study objectives, both descriptive analysis and several other exploratory experiments were carried out. The levels of compassion fatigue and burnout were at an all-time high. Compassion satisfaction was much lower than what

was considered the mean. Variables such as marital status, healthcare setting, the location of employment shift are all associated with cystic fibrosis (compassion fatigue). According to the findings of a model that uses multiple linear regression, being married, working in primary care, residing in an urban area, and working morning, evening or night shifts are all characteristics that increase one's risk of developing cystic fibrosis (compassion fatigue). The age of the professional, the gender of the professional, marital status of the professional, the setting of the center, the location of the shift of center, and the work shift were all characteristics linked to compassion satisfaction. According to the exploratory model, the characteristics that predicted a decrease in compassion satisfaction were working in primary care, living in an urban zone, and working a morning/evening/night shift. On the other hand, compassion satisfaction was elevated as a result of divorce. Work shift was the only thing that affected burnout. Nursing professionals are subjected to a wide variety of conditions, all of which have the potential to affect the quality of their work life negatively. There is a connection between the workplace and some of these aspects.

Wang et al. (2020) conducted a study to identify the factors that are associated with the standard of living enjoyed by registered nurses in their professional lives (Wang, Wang, Liu, & Wang, 2020). The study was carried out with the participation of 3,498 registered nurses working in five tertiary general hospitals in the Chinese provinces of Shanxi, Shandong, and Liaoning. The survey was a convenience sample. The study questioned nurses on a variety of topics, including their overall well-being, job and career satisfaction, the conditions under which they worked, and the amount of stress they experienced on the job. The total quality of work life score was found to be 3.40 (with a standard deviation of 0.61), while the working conditions and stress at work received lower values. The scale used was from 1 to 5, with 5 being the best possible score. The females were observed to have overall happiness that is 3.49.74 points higher than the males, which was found to be 3.35.87 points. Furthermore, we found that there is a statistically significant difference between the experience on the job of the various departments (P =.004). This was another finding that we made. It was discovered that the quality of working life for nurses is somewhere in the middle of the spectrum, with room for progress in both directions. Nurse managers in China must take advantage of the opportunity to implement measures that will improve the quality of working life of nurses in that country, and they are responsible for taking this task seriously.

1.8 Problem Statement

Nurses comprise the largest group of healthcare professionals in almost all hospitals worldwide, with estimates suggesting that they make up around 50% to 60% of the total human resources within a hospital (Zeb et al., 2019). Furthermore, nurses play a crucial role in delivering healthcare services to patients and are responsible for providing a significant amount of care to them. Therefore, ensuring the health and well-being of nurses is essential for maintaining the sustainability of any healthcare system worldwide and improving the quality of life for patients.

Adherence to standard precautions is crucial to reduce healthcare-acquired infections among nurses, as well as other healthcare providers. However, studies have shown that the actual adherence to these precautions in clinical settings falls short of the recommended guidelines. Despite the acknowledgement of the significance of adherence to standard precautions in preventing the transmission of contagious pathogens in the workplace, healthcare providers around the world have been found to exhibit less than optimal adherence to these guidelines (Ibrahim Al-Faouri, Suhib Hussein Okour, Nemeh Ahmad Alakour, Nasr %J Annals of Medicine Alrabadi, et al., 2021). Furthermore, previous studies have shown that nursing quality of the work-life was less optimal (Moradi et al., 2014).

In many countries, health institutions such as hospitals often face obstacles such as a shortage of healthcare providers and an increased turnover rate. These scarcity and turnover rates are particularly high for nurses. Turnover has a negative effect on the ability of any healthcare institution to meet the needs of patients and deliver healthcare services. Furthermore, it has been suggested that high turnover rates among nurses can result in understaffing, which can in turn increase the workload and stress levels of remaining staff. This can lead to significant fluctuations in nurses' attitudes towards their work environment, resulting in lower job satisfaction and reduced productivity. Such conditions may also encourage nurses to leave their jobs, further exacerbating staffing shortages. In addition, nurse staffing shortages have been linked to poorer patient outcomes, including higher rates of healthcare-associated infections, medical errors, and patient mortality. As a result, improving the quality of nursing work is believed to have a positive impact on nurses' job commitment, ultimately leading to better patient care and

outcomes (Kaddourah, Abu-Shaheen, & Al-Tannir, 2018). In addition, previous studies have shown that the quality of nursing work life affects the quality-of-care services delivered to patients (Ruiz-Fernández et al., 2020; Turchi et al., 2019).

A previous study conducted before the COVID-19 pandemic in Palestine showed that nurses' adherence of nurses to standard precautions was less than optimal (Fashafsheh et al., 2016). Therefore, non-adherence nurses are at higher risk of contracting infectious diseases. However, little is known about why nurses in Palestinian hospitals do not adhere to standard precautions while providing healthcare services to patients. One of the potential reasons could be a lack of knowledge about the components of the standard precautions. It has been argued that adequate knowledge about standard precautions could lead to greater adherence and fewer infections for healthcare providers and patients (Baqi, Damani, Shah, & Khanani, 2009).

Another reason for poor adherence to standard precautions could be the poor quality of nursing work. Previous studies have shown that poor quality of nursing work life could adversely affect their adherence to standard precautions (Ibrahim Al-Faouri, Suhib Hussein Okour, Nemeh Ahmad Alakour, Nasr %J Annals of Medicine Alrabadi, et al., 2021).

1.9 Research questions

Based on the literature review, the following questions remained unanswered:

- What is nurses' adherence level in governmental hospitals in Palestine to standard precautions?
- What is the quality of nursing work life for the nurses in governmental hospitals in Palestine?
- Is there an association between the adherence to standard precautions and the quality of nursing work life of nurses in the governmental hospitals in Palestine?

1.10 Research Hypotheses

This study was conducted with the following hypotheses:

- There are significant differences in the levels of adherence to the standard precautions with age, gender, place of residence, highest academic degree, marital

status, length of practice experience, salary, hierarchy rank, and the ward in which the nurse practiced.

- There are significant differences in the quality of nursing work with respect to age, gender, place of residence, highest academic degree, marital status, length of practice experience, salary, hierarchal rank and the ward in which the nurse practiced.
- There is a significant positive correlation between adherence to standard precautions and the quality of nursing work life for nurses in governmental hospitals in Palestine.

1.11 Research objectives

This study was conducted with the following objectives:

1. Determine the level of adherence of nurses in the governmental hospitals in Palestine to standard precautions.
2. Determine the quality of nursing work life for the nurses in government hospitals in Palestine.
3. Determine whether there were significant differences in the levels of adherence to the standard precautions regarding age, gender, place of residence, highest academic degree, marital status, length of practice experience, salary, hierarchal rank, and the ward in which the nurse practiced.
4. Determine whether there were significant differences in the quality of nursing work life in terms of age, gender, place of residence, highest academic degree, marital status, length of practice experience, salary, hierarchical rank, and the ward where the nurse practiced.
5. Investigate if there was an association between adherence to standard precautions and the quality of nursing work life for nurses in the governmental hospitals in Palestine.

1.12 Significance of the study

Previous studies have shown that nurses reported suboptimal quality of nursing work life. Furthermore, many nurses in different hospitals around the world reported less than optimal adherence to standard precautions. These below-average qualities of nursing work life and adherence to standard precautions might compromise the safety of nurses and patients receiving healthcare services (Barkat, 2020). Identifying the factors that contribute to poor or high quality of nursing work life and adherence to standard

precautions is crucial for decision-makers to develop effective interventions to improve these areas. By doing so, healthcare organizations can reduce the incidence of healthcare-acquired infections and provide higher quality healthcare services to patients. It can also help in retaining skilled nurses, reducing turnover rates, and ultimately improving the sustainability of the healthcare system.

Chapter Two

Methods

2.1 Study design

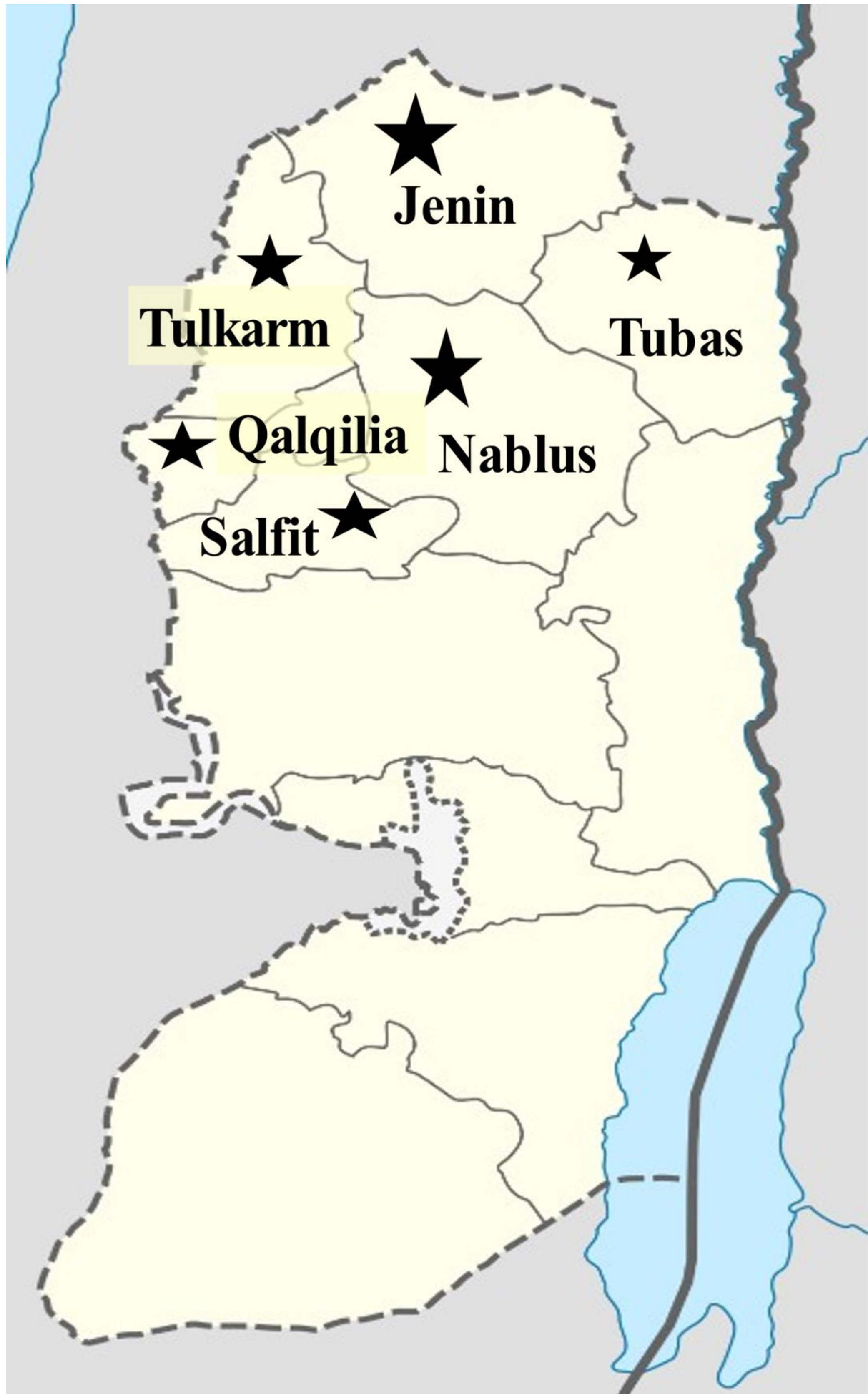
This study was conducted in a descriptive cross-sectional design to assess the adherence of nurses working in different governmental hospitals in the West Bank to standard precautions. Additionally, the study assessed the quality of nursing work life. A questionnaire was used as a study tool.

2.2 Study settings

The research study was conducted in six different government hospitals located in the West Bank of Palestine. The specific hospitals that were included in the study were the Khalil Suleiman Governmental Hospital in Jenin, Rafidia Governmental Hospital in Nablus, Thabit Thabit Governmental Hospital in Tulkarm, Darwish Nazal Governmental Hospital in Qalqilia, Yaser Arafat Governmental Hospital in Salfit, and the Turkish Governmental Hospital in Tubas. A graphical representation of the distribution of these hospitals is available in Figure 2. By carrying out the study in a variety of hospitals across the region, the researcher hoped to gain a comprehensive understanding of the determinants of poor/high quality of nursing work life and adherence to standard precautions in government hospitals within the West Bank of Palestine. Ultimately, the findings from this study could inform decision-makers on interventions and improvements that could be made to enhance the quality of nursing work life and adherence to standard precautions, which could lead to a reduction in the incidence of healthcare-acquired infections and better healthcare services for patients in the region.

Figure 2

Distribution of the hospitals in which the study was conducted



2.3 The population of the study

In this study, the target population was all registered nurses & midwives employed in six different governmental hospitals in the West Bank of Palestine there are 896 nurses.

2.3.1 Inclusion criteria

The inclusion criteria used in this study were as follows:

- Having a qualifying degree in nursing (diploma or above).
- Registered nurse in Palestine
- Having a practice experience of at least one year in a hospital setting.
- Expressing a willingness to provide informed consent

2.3.2 Exclusion criteria

- Had an experience of less than one year.
- Did not agree to provide informed consent.
- Were not directly involved in direct patient care.
- Worked in outpatient clinics.

2.4 Sample size

At the time of the study, there were 225 nurses employed at Khalil Suleiman Governmental Hospital in Jenin, 252 nurses employed at Rafidia Governmental Hospital in Nablus, 168 nurses employed at Thabit Thabit Governmental Hospital in Tulkarm, 88 nurses employed at Darwish Nazal Governmental Hospital in Qalqilia, 86 nurses were employed at Yaser Arafat Governmental Hospital in Salfit, and the 77 nurses were employed at Turkish Governmental Hospital in Tubas. The total population of potential participants was 896.

The sample size was calculated using the Slovin formula as shown in Equation 1.

Equation 1 *Slovin's Formula*

$$\mathrm{n} = \frac{N}{1 + Ne^2} \qquad (1)$$

Where: n: sample size N: population size, and e: margin of error

This study calculated the sample size with a 95% confidence interval and a 5% margin of error. The sample size calculated for this study was 270 nurses. To ensure

representativeness, it was decided to recruit about 30% of the nurses employed at each of the 6 hospitals. Therefore, 68 nurses were recruited from Khalil Suleiman Governmental Hospital in Jenin, 76 nurses were recruited from Rafidia Governmental Hospital in Nablus, 50 nurses were recruited from Thabit Thabit Governmental Hospital in Tulkarm, 27 nurses were recruited from Darwish Nazal Governmental Hospital in Qalqilia, 26 nurses were recruited from Yaser Arafat Governmental Hospital in Salfit and the 23 nurses were recruited from Turkish Governmental Hospital in Tubas.

2.5 The study tool

In this study, data collection was carried out using a questionnaire consisting of three parts. The first part of the questionnaire was designed to collect sociodemographic and work-related variables of the nurses participating in the study. Variables include age, gender, place of residence, highest academic degree, marital status, length of practice experience, salary, hierarchical rank and the ward where the nurse practiced. The second part collected nurses' compliance to the standard precautions using the CSPS (Alshammari et al., 2018). The CSPS contained 20 items, and each nurse had to indicate their behavior by answering either: never, seldom, sometimes, usually, or always. The third part contained the BQNWL (Brooks & Anderson, 2005; Brooks et al., 2007). The BQNWL contained 42 items in 4 domains: work life-home life (7 items), work design (10 items) work conditions (20 items), and work world (5 items).

The nurses had to indicate their agreement or disagreement on each item by answering by either: strongly disagree, moderately disagree, disagree, agree, moderately agree, or strongly agree. Prof. Beth A. Brooks granted permission to use the scale via email.

CSPS and BQNWL were previously tested for validity and reliability and were shown to be valid and reliable (Alshammari et al., 2018; Brooks & Anderson, 2005; Brooks et al., 2007; Khani & Jaafarpour, 2008). The questionnaire is provided in Appendix A.

2.6 Data collection

Permission was obtained from the Ministry of Health to conduct the study at the governmental hospitals. For participant recruitment, each hospital’s management was approached for permission, and based on eligibility criteria and consent, participants were included in the study. The objectives of the study were explained to each hospital’s matrons and head nurses to facilitate data collection, and the objectives were explained

to each potential participant too. Data were collected by the researchers through a self-administered questionnaire for nurses who work in different wards in the selected governmental hospitals. In addition to the original English format, the questionnaire was translated into Arabic. The sample consists of 270 nurses who meet the eligibility criteria. Participants in this study were chosen according to the inclusion criteria: they are full-time employees, have experience for more than one year, and have direct and recurrent contact with patients. Nurses who met the inclusion criteria received a copy of the questionnaire to fill out; a consent form was added in front of each questionnaire and asked the participants to freely participate in the study.

Also, a consent form was requested and signed by each participant, which indicated that participation was voluntary, the confidentiality of the information, and the right to refuse participation or withdraw at any time. The average time for filling out the questionnaire was 15–20 minutes. The returned completed questioners were 157, and 13 questioners are excluded because incomplete. Period of the study Data collection started on July 3, 2022, and continued until mid-August 2022.

2.7 Statistical analysis

In this study, the collected data was entered into Microsoft Excel 2013 and tabulated. To calculate the CSPS scores, the responses were converted using a scoring system where 'never' was given a score of 0, 'seldom' was given a score of 1, 'sometimes' was given a score of 2, 'usually' was given a score of 3, and 'always' was given a score of 4. The total score was then obtained by summing up the individual scores and ranged from 0 to 80 (Alshammari et al., 2018). Higher CSPS scores indicated higher compliance with the standard precautions. Answering all questions by selecting “always” indicated ideal compliance with standard precautions. CSPS scores were also converted into a percentage of ideal compliance. In order to calculate the BQNWL scores, the nurses' answers were converted using a scale where strongly disagree was given a score of 1, moderately disagree was given a score of 2, disagree was given a score of 3, agree was given a score of 4, moderately agree was given a score of 5, and strongly agree was given a score of 6. The individual scores were then added together to create a total score ranging from 42 to 252 (Brooks & Anderson, 2005; Brooks et al., 2007; Khani & Jaafarpour, 2008). The scores are interpreted as: low: 42-84, moderate: 85-168, and high: 169- 252.

IBM Statistical Package for Social Sciences (IBM SPSS) for Windows v.21.0 was used. Descriptive statistics such as numbers, percentages, mean, standard deviation (SD), and range were generated. To check for normal distribution, the kurtosis and skewness values were calculated and compared to the acceptable range of − 7.0 to + 7.0 for kurtosis and − 2.0 to + 2.0 for skewness (Kim, 2013). ince the data were found to be normally distributed, parametric tests such as Student's t-test or analysis of variance (ANOVA) with Tukey's pos-hoc tests were used as appropriate.

To control for potentially confounding variables, variables with a p-value of < 0.25 in the Student's t-test or ANOVA were included in a multiple linear regression model. The CSPS scores were stratified into < 60% and ≥ 60% of ideal compliance and compared using Chi-square or Fisher's exact tests, as appropriate. The BQNWL scores were stratified into moderate and high and compared using Chi-square or Fisher's exact tests, as appropriate. Correlations were investigated using Pearson's correlation coefficients.

In this study, statistical significance was defined as a p-value of < 0.05. By utilizing these statistical methods, the researchers were able to effectively analyze the data collected from the nurses participating in the study.

2.8 Ethical approval

Before conducting the study, the researchers obtained approval for the protocol and ethics from the Institutional Review Boards (IRBs) of An-Najah National University. The approval documentation is available in Appendix B. As part of the study, the nurses were informed that their participation was voluntary and they could withdraw at any tim

e without any negative consequences. The researchers also obtained permission from the hospitals where the study was conducted to ensure that the study was conducted in accordance with the hospital's policies and procedures.

2.9 Confidentiality

The data collected in this study were collected for scientific research only. Data collected were treated as confidential and were not used for purposes other than those of the study. An informed constant was obtained from all nurses. Data were kept in a safe place with restricted access.

Chapter Three

Results

A total of 257 nurses participated in this study and returned completed questionnaires that were included and analyzed. Of the nurses, 149 (58.0%) were aged 26-45 years, 158 (61.5%) were female, 233 (90.7%) lived in cities or villages, 145 (56.4%) had bachelor's degree, 161 (62.6%) were currently married, 101 (39.3%) had an experience of 10 years or more, 207 (80.5%) received a salary of 3000 NIS or more and 44 (17.1%) held managerial positions. The nurses worked in different wards and departments. The detailed demographic and work-related variables of the nurses are presented in Table 1.

Table 1

Demographic and work-related variables of the nurses who participated in the study

Variable	n	%
Age (years)		
≤ 25	74	28.8
26-45	149	58.0
≥ 46	34	13.2
Gender		
Male	99	38.5
Female	158	61.5
Place of residence		
City/village	233	90.7
Refugees camp	24	9.3
Educational level		
Diploma	77	30.0
Bachelor	145	56.4
Master	35	13.6
Marital status		
Currently married	96	37.4
Currently unmarried	161	62.6
Experience (years)		
≤ 5 years	99	38.5
6-10 years	57	22.2
≥ 10 years	101	39.3
Salary		
< 3000 NIS	50	19.5
≥ 3000 NIS	207	80.5
Rank		
Managerial position	44	17.1
Nurse	213	82.9
Ward		
Obstetrics	37	14.4
Operations room	29	11.3
Emergency room	37	14.4
Intensive care unit	16	6.2
Incubator unit	27	10.5
Internal medicine	25	9.7
Surgery unit	31	12.1
Renal unit	21	8.2
Pediatrics	20	7.8
Orthopedics	14	5.4

Note. NIS: New Israeli Shekel

3.1 Compliance of nurses with Standard Precautions

All nurses answered the CSPS items. In general, nurses adhered to standard precautions as shown by the answers to each CSPS item. The distribution of the nurses' responses is shown in Table 2.

Table 2

Distribution of answers of the nurses on the CSPS items

#	Statement	Never		Seldom		Sometimes		Usually		Always	
		n	%	n	%	n	%	n	%	n	%
1	In between times with patients, I wash my hands.	1	0.4	19	7.4	15	5.8	52	20.2	170	66.1
2*	I solely rinse my hands with water while washing.	58	22.6	58	22.6	45	17.5	42	16.3	54	21.0
3	If my hands are not obviously dirty, I use alcohol hand rubs instead.	11	4.3	13	5.1	33	12.8	96	37.4	104	40.5
4*	After giving injections, I recap the used needles.	75	29.2	44	17.1	31	12.1	39	15.2	68	26.5
5	The discarded sharp objects are placed in sharp boxes.	3	1.2	2	0.8	4	1.6	30	11.7	218	84.8
6*	I empty the sharps box when it becomes full.	20	7.8	34	13.2	56	21.8	58	22.6	89	34.6
7	I ensure to remove my personal protective equipment (PPE) in the area specifically designated for that purpose.	1	0.4	17	6.6	26	10.1	96	37.4	117	45.5
8	Even after putting on personal protection equipment, I take a shower if there is a lot of splashing.	26	10.1	25	9.7	35	13.6	78	30.4	93	36.2
9	I apply waterproof dressing to cover any wounds or lesions before coming into contact with the patient.	1	0.4	2	0.8	15	5.8	93	36.2	146	56.8
10	I always put on gloves before coming into contact with body fluids, blood products, or any secretions of the patients.	1	0.4	2	0.8	10	3.9	54	21.0	190	73.9
11	I change my gloves at each patient encounter.	4	1.6	11	4.3	5	1.9	44	17.1	193	75.1
12	I promptly disinfect my hands after removing my gloves.	6	2.3	11	4.3	10	3.9	69	26.8	161	62.6
13	I utilize a surgical mask alone or in combination with goggles, a face shield, and an apron when there is a possibility of a splash or splatter.	4	1.6	9	3.5	36	14.0	107	41.6	101	39.3
14	When I wear a mask, it covers my mouth and nose.	0	0.0	11	4.3	28	10.9	84	32.7	134	52.1
15*	I use surgical masks or disposable personal protective equipment.	74	28.8	48	18.7	43	16.7	42	16.3	50	19.5
16	I don a gown or apron when I anticipate exposure to blood, bodily fluids, or patient excretions.	4	1.6	5	1.9	28	10.9	93	36.2	127	49.4
17	I dispose of waste contaminated with blood, body fluids, secretions, and excretions in red plastic bags, regardless of the infectious state of the patient.	7	2.7	10	3.9	23	8.9	79	30.7	138	53.7
18	After use, I disinfect surfaces and equipment.	4	1.6	8	3.1	12	4.7	73	28.4	160	62.3
19	To disinfect equipment with visible soil, I wear gloves.	0	0.0	0	0.0	14	5.4	79	30.7	164	63.8
20	I use disinfectants to wipe up any spilled blood or bodily fluids as soon as possible.	3	1.2	10	3.9	14	5.4	74	28.8	156	60.7

Note. *Items 2, 4, 6 and 15 were stated negatively

The mean CSPS score was 61.7 ± 7.8. When the CSPS score was converted to the percentage of ideal compliance, the mean score was 77.1% ± 9.8%. Table 3 shows the mean, possible range and range of scores in the sample in this study.

Table 3
CSPS score, possible range, and range in the sample

	CSPS	
	Total score	% of ideal compliance
Mean	61.7	77.1
SD	7.8	9.8
Possible range	0.0-80.0	0.0-100.0
Range in sample	30.0-76.0	37.5-95.0

When asked about their sources of knowledge about CSPS, nurses stated different sources. Details of the sources stated by the nurses are shown in Table 4.

Table 4
Sources of knowledge about CSPS

Source of knowledge	n*	%*
Hospital instructions	167	65.0
Self-learning	113	44.0
Workshops	64	24.9
Infection control committee	92	35.8
Lectures	104	40.5

Note. *The nurses mentioned more than one source; therefore, the numbers do not sum up to 257, and the percentages do not sum up to 100%.

3.2 Association between CSPS score with demographic and work-related variables of nurses

In this study, the mean total CSPS score and CSPS percentage of ideal compliance were compared across various demographic and work-related variables. Results indicated that female nurses had significantly higher scores than male nurses. Furthermore, nurses who lived in cities and villages had significantly higher scores compared to those who lived in refugee camps. Nurses with 6-10 years of experience had significantly lower scores than

those with less than five years and those with ten or more years of experience. Additionally, nurses working in obstetrics and the renal unit had significantly higher scores than nurses working in other wards. Details of the associations are shown in Table 5.

Table 5

Association between CSPS score with demographic and work-related variables of the nurses

			CSPS total score			CSPS percentage of ideal compliance		
Variable	n	%	Mean	SD	p	Mean	SD	p
Age (years)								
≤ 25	74	28.8	63.4	0.9		79.2	1.2	
26-45	149	58.0	62.7	0.6	0.748	78.4	0.8	0.748
≥ 46	34	13.2	63.6	1.2		79.5	1.5	
Gender								
Male	99	38.5	61.8	7.8	0.042	77.2	9.7	0.042
Female	158	61.5	63.8	7.7		79.7	9.6	
Place of residence								
City/village	233	90.7	63.4	7.4	0.004	79.3	9.2	0.004
Refugees camp	24	9.3	58.7	9.7		73.4	12.2	
Educational level								
Diploma	77	30.0	64.3	0.9		80.4	1.1	
Bachelor	145	56.4	62.5	0.7	0.186	78.1	0.8	0.186
Master	35	13.6	62.1	1.2		77.6	1.5	
Marital status								
Currently married	96	37.4	63.5	8.0	0.397	79.4	10.0	0.397
Currently unmarried	161	62.6	62.7	7.6		78.4	9.5	
Experience (years)								
≤ 5 years	99	38.5	63.9	0.8		79.9	1.0	
6-10 years	57	22.2	60.7	1.1	0.038	75.9	1.4	0.038
≥ 10 years	101	39.3	63.4	0.7		79.2	0.9	
Salary		0.0						
< 3000 NIS	50	19.5	63.7	6.6	0.503	79.6	8.3	0.503
≥ 3000 NIS	207	80.5	62.8	8.0		78.6	10.0	
Rank								
Managerial position	44	17.1	62.6	7.3	0.717	78.3	9.1	0.717
Nurse	213	82.9	63.1	7.8		78.8	9.8	
Ward								
Obstetrics	37	14.4	65.6	1.2		82.0	1.5	
Operations room	29	11.3	63.9	1.4		79.8	1.8	
Emergency room	37	14.4	63.5	1.4		79.4	1.7	
Intensive care unit	16	6.2	59.7	3.1		74.6	3.8	
Incubator unit	27	10.5	62.8	1.5	0.027	78.5	1.9	0.027
Internal medicine	25	9.7	62.9	1.1		78.6	1.3	
Surgery unit	31	12.1	62.9	1.1		78.6	1.4	
Renal unit	21	8.2	65.2	1.3		81.5	1.6	
Pediatrics	20	7.8	61.1	1.5		76.4	1.9	
Orthopedics	14	5.4	57.1	2.2		71.4	2.7	

To control for any confounding variables, the variables that showed significant association (p-value < 0.25) were included in a multiple linear regression model. The results of the regression analysis showed that the place of residence and the ward were significantly associated with the CSPS scores. Details of the multiple linear regression model are shown in Table 6.

Table 6

Multiple linear regression of the CSPS score with demographic and work-related variables

Variable	Unstandardized Coefficients	SE	Standardized Coefficients	t	p
Gender	1.70	0.98	0.11	1.74	0.084
Place of residence	-4.66	1.62	-0.18	-2.87	0.004
Education	-1.30	0.75	-0.11	-1.75	0.082
Marital status	-1.02	1.18	-0.06	-0.87	0.386
Experience	0.35	0.65	0.04	0.54	0.588
Ward	-0.39	0.17	-0.14	-2.29	0.023

When the CSPS percentage of ideal compliance scores was stratified into < 60% and ≥ 60%, 10 (3.9%) nurses had a CSPS percentage of ideal compliance of < 60%. Chi-square / Fisher exact tests showed that nurses in the obstetrics, operations room, incubator unit, internal medicine, surgery and renal unit were more likely to score ≥ 60%. The details of the associations are shown in Table.

Table 7

Association between scoring ≥ 60% CSPS ideal compliance with demographic and work-related variables of the nurses

	CSPS percentage of ideal compliance					
	< 60%		≥ 60%			
Variable	n	%	n	%	Chi-square/Fisher's exact test	p
Age (years)						
≤ 25	3	1.2	71	27.6		
26-45	6	2.3	143	55.6	0.13	1.000
≥ 46	1	0.4	33	12.8		
Gender						
Male	6	2.3	93	36.2	2.02	0.191
Female	4	1.6	154	59.9		
Place of residence						
City/village	7	2.7	226	87.9	5.23	0.056
Refugees camp	3	1.2	21	8.2		
Educational level						
Diploma	3	1.2	74	28.8		
Bachelor	6	2.3	139	54.1	0.03	1.000
Master	1	0.4	34	13.2		
Marital status						
Currently married	3	1.2	93	36.2	0.24	0.748
Currently unmarried	7	2.7	154	59.9		
Experience (years)						
≤ 5 years	4	1.6	95	37.0		
6-10 years	3	1.2	54	21.0	0.51	0.851
≥ 10 years	3	1.2	98	38.1		
Salary						
< 3000 NIS	1	0.4	49	19.1	0.59	0.692
≥ 3000 NIS	9	3.5	198	77.0		
Rank						
Managerial position	2	0.8	42	16.3	0.06	1.000
Nurse	8	3.1	205	79.8		
Ward						
Obstetrics	0	0.0	37	14.4		
Operations room	0	0.0	29	11.3		
Emergency room	2	0.8	35	13.6		
Intensive care unit	3	1.2	13	5.1		
Incubator unit	2	0.8	25	9.7	14.62	0.007
Internal medicine	0	0.0	25	9.7		
Surgery unit	0	0.0	31	12.1		
Renal unit	0	0.0	21	8.2		
Pediatrics	1	0.4	19	7.4		
Orthopedics	2	0.8	12	4.7		

3.3 Quality of Nursing Work

In this study, the quality of nursing work was assessed using BQNWLS. Nurses answered each item of the 42-item scale. The distribution of nurses' answers on each item of the BQNWLS with its work life-home life, work design, work context and work world domains are shown in Table c1 in Appendix c.

In this study, the mean total score of the nurses was 177.0 ± 30.2. On the other hand, the mean score in the work life-home life domain was 28.5 ± 6.5, the mean score on the work design domain was 43.2 ± 7.8, the mean score on the work context domain was 88.5 ± 17.3, and the mean score on the work world domain was 16.8 ± 5.5. Table 8 shows the mean, possible range and the range of BQNWL scores in the sample of nurses in this study.

Table 8

BQNWL score, possible range, and range in the sample

	BQNWL				
	Total score	Work life-home life domain	Work design domain	Work context domain	Work world domain
Mean	177.0	28.5	43.2	88.5	16.8
SD	30.2	6.5	7.8	17.3	5.5
Possible range	42.0-252.0	7.0-42.0	10.0-60.0	20.0-120.0	5.0-30.0
Range in sample	100.0-244.0	10.0-42.0	20.0-60.0	42.0-120.0	5.0-30.0

3.4 Association between BQNWL score with demographic and work-related variables of nurses

When the means of the BQNWL scores were compared, the nurses who were currently unmarried had significantly higher work life-home life scores than the nurses who were currently married. The nurses who had work experience of 6-10 years had significantly lower work context scores compared to those who had ≤5 years and ≥ 10 years of experience. The nurses in internal medicine and surgery unit had significantly higher work world scores compared to those in other wards. On the other hand, the work design domain was not significantly associated with any of the demographic and work-related variables of the nurses. Details are shown in Table c2 in appendix c.

The multiple linear regression model included variables that showed significant associations and controlled for potentially confounding variables. Variables with a p-value of < 0.25 were included in the model. The results of the multiple linear regression model indicated that the work-life-home life scores were significantly associated with marital status. Details of the multiple linear regression model are shown in Table c3 in Appendix c.

When nurses were stratified based on their BQNWL scores in classes, 112 (43.6%) had moderate BQNWL and 145 (56.4%) had high BQNWL. None of the nurses had a low BQNWL. Chi-square / Fisher exact tests showed that female nurses tended to have significantly higher BQNWL compared to male nurses. The details of the associations are shown in Table c4 in Appendix c.

3.5 Correlation between CSPS and BQNWL scores

The results of the study indicated that there was a weak positive correlation between the CSPS scores and the BQNWL scores (Pearson's r = 0.16, p = 0.011), as well as a weak positive correlation between CSPS scores and work context scores (Pearson's r = 0.19, p = 0.003). However, the study also found that there were moderate to strong positive correlations between the various domains of the BQNWL. The details of the associations are shown in Table c5 in appendix c.

Chapter Four
Discussions and Conclusions

4.1 Summary of the main findings

Nurses play a crucial role as healthcare providers in all healthcare systems across the globe. Nurses continuously face unprecedented challenges while providing healthcare services to patients in different health settings. These unprecedented challenges can compromise patient care, the personal safety of nurses themselves, and their psychological health (Firew et al., 2020).

Previous research has demonstrated that failure to follow standard precautions, such as not having appropriate personal protective equipment and delaying early testing, increases the likelihood of nurses acquiring infections (Chen-Lim et al., 2022). In addition to the health risks of contracting healthcare-associated infections, a lack of adherence to standard precautions could also compromise the psychological health of nurses. Studies conducted in the US, Singapore, China and Europe have shown that nurses reported higher levels of depression, anxiety, and posttraumatic distress disorder symptoms during the ongoing COVID-19 pandemic (Jones, Schnitzler, & Borgstrom, 2022; Nakanishi et al., 2022; Ng et al., 2020; Shanafelt, Ripp, & Trockel, 2020; Tan et al., 2020).

These psychological health problems can also deteriorate the quality of the working life of the nurses and may negatively compromise their satisfaction with their current work conditions. Therefore, this study investigated the association between adherence to standard precautions and quality of nursing work in six government hospitals in the north of Palestine for the first time.

The mean CSPS score was 61.7 ± 7.8. When the CSPS score was converted to the percentage of ideal compliance, the mean score was 77.1% ± 9.8%. Associations were established between demographic and professional variables with CSPS scores.

The mean BQNWLS score was 177.0 ± 30.2. The mean score in work life-home life domain was 28.5 ± 6.5, the mean score in the work design domain was 43.2 ± 7.8, the mean score in the work context domain was 88.5 ± 17.3, and the mean score in the work world domain was 16.8 ± 5.5. Associations between demographic and professional variables with BQNWLS scores were also established. The findings of the study revealed

that there was a statistically significant but weak positive correlation between the CSPS scores and the BQNWL scores (Pearson's r = 0.16, p = 0.011). Similarly, there was also a significant but weak positive correlation between the CSPS scores and work context scores (Pearson's r = 0.19, p = 0.003). In contrast, there were significant moderate to strong positive correlations among the various domains of the BQNWL.

4.2 Evaluation of the methods used in this study

4.2.1 The sample of nurses who returned usable questionnaires

In this study, 257 nurses were employed in the 6 West Bank of Palestine hospitals. The sample size in this study was fairly large and the diversity in the demographic and work-related variables of the nurses included in this study should have improved the representativeness of the entire population of nurses working in the different hospitals in the West Bank of Palestine. Nurses who participated in this study belonged to different age groups, both genders, lived in cities, villages, and refugee camps, had different qualifying degrees in nursing, had a variable length of experience, worked in different wards, and held different hierarchical positions. The large sample and the diversity in the demographic and work-related variables of nurses should have improved the external validity of the results generated in this study (Ferguson, 2004; Murad, Katabi, Benkhadra, & Montori, 2018).

4.2.2 The tool used to measure adherence to the standard precautions

In this study, the compliance with standard precautions was assessed using the Compliance with Standard Precautions Scale (CSPS). This scale was reliable, valid, and suitable for use in different healthcare systems. The reliability and validity of the Arabic version of this scale was assessed among nursing students in Saudi Arabia (Cruz et al., 2016). The study showed that the Arabic version of the CSPS had good internal consistency and reliability, as shown by Cronbach’s alpha of 0.89, the intraclass correlation coefficient of 0.88, and the total correlations between 0.325 and 0.728. Similarly, the Turkish and Italian versions of the CSPS were also shown to be valid and reliable (Donati, Biagioli, Cianfrocca, De Marinis, & Tartaglini, 2019; Samur, Seren Intepeler, & Lam, 2020). Furthermore, the tool was also shown to be valid and reliable when administered by clinical nurses (Lam, 2014).

4.2.3 The tool used to measure the quality of the nursing work life

This study assessed the quality of nursing work life using the BQNWLS (Brooks & Anderson, 2005; Brooks et al., 2007). This scale was developed to differentiate the quality of nursing work life from the concept of job satisfaction. As tested in other settings, the scale was previously shown to be valid and reliable (Akter, Akkadechanunt, Chontawan, & Klunklin, 2018; Arıkan Dönmez et al., 2022; Brooks & Anderson, 2005; Brooks et al., 2007). A high Cronbach's alpha of 0.94 was reported in the previous studies indicated that the items of the tool were internal consistent and highly related. Furthermore, the scale used in this study includes several domains such as work life-home life, work design, work context, and work world. Thus, it was deemed appropriate for evaluating the quality of nursing work life in this research.

4.3 Discussion and interpretation of the main findings

4.3.1 The reported compliance with the standard precautions

The findings of this study showed that the nurses reported high compliance with the standard precautions. This high compliance was indicated by answering 'usually' or "always" on the different CSPS items. When the CSPS scores were converted into a percentage of ideal compliance, the mean score was 77.1% ± 9.8%. The findings reported in this study were comparable to those reported among nurses in Italy (Donati et al., 2019). The results reported in this study indicated that decision-makers need to encourage nurses to improve some practices, such as using more than only water to wash hands, never recapping needles used after administering an injection, disposing of the sharps box regularly and never reusing surgical masks or other disposable personal protective equipment. Taken together, these results might highlight areas in current practices of the nurses that might need improvement. Probably, the hospital administration should consider placing and periodically replacing soaps, detergents, and antiseptics/sanitizers that could be available for nurses to continuously clean and disinfect their hands. Clear instructions, training, reminding posters, brochures, and other tools should be provided to nurses to remind them never to recap used needles or wear used surgical masks and other disposable personal protective equipment. There should be a policy and strictly observed disposal of full sharps boxes.

4.3.2 The reported sources of knowledge about the CSPS

The findings of this study showed that the most commonly reported sources of knowledge about CSPS were the instructions provided by hospitals and self-learning. These findings might indicate that nurses pay attention to the instructions provided by hospitals. Therefore, hospital instructions can be used to leverage nurses' adherence to the recommended CSPS and improve their current practices (W. E. Rosa et al., 2020). Lectures, infection control committees, and workshops were the other sources of knowledge mentioned by the nurses who participated in this study. Probably, decision-makers might consider conducting more workshops and other ways to propagate the recommendations of infection control committees.

4.3.2.1 The effects of demographic and work-related variables on adherence to standard precautions

This study found that female nurses had higher adherence to standard precautions, as demonstrated by their higher total CSPS score and CSPS percentage of ideal compliance, compared to male nurses. These results align with findings from previous studies that have also reported higher adherence to infection prevention protocols among female nurses (Colet, Cruz, Alotaibi, Colet, & Islam, 2017; J. H. Lim, Ahn, & Son, 2019; S. H. Lim et al., 2021; van Gulik et al., 2021). In these studies, female nurses were more likely to report higher adherence to standard precautions. This could be interpreted by the difference in the practices of female and male healthcare professionals (Colet et al., 2017). Therefore, decision makers should consider targeting male nurses to improve their adherence to standard precautions.

In this study, nurses who lived in refugee camps had significantly lower CSPS scores compared to their counterparts who lived in cities and villages. The findings reported in this study could be explained by cultural differences that could be related to the place of residence. Previous studies reported that cultural differences affected the adherence of nurses to recommended standard precautions (S. H. Lim et al., 2021; Pereira, Lam, & Gir, 2017; van Gulik et al., 2021). On the other hand, nurses with more experience (10 and more years of experience) and those who had an experience of less than five years had higher CSPS scores compared to those with 6-10 years of experience. More studies are probably needed to understand why junior (experience of less than 5 years) and senior

nurses (experience of 10 and more years) adhere more adherents to the recommended standard precautions compared to nurses with intermediate experience.

Interestingly, in this study, nurses who practiced in the renal units and those in the obstetrics wards had significantly higher CSPS scores than those who practiced in other wards. With the additional stratification of the percentage of ideal compliance scores of the CSPS, this study showed that nurses who practiced in the obstetrics, operating room, incubator unit, internal medicine, surgery, and renal unit were more likely to score ≥ 60%. Given the sensitivity of patients admitted to these wards, the findings reported in this study could be explained by the importance of adherence to standard precautions in these units (Fabrizi & Messa, 2019; Mactier, Hoenich, & Breen, 2011; Ozturk et al., 2020). Although the patients admitted to these wards may be more fragile than those admitted to the other wards, it is noteworthy that nurses adhere to the standard precautions in all hospital wards.

4.3.3 The reported quality of nursing work life

Based on the mean total score and scores on individual domains, this study suggests that the nursing work life quality is moderately high. The mean score on the work life-home life domain, work design domain, work context domain, and work world domain were reported in this study. The results of this study are similar to the results of previous studies (Akter et al., 2018; Arıkan Dönmez et al., 2022; Brooks & Anderson, 2005; Brooks et al., 2007).

4.3.3.1 The effects of demographic and work-related variables on the quality of the nursing work-life score

The findings reported in this study showed that unmarried nurses had significantly higher work-life-home life scores compared to their married counterparts. These findings could be explained by the probably compelling duties of married nurses compared to unmarried nurses. Previous studies have reported that married healthcare professionals have additional duties due to their marital status compared to single healthcare professionals (Suryavanshi et al., 2020). These compelling needs and duties could deteriorate the psychological health of healthcare professionals. Therefore, decision-makers in healthcare authorities must consider improving the working conditions of married nurses.

Decision makers might consider increasing the salaries and incentives for married nurses. Other measures could include allowing less working hours and more leaves for the married nurses.

Similarly, to compliance with standard precautions, the nurses with more experience (10 and more years of experience) and those who had an experience of less than 5 years had higher work context scores than those with 6-10 years of experience. Similarly, more studies are still needed to understand the reasons why nurses with intermediate experience (6-10 years of experience) report lower work context scores compared to junior nurses (experience of less than five years) and senior nurses (experience of 10 and more years).

Interestingly, in this study, nurses practicing in the internal medicine and surgery wards had significantly higher work world scores compared to nurses who worked in other wards. Nurses practicing on the internal medicine and surgery wards felt that their job was secure, satisfied with their salary, believed that their job impacted the lives of their patients, and were more confident in their ability to find the same job with a similar salary and benefits. This could be explained by the fact that nurses practicing on internal medicine and surgery encounter a diverse population of patients (Miller et al., 2008). Such working conditions could be challenging for nurses. However, this could stimulate interest in the job and might promote a feeling of importance in the duties performed by the nurses on these wards (Vatn & Dahl, 2022). Similar to the adherence to the standard precautions, the nurses who participated in this study reported a higher BQNWL compared to their male counterparts. Again, this could be explained by gender differences in the attitudes of female and male healthcare professionals toward the quality of their work life (Akter et al., 2018; Arıkan Dönmez et al., 2022; Brooks & Anderson, 2005; Brooks et al., 2007).

4.3.4 Association between adherence to standard precautions and quality of work life

Interestingly, this study showed a significantly low positive correlation between CSPS scores and BQNWL scores. Similarly, there was a significantly low positive correlation between CSPS scores and work context scores. These findings might indicate that improving the quality of nursing work life could improve adherence to standard

precautions and *vice versa*. Similarly, improving nurses' adherence to standard precautions could improve the quality of their work life and *vice versa*.

4.4 Strengths of the current study

This study has several strengths. Strengths of this study include:

1. This is the first study in Palestine to assess the standard precautions among nurses working in different hospitals in the West Bank of Palestine.
2. This is the first study in Palestine to assess the quality of nursing work life in different hospitals in the West Bank of Palestine.
3. This is the first investigation of the correlation between adherence to standard precautions and the quality of nursing work life in Palestine.
4. The tools used in this study were valid, reliable and suitable for use in the target population.
5. The sample recruited for this study was diversified in terms of gender, age groups, places of residence, academic degrees, wards, length of work experience, hierarchical ranks and salary levels.

4.5 Limitations of the study

The current study had some limitations. Limitations of this study include:

1. The sample was drawn from governmental hospitals. The study could have been more representative if the sample had been recruited from different government and private hospitals.
2. The nurses were recruited from hospitals in the northern areas of the West Bank. The inclusion of nurses from the central and southern regions of the West Bank should have improved the representativeness of nurses working in Palestine.
3. This study collected and investigated a limited number of demographic and work-related conditions. The effects of these variables could have been used to understand the concepts of adherence to standard precautions and quality of nursing work life.
4. The study was purely observational. The study could have been stronger if the intervention had been used to improve nurses' adherence to standard precautions.

5. This study was conducted during the ongoing COVID-19 pandemic. Therefore, little could be investigated about how the pandemic affected the adherence to standard precautions or the working life of nurses.
6. The nurses' responses were self-reported. Therefore, recall and desirability biases could not be excluded.

4.6 Conclusion

In conclusion, nurses who worked in different hospitals in Palestine reported moderate adherence to standard precautions. On the other hand, nurses reported a moderately high quality of nursing work life. Female nurses reported greater adherence to standard precautions and higher quality of nursing work life compared to male nurses. There was a significant low positive correlation between CSPS scores and BQNWL scores. Decision makers in healthcare authorities might consider the findings of this study to improve the adherence of nurses to the standard precautions and to improve the quality of their work life.

4.7 Recommendations

Based on the findings of this study, the following recommendations can be made:

1. Decision makers in health authorities should consider this study's findings to improve nurses' adherence to standard precautions.
2. Decision makers in health authorities should consider this study's findings to improve the nurses' quality of working life.
3. Improvements should especially be targeted at male nurses and those with intermediate work experience.

4.8 Future work

Future works should be conducted to:

1. Assess nurses' adherence to the standard precautions in other governorates of Palestine.
2. Assess the quality of nursing work life for the nurses in other governorates of Palestine.
3. Understand why nurses with intermediate experience report lower adherence to standard precautions compared to junior and senior nurses.

4. Understand why nurses with an intermediate experience report a lower quality of nursing work life compared to junior and senior nurses.

List of Abbreviations

Abbreviation	Meaning
ANOVA	Analysis of variance
BQNWLS	Brooks' quality of nursing work life survey
CDC	Centers for Disease Control and Prevention
COVID-19	Corona Virus Disease-19
CSPS	Compliance with Standard Precautions Scale
FIASPS	Factors Influencing Adherence to Standard Precautions Scale
HIV	Human immunodeficiency virus
IRB	Institutional Review Boards
MERS	Middle East Respiratory Syndrome
NIS	New Israeli Shekel
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SD	Standard deviation
WHO	World Health Organization

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Appendices

Appendix A

The Arabic translated questionnaire

جامعة النجاح الوطنية

كلية الدراسات العليا

برنامج ماجستير إدارة الصحة العامة

الموضوع : استبيان

تحية طيبة وبعد،

تقوم الباحثة بدراسة ميدانية عنوانها" العلاقة بين جودة الحياة العملية للممرضات والامتثال للاحتياطات القياسية: دراسة مقطعية من فلسطين " وذلك استكمالا لمتطلبات الحصول على درجة الماجستير في برنامج إدارة الصحة العامة في جامعة النجاح الوطنية , ولتحقيق أغراض الدراسة، قامت الباحثة بإعداد استبانة معتمدة على ما جاء في أدبيات الأبحاث ، والدراسات السابقة، لذا يُرجى التكرم بالإجابة على الأسئلة بوضع إشارة (×) في المكان المناسب، علمًا بأن البيانات هي لأغراض البحث العلمي فقط، وسُتعامل بموضوعية وأمانة وسرية تامة .

شاكرة لكم حُسن تعاونكم

الباحثة

سلوى محمد اسعد

أولاً: البيانات الشخصية

1. العمر : □ أقل من 25 سنة □ من 26-35 سنة □ من36-45 سنة □ أكثر من 46 سنة
2. الجنس: □ ذكر .□ انثى .
3. الإقامة: □ مدينة □ قرية □ مخيم.
4. مستوى التعليم:□ دبلوم □ بكالوريوس □ ماجستير □ دكتوراه.
5. الحالة الاجتماعية: □اعزب/اء □ متزوج / ة □مطلق /ة □ارمل/ة
6. وحدة العمل (القسم): □غرفة الولادة □غرفة العمليات □غرفة الطوارئ
□ قسم العناية المكثفة □ قسم الحضانة □ قسم الباطني □ قسم الجراحة □ قسم الكلى
□ قسم الأطفال □ قسم القلب □ قسم العظام □ قسم العلاج الطبيعي
7. سنوات الخبرة: □ أقل من 5 سنوات □ من 6-10 سنوات □ أكثر من 10 سنوات
8. الراتب الشهري : □ أقل من 3000 شيقل □ 3000 شيقل فأكثر.
9. المسمى الوظيفي:□ مسؤول/ة تمريض □ رئيس/ة قسم □ ممرض/ة □ **Senior** ممرض/ة **.Junior**
10. مصدر المعرفة بالاحتياطات القياسية: □ إرشادات المستشفى□ تعلم ذاتي□ ورشات العمل
□ لجنة مكافحة العدوى □ محاضرات □ غير ذلك

ثانياً: فقرات أداة الدراسة, الرجاء وضع إشارة(**X**) في المكان المناسب

الرقم	الفقرات	أوافق بشدة	أوافق	محايد	أعارض	أعارض بشدة
المحور الأول: أنشطة الامتثال لممرضات المستشفيات بالاحتياطات القياسية						
1.	أغسل يدي اثناء التعامل مع المرضى					
2.	أستخدم الماء فقط لغسل اليدين					
3.	أستخدم فرك اليدين بالكحول كبديل إذا لم تكن يدي متسخة بشكل واضح					
4.	أعيد غطاء الإبر المستخدمة بعد إعطاء حقنة					
5.	اضع الأدوات الحادة المستعملة في الصندوق المخصص(**sharp box)**					
6.	يتم التخلص من صندوق الأدوات الحادة فقط عندما يكون ممتلئ					
7.	أقوم بإزالة معدات الوقاية الشخصية في منطقة معينة					
8.	أستحم في حالة تناثر السوائل على نطاق واسع حتى بعد ارتداء معدات الوقاية الشخصية					
9.	أقوم بتغطية جرحي (جروح) أو آفاتي بضمادة مقاومة للماء قبل ملامسة المريض					

.10	أرتدي القفازات عندما أتعرض لسوائل الجسم ومنتجات الدم وأي إفرازات للمرضى.					
.11	أقوم بتغيير القفازات بين مريض واخر اثناء العمل معهم					
.12	أقوم بتطهير يدي فور نزع القفازات					
.13	أرتدي كمامة فقط أو بالاشتراك مع نظارات واقية ودرع للوجه ومئزر كلما كان هناك احتمال لوجود تناثر لسوائل جسم المريض					
.14	يتم تغطية فمي وأنفي عندما أرتدي قناعًا					
.15	أعيد استخدام الكمامة أو معدات الوقاية الشخصية التي يمكن التخلص منها					
.16	أرتدي مريلة عند تعرضي للدم أو سوائل الجسم أو أي إفرازات للمريض					
.17	توضع النفايات الملوثة بالدم وسوائل الجسم والإفرازات في أكياس بلاستيكية صفراء بغض النظر عن حالة إصابة المريض.					
.18	أقوم بتطهير الأسطح والمعدات بعد الاستخدام					
.19	أرتدي قفازات لتطهير المعدات الملوثة بشكل ظاهر					
.20	أقوم بتنظيف انسكاب الدم أو سوائل الجسم الأخرى على الفور بالمطهرات.					

	الفقرات	أوافق بشدة	اوافق	محايد	اعارض	اعارض بشدة
المحور الثاني: جودة الحياة الوظيفية						
.21	أنا قادر على الموازنة بين العمل واحتياجات عائلتي					
.22	أنا قادر على ترتيب الرعاية النهارية عندما يكون طفلي مريضًا					
.23	أنا قادر على ترتيب رعاية الأطفال عندما أكون في العمل					
.24	لدي طاقة متبقية بعد الانتهاء من العمل					
.25	جداول المناوبات يؤثر سلبا على حياتي					
.26	أنا قادر على ترتيب الرعاية النهارية لوالدي المسنين					
.27	سياسة منظمتي فيما يتعلق بوقت إجازة الأسرة كافية					
المحور الثالث: تصميم العمل						
.28	أنا راضٍ عن عملي					
.29	عبء عملي ثقيل للغاية					
.30	أقوم بالعديد من المهام غير التمريض					
.31	يوجد عدد كافٍ من الممرضات في بيئة عملي .					
.32	لدي الوقت الكافي لأقوم بعملي بشكل جيد					
.33	أنا قادر على تقديم رعاية جيدة للمرضى					
.34	لدي الاستقلالية في اتخاذ قرارات رعاية المرضى					
.35	أتلقى قدرًا كافيًا من المساعدة من موظفي الدعم (المساعدات الغذائية والتدبير المنزلي وفني رعاية المرضى ومساعدي التمريض)					
.36	أتلقى مساعدة عالية الجودة من موظفي الدعم (المساعدات الغذائية والتدبير المنزلي وفني رعاية المرضى ومساعدي التمريض)					

.37	أواجه العديد من الانقطاعات(**interruptions**) في روتين عملي اليومي					
المحور الرابع: ظروف العمل						
.38	أنا قادر على التواصل بشكل جيد مع مدير / مشرف الممرضة.					
.39	يوفر مدير التمريض / المشرف إشرافًا مناسبًا وكافيا					
.40	أنا قادر على المشاركة في القرارات التي يتخذها مدير التمريض / المشرف					
.41	الإدارة العليا تحترم التمريض					
.42	أشعر باحترام الأطباء في بيئة عملي					
.43	أتواصل بشكل جيد مع الأطباء في بيئة عملي					
.44	من المهم بالنسبة لي الحصول على دعم من المستشفى لمتابعة الدراسات العليا					

	الفقرات	أوافق بشدة	اوافق	محايد	اعارض	اعارض بشدة
.45	الصداقات مع زملائي في العمل مهمة بالنسبة لي					
.46	أتلقى تعليقات على أدائي من مدير التمريض/ المشرف					
.47	هناك عمل جماعي في بيئة عملي					
.48	أشعر بالانتماء إلى مكان عملي					
.49	أنا قادر على التواصل مع الموظفين الآخرين					
.50	سياسات وإجراءات التمريض تسهل عملي					
.51	منطقة الاستراحة / غرفة خلع الملابس لفريق التمريض في منطقتي مريحة					
.52	توفر سياسة عملي فرصًا للتقدم الوظيفي					
.53	أتلقى دعمًا لحضور برامج التعليم المستمر أثناء الخدمة					

.54	لقد تم الاعتراف بي لإنجازاتي من قبل مدير التمريض / المشرف					
.55	أشعر بالأمان من الأذى الشخصي (الجسدي أو العاطفي أو اللفظي) في العمل					
.56	توفر المستشفى بيئة آمنة					
.57	لدي إمدادات و اجهزة كافية لرعاية المرضى					
المحور الخامس: عالم العمل (بيئة العمل)						
.58	أعتقد أن المجتمع لديه الصورة الصحيحة عن التمريض					
.59	سأتمكن من العثور على نفس الوظيفة في مؤسسة أخرى بنفس الراتب والمزايا تقريبًا.					
.60	أشعر أن وظيفتي آمنة					
.61	أعتقد أن عملي يؤثر على حياة المرضى / أسرهم					
.62	راتبي كافٍ					

"شكراً لحسن تعاونكم"

Appendix B

Study approval

State of Palestine
Ministry of Health
Education in Health and Scientific Research Unit

دولة فلسطين
وزارة الصحة
وحدة التعليم الصحي والبحث العلمي

Ref.: ....
Date:..................

الرقــم: ص ح/٦٢٦/٢٠٢٢
التــاريخ: ٢٨/٣/٢٠٢٢

الأخ مدير عام الادارة العامة للمستشفيات المحترم،،،

تحية واحترام...

<u>الموضــوع: تسهيل مهمة بحث</u>

يرجى التكرم بتسهيل مهمة الطالبة: **سلوى محمد أسعد**– ماجستير ادارة الصحة العامة– **جامعة النجاح**، لعمل بحث بعنوان:

Association between Nurses' Quality of Work Life and Compliance with "Standard Precautions: A Cross-Sectional Study from Palestine

حيث ستقوم الطالبة بجمع معلومات عن طريق تعبئة استبانة من قبل طاقم التمريض وقابلات المستشفيات، وذلك في:

- **مستشفى رفيديا – مستشفى الوطني – مستشفى جنين – مستشفى قلقيلية**
- **ميتشفى طوباس – مستشفى سلفيت – مستشفى طولكرم**

مع العلم أن مشرف الدراسة: د. سائد الزبود ود. عبد السلام الخياط.

على ان يتم الالتزام بالمحافظة على اخلاقيات البحث العلمي وسرية المعلومات.
على ان يتم الالتزام بجميع تعليمات واجراءات الوقاية والسلامة الصادرة عن وزارة الصحة بخصوص جائحة كورونا، وتحت طائلة المسؤولية. وابراز شهادة التطعيم قبل دخول مرافق وزارة الصحة.
على ان يتم تزويد الوزارة بنسخة PDF من نتائج البحث، التعهد بعدم النشر لحين الحصول على موافقة وزارة الصحة.

مع الاحترام...

د. عبد الله القواسمي
رئيس وحدة التعليم الصحي والبحث العلمي

نسخة: عميد كلية الدراسات العليا المحترم/ جامعة النجاح

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Appendix C

Tables

Table c.1

Distribution of answers on the 42 items of the BQNWLS

Domain	#	Statement	SD		MD		D		A		MA		SA	
			n	%	n	%	n	%	n	%	n	%	n	%
Work life-home life	1	I am able to balance job and family obligations.	5	1.9	12	4.7	38	14.8	10	3.9	103	40.1	89	34.6
	2	If my child becomes ill, I am able to make arrangements for day care.	14	5.4	24	9.3	94	36.6	16	6.2	67	26.1	42	16.3
	3	When I am at work, I can arrange for child care.	21	8.2	20	7.8	92	35.8	22	8.6	55	21.4	47	18.3
	4	I still have energy after work.	35	13.6	41	16.0	50	19.5	20	7.8	62	24.1	49	19.1
	5	My life is harmed by changing schedules.	11	4.3	15	5.8	43	16.7	21	8.2	81	31.5	86	33.5
	6	I can arrange day care for my elderly folks.	10	3.9	37	14.4	67	26.1	17	6.6	71	27.6	55	21.4
	7	My company's policy on family leave is adequate.	29	11.3	46	17.9	54	21.0	16	6.2	72	28.0	40	15.6
Work design	8	My employment is satisfactory to me.	11	4.3	10	3.9	39	15.2	16	6.2	100	38.9	81	31.5
	9	My workload is excessive.	10	3.9	22	8.6	42	16.3	23	8.9	83	32.3	77	30.0
	10	I do a variety of non-nursing activities.	6	2.3	22	8.6	49	19.1	24	9.3	70	27.2	86	33.5
	11	There are plenty of nurses in my workplace.	34	13.2	36	14.0	61	23.7	16	6.2	63	24.5	47	18.3
	12	I have enough time to accomplish a good job.	19	7.4	27	10.5	57	22.2	22	8.6	77	30.0	55	21.4
	13	I am capable of providing high-quality patient care.	6	2.3	8	3.1	20	7.8	22	8.6	87	33.9	114	44.4
	14	I have the authority to make decisions about patient care.	5	1.9	29	11.3	49	19.1	24	9.3	81	31.5	69	26.8
	15	I receive sufficient support from the support staff such as dietary aides, housekeeping personnel, patient care technicians, and nursing assistants.	18	7.0	38	14.8	55	21.4	20	7.8	65	25.3	61	23.7
	16	Support workers provide excellent service to me (the dietary aides, housekeeping, patient care technicians and nursing assistants)	17	6.6	36	14.0	65	25.3	20	7.8	74	28.8	45	17.5
	17	My daily work routine is disrupted by several interruptions.	1	0.4	14	5.4	64	24.9	27	10.5	83	32.3	68	26.5

Domain	#	Statement	SD		MD		D		A		MA		SA	
			n	%	n	%	n	%	n	%	n	%	n	%
	18	I can effectively interact with my nurse manager/supervisor.	6	2.3	10	3.9	26	10.1	14	5.4	100	38.9	101	39.3
	19	My nurse manager/supervisor supervises me adequately.	5	1.9	22	8.6	37	14.4	14	5.4	101	39.3	78	30.4
	20	I have the ability to influence decisions made by my nurse manager/supervisor.	16	6.2	25	9.7	49	19.1	17	6.6	86	33.5	64	24.9
	21	Upper-level management values nursing.	19	7.4	25	9.7	52	20.2	12	4.7	72	28.0	77	30.0
	22	In my workplace, I am respected by physicians.	8	3.1	21	8.2	40	15.6	19	7.4	107	41.6	62	24.1
	23	I get along well with the doctors at my workplace.	1	0.4	14	5.4	38	14.8	14	5.4	119	46.3	71	27.6
	24	Having the support of my hospital in pursuing higher education is essential.	11	4.3	20	7.8	26	10.1	13	5.1	94	36.6	93	36.2
	25	Coworker friendships are vital to me.	4	1.6	4	1.6	23	8.9	10	3.9	91	35.4	125	48.6
Work context	26	My nurse manager/supervisor provides me with comments on my performance.	3	1.2	18	7.0	38	14.8	24	9.3	106	41.2	68	26.5
	27	My workplace is a collaborative environment.	4	1.6	6	2.3	23	8.9	9	3.5	111	43.2	104	40.5
	28	My workplace gives me a sense of belonging.	3	1.2	8	3.1	24	9.3	17	6.6	107	41.6	98	38.1
	29	I can communicate with the other members of the team (physical, respiratory, etc.)	3	1.2	6	2.3	21	8.2	12	4.7	112	43.6	103	40.1
	30	Nursing policies and procedures make my job easier.	6	2.3	14	5.4	48	18.7	17	6.6	102	39.7	70	27.2
	31	My nursing staff's break area/locker room is comfortable.	48	18.7	42	16.3	43	16.7	13	5.1	66	25.7	45	17.5
	32	My workplace offers prospects for progression.	21	8.2	23	8.9	59	23.0	21	8.2	85	33.1	48	18.7
	33	I am given financial assistance to attend in-services and continuing education seminars.	27	10.5	30	11.7	49	19.1	20	7.8	86	33.5	45	17.5

Domain	#	Statement	SD		MD		D		A		MA		SA	
			n	%	n	%	n	%	n	%	n	%	n	%
	34	My nurse manager/supervisor recognizes my successes.	16	6.2	25	9.7	46	17.9	22	8.6	97	37.7	51	19.8
	35	I feel protected from any physical, emotional, or verbal harm at my workplace.	31	12.1	40	15.6	59	23.0	20	7.8	70	27.2	37	14.4
	36	The hospital offers a safe environment.	34	13.2	40	15.6	63	24.5	19	7.4	65	25.3	36	14.0
	37	I have access to adequate supplies and equipment to provide quality care to patients.	19	7.4	31	12.1	50	19.5	22	8.6	89	34.6	46	17.9
Work world	38	I believe that society has a positive perception about nurses.	58	22.6	58	22.6	50	19.5	16	6.2	35	13.6	40	15.6
	39	I could get a similar work in another organization for roughly the same salary and perks.	33	12.8	49	19.1	70	27.2	21	8.2	48	18.7	36	14.0
	40	My employment is secure to me.	41	16.0	45	17.5	73	28.4	20	7.8	47	18.3	31	12.1
	41	I feel that my work has a positive impact on the lives of patients and their families.	19	7.4	27	10.5	46	17.9	18	7.0	75	29.2	72	28.0
	42	My pay is adequate.	77	30.0	58	22.6	54	21.0	14	5.4	32	12.5	22	8.6

Note. SD: strongly disagree, MD: moderately disagree, D: disagree, A: agree, MA: moderately agree, SA: strongly agree

Table c.2

Association between BQNWL score with demographic and work-related variables of the nurses

	BQNWL total score			Work life-home life score			Work design score			Work context score			Work world score		
Variable	Mean	SD	p	Mean	SD	p	Mean	SD	p	Mean	SD	p	Mean	SD	p
Age (years)															
≤ 25	182.7	3.4		29.4	0.7		44.4	0.9		91.4	2.0		17.5	0.6	
26-45	173.2	2.5	0.058	27.9	0.6	0.252	42.3	0.6	0.100	86.5	1.4	0.090	16.5	0.5	0.449
≥ 46	181.4	5.0		28.9	1.1		44.5	1.3		91.1	3.1		16.9	1.1	
Gender															
Male	179.6	30.8	0.293	29.3	6.6	0.098	43.4	7.7	0.733	89.3	18.1	0.572	17.5	5.9	0.122
Female	175.5	29.8		27.9	6.4		43.1	8.0		88.1	16.8		16.4	5.2	
Place of residence															
City/village	177.9	30.6	0.173	28.7	6.5	0.137	43.3	7.9	0.666	89.0	17.5	0.151	16.9	5.6	0.557
Refugees camp	169.0	25.7		26.6	7.0		42.5	7.0		83.7	14.1		16.2	5.0	
Educational level															
Diploma	177.1	3.1		28.4	0.7		43.8	0.8		88.9	1.8		16.1	0.5	
Bachelor	178.0	2.6	0.649	28.5	0.6	0.981	43.5	0.7	0.142	88.6	1.4	0.895	17.4	0.5	0.159
Master	172.7	5.8		28.5	1.1		40.8	1.4		87.3	3.5		16.2	1.0	
Marital status															
Currently married	175.5	29.6	0.536	27.1	6.4	0.011	42.5	7.3	0.269	88.8	17.5	0.877	17.1	5.3	0.495
Currently unmarried	178.0	30.6		29.3	6.5		43.6	8.1		88.4	17.2		16.7	5.6	
Experience (years)															
≤ 5 years	181.0	2.8		28.5	0.7		43.7	0.8		91.5	1.6		17.3	0.5	
6-10 years	170.0	4.0	0.089	27.7	0.8	0.602	41.5	1.1	0.163	84.1	2.3	0.032	16.7	0.8	0.613
≥ 10 years	177.2	3.1		28.8	0.7		43.7	0.8		88.1	1.8		16.5	0.6	
Salary															
< 3000 NIS	180.1	25.0	0.430	27.7	5.4	0.354	43.0	6.4	0.871	91.8	15.9	0.139	17.6	5.6	0.306
≥ 3000 NIS	176.3	31.3		28.7	6.8		43.2	8.2		87.7	17.5		16.7	5.5	
Rank															
Managerial position	182.2	33.7	0.214	29.6	6.5	0.222	44.8	7.5	0.134	90.6	19.1	0.376	17.2	6.9	0.654
Nurse	176.0	29.4		28.2	6.5		42.9	7.9		88.1	16.9		16.8	5.2	
Ward															
Obstetrics	179.6	5.2		28.3	1.1		40.1	1.4		82.4	3.3		17.5	0.8	
Operations room	163.3	5.4	0.182	26.1	1.2	0.563	43.7	1.3	0.292	92.9	3.0	0.283	14.7	1.0	0.050
Emergency room	181.7	5.0		29.0	1.2		41.3	1.9		85.3	3.6		16.2	0.9	

	BQNWL total score			Work life-home life score			Work design score			Work context score			Work world score		
Variable	Mean	SD	p	Mean	SD	p	Mean	SD	p	Mean	SD	p	Mean	SD	p
Intensive care unit	170.2	6.6		27.4	1.6		42.8	1.5		84.7	3.2		16.3	1.1	
Incubator unit	173.3	5.7		28.7	1.2		45.8	1.6		92.5	3.1		17.1	1.0	
Internal medicine	188.3	6.0		30.5	1.3		44.5	1.4		87.8	3.2		19.5	1.2	
Surgery unit	178.7	5.4		28.4	1.1		44.4	1.7		88.8	4.0		18.1	1.0	
Renal unit	180.0	6.8		28.6	1.6		42.5	2.2		92.6	3.6		17.1	1.2	
Pediatrics	178.2	7.6		28.1	1.7		41.4	1.5		85.6	3.0		14.6	1.4	
Orthopedics	171.9	5.0		43.8	1.2		89.9	3.2		17.5	0.8		16.8	1.3	

Table c.3

Multiple linear regression of the BQNWL score with demographic and work-related variables

Domain	Variable	Unstandardized Coefficients	SE	Standardized Coefficients	t	p
BQNWL total score	Age	-2.75	4.13	-0.06	-0.66	0.507
	Place of residence	-8.34	6.53	-0.08	-1.28	0.202
	Experience	-1.74	2.99	-0.05	-0.58	0.560
	Rank	-8.60	5.39	-0.11	-1.60	0.112
Work life-home life score	Ward	0.46	0.68	0.04	0.68	0.499
	Gender	-1.41	0.83	-0.10	-1.69	0.091
	Place of residence	-2.13	1.38	-0.10	-1.55	0.123
	Marital status	2.13	0.85	0.16	2.51	0.013
	Rank	-0.51	1.10	-0.03	-0.47	0.640
Work design score	Age	-1.08	1.07	-0.09	-1.02	0.311
	Education	-1.43	0.77	-0.12	-1.86	0.064
	Experience	0.23	0.77	0.03	0.29	0.769
	Rank	-2.68	1.40	-0.13	-1.91	0.057
Work context score	Age	0.87	2.41	0.03	0.36	0.717
	Place of residence	-4.55	3.75	-0.08	-1.21	0.226
	Experience	-1.36	1.75	-0.07	-0.78	0.435
	Salary	-2.72	3.28	-0.06	-0.83	0.407
Work world score	Gender	-1.03	0.72	-0.09	-1.43	0.154
	Education	0.25	0.55	0.03	0.45	0.652
	Ward	0.06	0.12	0.03	0.46	0.648

Table c.4

Association between BQNWL class with demographic and work-related variables of the nurses

	BQNWL class					
	Moderate		High			
Variable	n	%	n	%	Chi-square/Fisher's exact test	p
Age (years)						
≤ 25	26	10.1	48	18.7		
26-45	73	28.4	76	29.6	4.32	0.117
≥ 46	13	5.1	21	8.2		
Gender						
Male	35	13.6	64	24.9	4.43	0.039
Female	77	30.0	81	31.5		
Place of residence						
City/village	97	37.7	136	52.9	3.85	0.055
Refugees camp	15	5.8	9	3.5		
Educational level						
Diploma	32	12.5	45	17.5		
Bachelor	63	24.5	82	31.9	0.48	0.808
Master	17	6.6	18	7.0		
Marital status						
Currently married	46	17.9	50	19.5	1.17	0.300
Currently unmarried	66	25.7	95	37.0		
Experience (years)						
≤ 5 years	36	14.0	63	24.5		
6-10 years	32	12.5	25	9.7	5.75	0.055
≥ 10 years	44	17.1	57	22.2		
Salary						
< 3000 NIS	16	6.2	34	13.2	3.39	0.080
≥ 3000 NIS	96	37.4	111	43.2		
Rank						
Managerial position	16	6.2	28	10.9	1.12	0.320
Nurse	96	37.4	117	45.5		
Ward						
Obstetrics	17	6.6	20	7.8		
Operations room	18	7.0	11	4.3		
Emergency room	13	5.1	24	9.3		
Intensive care unit	7	2.7	9	3.5		
Incubator unit	15	5.8	12	4.7	10.13	0.060
Internal medicine	7	2.7	18	7.0		
Surgery unit	12	4.7	19	7.4		
Renal unit	8	3.1	13	5.1		
Pediatrics	8	3.1	12	4.7		
Orthopedics	7	2.7	7	2.7		

Table c.5

Associations between CSPS and BQNWL scores

Score	Correlation	CSPS	Work life-home life	Work design	Work context	Work world	BQNWL total
CSPS	Pearson's r	-	0.12	0.08	0.19	0.02	0.16
	p		0.052	0.195	0.003	0.702	0.011
Work life-home life	Pearson's r	0.12	-	0.52	0.48	0.33	0.69
	p	0.052		< 0.001	< 0.001	< 0.001	< 0.001
Work design	Pearson's r	0.08	0.52	-	0.57	0.40	0.77
	p	0.195	< 0.001		< 0.001	< 0.001	< 0.001
Work context	Pearson's r	0.19	0.48	0.57	-	0.55	0.92
	p	0.003	< 0.001	< 0.001		< 0.001	< 0.001
Work world	Pearson's r	0.02	0.33	0.40	0.55	-	0.67
	p	0.702	< 0.001	< 0.001	< 0.001		< 0.001
BQNWL total	Pearson's r	0.16	0.69	0.77	0.92	0.67	-
	p	0.011	< 0.001	< 0.001	< 0.001	< 0.001	

جـامعـــة النجاح الوطنية

كليـــة الدراســـات العليـــا

العلاقة بين جودة الحياة العملية للممرضات والامتثال للاحتياطات القياسية: دراسة مقطعية من فلسطين

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قدمت هذه الرسالة استكمالا لمتطلبات الحصول على درجة الماجستير في اسم إدارة الصحة العامة، من كلية الدراسات العليا، في جامعة النجاح الوطنية، نابلس– فلسطين.

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الملخص

طاقم التمريض هم أكبر فئة من مقدمي الرعاية الصحية في جميع المستشفيات تقريبًا حول العالم. بينت الدراسات أن جودة الحياة العملية التمريضية والالتزام بالاحتياطات القياسية أقل من المستوى الأمثل.

هدفت هذه الدراسة إلى تقييم مستوى التزام طاقم التمريض في المستشفيات الحكومية في فلسطين بالاحتياطات المعيارية وجودة حياتهم العملية.

أجريت هذه الدراسة بتصميم مقطعي وصفي في 6 مستشفيات حكومية في الضفة الغربية. احتوى الاستبيان على الامتثال لمقياس الاحتياطات القياسية (CSPS) ومسح بروكس لجودة حياة العمل التمريضي (BQNWL).

شارك ما مجموعه 257 ممرض/ة في هذه الدراسة وأعادوا الاستبيانات المكتملة. كان متوسط النسبة المئوية للامتثال المثالي 77.1٪ ± 9.8٪ وكان لدى 10 (3.9٪) ممرضات نسبة CSPS٪ من الامتثال المثالي أقل من 60٪. طاقم التمريض في قسم التوليد ، وغرفة العمليات ، ووحدة الحضانة ، والطب الباطني ، والجراحة ، ووحدة الكلى كانوا أكثر إحتمالية لتسجيل 60٪ من الامتثال المثالي فأعلى. كان متوسط مجموع نقاط 177.0 ± 30.2 على مقياس BQNWL. كانت الدرجات المتوسطة 28.5 ± 6.5 و 43.2 ± 7.8 و 88.5 ±

17.3 و 16.8 ± 5.5 في مجالات الحياة العملية والحياة المنزلية وتصميم العمل وسياق العمل ومجالات عالم العمل، على التوالي. كان هناك ارتباط إيجابي منخفض بين درجات CSPS ودرجات BQNWL (Pearson's r = 0.16 ، p = 0.011). وبالمثل ، كان هناك ارتباط إيجابي منخفض كبير بين درجات CSPS ودرجة سياق العمل (Pearson's r = 0.19 ، p = 0.003).

طاقم التمريض العامل في المستشفيات المختلفة في فلسطين عبروا عن التزام معتدل بالاحتياطات المعيارية. من ناحية أخرى ، عبر طاقم التمريض عن جودة عالية إلى حد ما في حياة العمل التمريضية. عبرت الممرضات عن التزام أعلى بالاحتياطات القياسية وجودة أعلى في حياة العمل التمريضية مقارنة بطاقم التمريض من الذكور. كان هناك ارتباط إيجابي منخفض بين درجات CSPS ودرجات BQNWL. نتائج هذه الدراسة قد تكون مفيدة لصانعو القرار في سلطات الرعاية الصحية لتحسين التزام طاقم التمريض بالاحتياطات القياسية وتحسين جودة حياتهم العملية.

الكلمات المفتاحية: التمريض، الاحتياطات المعيارية، مكافحة العدوى، جودة العمل التمريضي.