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Behavioral factors influencing Chuuk state hospital nurses' care of COVID-19/infectious disease patients: Basis for program development

Russell Deon Bation Agum *

Graduate School, College of Nursing and Health Sciences, Palawan State University.

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Abstract

This study examined the factors affecting nursing care for infectious disease patients at Chuuk State Hospital, focusing on five behavioral domains: physical, personal, emotional, psychological, and life experience. Using a descriptive-correlational design, the study assessed the extent to which these factors influenced nursing care and determined their relationship with selected demographic variables. Data were analyzed using the weighted mean and the chi-square test of association. Findings revealed that personal factors had the highest overall mean (M = 4.04), followed by life experience factors (M = 3.99), emotional factors (M = 3.73), and psychological factors (M = 3.68), all of which were interpreted as highly affected. In contrast, physical factors had the lowest overall mean (M = 3.37), indicating a moderate effect. These findings suggest that nursing care in infectious disease settings was influenced more strongly by internal nurse-related strengths, including professional commitment, emotional resilience, psychological adaptability, and prior experience, than by physical or environmental conditions alone. In terms of demographic relationships, age was significantly associated only with personal factors, while sex and length of service showed no significant relationship with any of the five domains. Unit or ward assignment was significantly related only to physical factors, indicating that environmental and resource-related conditions differed by work area, whereas internal and experiential dimensions were generally shared across demographic groups. The study concludes that effective nursing care for infectious disease patients depends not only on adequate physical resources but, more importantly, on nurses' personal and professional capacities. Strengthening staffing, workplace support systems, and professional development may improve care quality and sustainability.

Keywords: Behavioral Factors; Infectious Disease; Chuuk State Hospital; Nursing Quality Care

1. Introduction

Infectious diseases remain a major concern in healthcare systems worldwide because of their impact on patient safety, healthcare delivery, and public health outcomes. In hospital settings, the management of infectious disease patients requires not only clinical competence but also consistent, safe, and compassionate nursing care. Nurses play a central role in this process because they provide continuous bedside care, monitor patient conditions, implement infection control measures, and respond directly to the physical and emotional needs of patients. As such, the quality of care they provide is influenced not only by knowledge and technical skills but also by behavioral factors that shape their capacity and willingness to perform effectively.

The global experience during the COVID-19 pandemic highlighted the many challenges faced by nurses caring for infectious disease patients. Studies have shown that frontline nurses experienced fear, anxiety, emotional fatigue, and psychological distress due to prolonged exposure to infected patients, uncertainty in the workplace, and concern for their own safety and that of their families (Han et al., 2022; Moghaddam et al., 2021; Cho & Kim, 2021). In addition,

* Corresponding author: Russell Deon Bation Agum

physical strain associated with long working hours, the use of personal protective equipment, and the demands of managing critically ill patients contributed to fatigue and reduced work efficiency (Winnand et al., 2023; Demir & Şahin, 2022). These findings suggest that nursing care in infectious disease settings is shaped by a complex interaction of emotional, psychological, and physical conditions.

Beyond workplace pressures, personal and experiential influences also affect how nurses provide care. Personal factors such as values, professional identity, training, and sense of duty have been found to shape nurses' readiness to continue caring for patients despite occupational risks (Jeong & Kim, 2022). Likewise, life experiences, including prior exposure to health crises, difficult clinical situations, and personal loss, may contribute to resilience, empathy, and adaptability in caregiving (Guo et al., 2022). These factors indicate that nursing behavior is not only a product of external working conditions but also of internal dispositions and accumulated experiences that guide professional practice.

In Chuuk State Hospital, nurses are at the forefront of caring for infectious disease patients and are expected to deliver quality nursing services under demanding circumstances. However, factors such as workload, staffing limitations, emotional stress, workplace safety concerns, and varying levels of professional experience may affect their caregiving performance. Despite the critical importance of this issue, there is limited local evidence examining the behavioral factors that influence the care provided by nurses in this hospital setting. This gap in knowledge limits the development of context-specific interventions that could strengthen nursing practice and support nurse well-being.

This study was conducted to determine the behavioral factors influencing Chuuk State Hospital nurses' care of infectious disease patients in terms of physical, personal, emotional, psychological, and life experience factors. By examining these domains, the study aims to provide a clearer understanding of the conditions that shape nursing care in the hospital. The findings are expected to serve as a basis for program development intended to improve staffing support, workplace safety, psychosocial services, and professional development initiatives, thereby enhancing both the quality of patient care and the well-being of nurses.

2. Methodology

2.1. Research Design

This study employed a quantitative descriptive-correlational research design to examine the behavioral factors influencing Chuuk State Hospital nurses' care of infectious disease patients. The descriptive component was used to determine the respondents' socio-demographic characteristics and to assess the extent to which the identified behavioral factors affected nursing care. The correlational component was used to determine whether significant differences existed between selected profile variables and the five behavioral domains, namely physical, personal, emotional, psychological, and life experience factors. This design was considered appropriate because it enabled the study to describe the variables systematically and examine their possible associations using objective statistical procedures.

2.2. Research Locale

The study was conducted at Chuuk State Hospital, a healthcare institution in Chuuk State that provides direct care and treatment to patients with infectious diseases. The hospital was chosen as the setting of the study because it is one of the primary institutions where nurses are regularly exposed to the demands and challenges of caring for infectious disease patients. This made it an appropriate locale for investigating the behavioral factors that may influence the quality of nursing care.

2.3. Participants of the Study

The participants of the study were the staff nurses of Chuuk State Hospital who were directly involved in the care of infectious disease patients during the conduct of the study. The target population included nurses assigned to clinical units where direct patient care was rendered. To ensure adequate representation of all eligible respondents, the study utilized a total enumeration or census sampling technique.

A total of 68 nurses met the inclusion criteria and participated in the study. Nurses were included if they were currently employed at Chuuk State Hospital, assigned to clinical areas handling infectious disease patients, and willing to participate in the study. Nurses who were on extended leave during the data collection period or those assigned purely to administrative positions without direct patient contact were excluded from participation.

2.4. Research Instrument

Data were gathered using a structured questionnaire designed to assess the behavioral factors influencing nurses' care of infectious disease patients. The instrument consisted of two major parts. The first part elicited information on the respondents' socio-demographic profile, specifically age, sex, nursing unit or ward assignment, and length of service. The second part consisted of statements measuring the extent to which the five domains—physical, personal, emotional, psychological, and life experience factors—influenced nursing care.

The questionnaire used a scaled-response format to allow respondents to indicate the degree to which each statement applied to their experience. Prior to administration, the instrument underwent content validation to ensure that the items were relevant, clear, and appropriate to the objectives of the study. Necessary revisions were incorporated based on expert comments and recommendations.

3. Data Collection Procedure

Prior to data collection, the researcher secured the necessary permission from the appropriate authorities of Chuuk State Hospital. After approval was obtained, eligible respondents were identified based on the inclusion criteria. The purpose of the study was explained to the participants, and informed consent was secured before the administration of the questionnaire.

The questionnaires were distributed personally to the respondents in their respective work areas at a time that did not disrupt hospital operations or patient care. Respondents were given sufficient time to complete the instrument, and the accomplished questionnaires were retrieved thereafter. Upon collection, the questionnaires were checked for completeness and consistency to ensure the accuracy and usability of the data gathered.

3.1. Ethical Considerations

Ethical principles were strictly observed throughout the conduct of the study. Ethical approval was granted by the Palawan State University Research Ethics Review Committee prior to the conduct of the research. In addition, permission to administer the study was secured from the appropriate hospital authorities.

Participation in the study was voluntary, and the respondents were fully informed about the purpose of the research, the nature of their participation, and their right to withdraw from the study at any time without penalty. Informed consent was obtained from all participants before data collection.

Confidentiality and anonymity were maintained by ensuring that no identifying information was disclosed in the presentation of the findings. All responses were treated with strict confidentiality and were used solely for academic and research purposes. The researcher also took appropriate measures to minimize any discomfort or emotional distress that participants might experience while responding to the questionnaire.

3.2. Statistical Treatment of Data

The data gathered were analyzed using both descriptive and inferential statistics. To describe the respondents' socio-demographic profile, frequency and percentage were used. To determine the extent to which the behavioral factors influenced nursing care, weighted mean and rank were employed.

To test for significant differences in the behavioral factors when respondents were grouped according to their profile variables, the study used the Mann-Whitney U test and the Kruskal-Wallis test. The Mann-Whitney U test was applied for variables with two categories, while the Kruskal-Wallis test was used for variables with more than two categories. These non-parametric statistical tools were appropriate for the nature of the data and were used to determine whether the observed differences were statistically significant.

4. Results

4.1. Physical Factors Influencing the Nursing Care of Infectious Disease Patients

Table 1 below presents the results of physical factors influencing the nursing care of infectious disease patients. The physical factors had an overall mean of 3.37, interpreted as moderately affected, showing that the physical work environment had a moderate influence on the nursing care of infectious disease patients. The highest-rated indicator was the availability of sufficient personal protective equipment (PPE) with M = 3.79, followed by physical resources

having a direct positive impact on patient care quality (M = 3.72), environmental conditions such as lighting and ventilation facilitating efficient care delivery (M = 3.66), hospital infrastructure meeting infectious disease demands (M = 3.57), and facility maintenance supporting nursing work (M = 3.56), all interpreted as highly affected. Meanwhile, workplace layout allowing easy access to supplies (M = 3.32), ergonomic design of the work area (M = 3.01), access to designated break areas (M = 3.01), and minimal physical fatigue due to work environment quality (M = 2.76) were only moderately affected, while staffing adequacy to meet patient care demands had the lowest mean at M = 2.58, interpreted as fairly affected. Overall, the findings suggest that while PPE, resources, and environmental conditions generally supported nursing care, staffing adequacy and physical fatigue remained important concerns that may affect the quality and efficiency of care (Brešan et al., 2021; Havaei et al., 2021; Lee & Kang, 2019; Radosz-Knawa et al., 2022; Młynarska et al., 2020).

Table 1 Physical Factors that Affect the Nursing Care of Infectious Disease Patients

Statement	Mean	Descriptor
The hospital provides sufficient personal protective equipment (PPE) to ensure my safety.	3.79	Highly affected
The physical resources provided have a direct positive impact on the quality of patient care.	3.72	Highly affected
The environmental conditions (e.g., lighting, ventilation) in my department facilitate efficient care delivery.	3.66	Highly affected
The infrastructure of Chuuk State Hospital meets the demands of infectious disease care.	3.57	Highly affected
The maintenance of the facility contributes positively to my overall support during infectious outbreaks.	3.56	Highly affected
The layout of my workplace allows for easy access to necessary supplies and equipment.	3.32	Moderately affected
The ergonomic design (like chairs, tools, or workspaces) of my work area minimizes physical discomfort during long shifts.	3.01	Moderately affected
I have access to designated break areas that help reduce physical stress during shifts.	3.01	Moderately affected
I experience minimal physical fatigue due to the quality of the work environment.	2.76	Moderately affected
Staffing levels in my unit are adequate to prevent excessive workload.	2.31	Faily affected
Overall Mean Rating	3.37	Moderately affected

Legend for the Mean Rating: 1.00 – 1.80 poorly affected;1.81 – 2.60 fairly affected; 2.61 – 3.40 moderately affected; 3.41 – 4.20 highly affected; 4.21 – 5.00 extremely affected

4.2. Personal Factors Influencing the Nursing Care of Infectious Disease Patients

Table 2 presents the personal factors influencing the nursing care of infectious disease patients. The personal factors were rated as highly affected, with an overall mean of 4.04, showing that nurses' motivation, commitment, responsibility, and personal values strongly influenced the nursing care of infectious disease patients. The highest-rated indicators were commitment to ethical practice under extreme pressure (M = 4.09) and intrinsic motivation in overcoming daily challenges (M = 4.09). These were followed by professional identity as a source of strength (M = 4.07), empowerment to advocate for patients (M = 4.07), and strong motivation to provide high-quality care (M = 4.06). Other highly rated indicators included alignment of personal values with professional expectations (M = 4.04), confidence in clinical skills (M = 4.01), sense of responsibility in maintaining high standards of care (M = 4.01), engagement in additional training (M = 3.97), and belief in positive decision-making impact (M = 3.96). These findings indicate that nurses relied heavily on their internal strengths and professional dedication in delivering quality care in infectious disease settings (Cui et al., 2022; Kuesakul et al., 2024; Sikorska et al., 2023).

Table 2 Personal Factors that Affect the Nursing Care of Infectious Disease Patients

Statement	Mean	Descriptor
I am committed to ethical practice even when facing extreme work pressures.	4.09	Highly affected
My intrinsic motivation is a critical factor in overcoming daily work challenges.	4.09	Highly affected
My professional identity as a nurse is a major source of strength during critical events.	4.07	Highly affected
I feel empowered to advocate for my patients during infectious disease outbreaks.	4.07	Highly affected
I have strong personal motivation to provide high-quality nursing care, even under challenging circumstances.	4.06	Highly affected
My personal values align closely with the expectations of the nursing profession.	4.04	Highly affected
I am confident in my clinical skills when caring for infectious disease patients.	4.01	Highly affected
I feel responsible for maintaining high standards of care in my unit.	4.01	Highly affected
I regularly seek additional training to improve my knowledge in infectious disease management.	3.97	Highly affected
I believe that my decision-making positively affects patient outcomes.	3.96	Highly affected
Overall Mean Rating	4.04	Highly affected

Legend for the Mean Rating: 1.00 – 1.80 poorly affected; 1.81 – 2.60 fairly affected; 2.61 – 3.40 moderately affected; 3.41 – 4.20 highly affected; 4.21 – 5.00 extremely affected

4.3. Emotional Factors Influencing the Nursing Care of Infectious Disease Patients

The table 3 below presents the emotional factors influencing the nursing care of infectious disease patients. The emotional factors had an overall mean of 3.73, interpreted as highly affected, indicating that emotional dimensions strongly influenced the nursing care of infectious disease patients. The highest-rated indicator was empathy toward patients with M = 4.16, followed by positive feedback from patients boosting emotional morale (M = 4.10), feeling emotionally overwhelmed by job demands (M = 4.06), ability to quickly recover emotionally after stressful clinical incidents (M = 4.04), and improving emotional regulation skills would enhance performance (M = 3.96). Other highly rated indicators included emotional support from colleagues (M = 3.90). Meanwhile, supportive emotional climate in the work environment (M = 3.38) and satisfaction with institutional emotional support (M = 3.04) were only moderately affected, while frequent anxiety when caring for infectious patients had the lowest mean of M = 2.56, interpreted as fairly affected. Overall, the findings show that empathy, resilience, morale, and peer support were strong emotional influences on care, although institutional emotional support and workplace climate still need improvement (Huang et al., 2021; Havaei et al., 2021).

Table 3 Emotional Factors that Affect the Nursing Care of Infectious Disease Patients

Statement	Mean	Descriptor
I feel a strong sense of empathy toward my patients, which enhances my care delivery.	4.16	Highly affected
Positive feedback from patients boosts my emotional morale.	4.10	Highly affected
I sometimes feel emotionally overwhelmed by the demands of my job.	4.06	Highly affected
I am able to manage my emotions effectively during high-stress situations.	4.04	Highly affected
I am able to quickly recover emotionally after experiencing stressful clinical incidents.	4.04	Highly affected
I believe that improving my emotional regulation skills would enhance my performance.	3.96	Highly affected
Emotional support from my colleagues helps me cope with the challenges of my work.	3.90	Highly affected

I feel that my current work environment fosters a supportive emotional climate.	3.38	Moderately affected
I am satisfied with the level of emotional support provided by my institution.	3.04	Moderately affected
I experience anxiety frequently when caring for patients with infectious diseases.	2.56	Fairly affected
Overall Mean Rating	3.73	Highly affected

Legend for the Mean Rating: 1.00 – 1.80 poorly affected; 1.81 – 2.60 fairly affected; 2.61 – 3.40 moderately affected; 3.41 – 4.20 highly affected; 4.21 – 5.00 extremely affected

4.4. Psychological Factors Influencing the Nursing Care of Infectious Disease Patients

The table 4 below presents the psychological factors influencing the nursing care of infectious disease patients. The psychological factors had an overall mean of 3.68, interpreted as highly affected, indicating that nurses' mental resilience and psychological preparedness strongly influenced the nursing care of infectious disease patients. The highest-rated indicator was psychological flexibility enables better patient care with M = 3.93, followed by mental preparedness (M = 3.90), effective coping strategies (M = 3.85), mindfulness practices (M = 3.82), and maintaining focus under stress (M = 3.71), all interpreted as highly affected. Meanwhile, burnout resistance had M = 3.29, interpreted as moderately affected, while workplace psychological support and resources had the lowest mean of M = 2.40, interpreted as fairly affected. Overall, the findings show that nurses demonstrated strong psychological readiness, adaptability, and coping ability, although institutional psychological support remained limited (Almeida et al., 2023; Huang et al., 2021; Pujiyanto et al., 2022; Shi et al., 2024; Smith, 2023; Zakeri et al., 2022).

Table 4 Psychological Factors that Affect the Nursing Care of Infectious Disease Patients

Statement	**Mean**	**Descriptor**
I maintain a positive outlook despite the high-paced and stressful work environment.	3.99	Highly affected
I consider myself resilient when facing work-related stress.	3.97	Highly affected
I can quickly adapt to changes in patient care demands during crises.	3.96	Highly affected
I believe that my psychological flexibility enables me to provide better patient care.	3.93	Highly affected
I feel mentally prepared to face the challenges of infectious disease care.	3.90	Highly affected
I have effective strategies for coping with high-pressure clinical situations.	3.85	Highly affected
I actively practice techniques (e.g., mindfulness) that enhance my mental well-being.	3.82	Highly affected
I am capable of maintaining focus and clarity in stressful situations.	3.71	Highly affected
I rarely experience burnout, even during prolonged periods of stress.	3.29	Moderately affected
My workplace provides sufficient psychological support and resources.	2.40	Fairly affected
Overall Mean Rating	3.68	Highly affected

Legend for the Mean Rating: 1.00 – 1.80 poorly affected; 1.81 – 2.60 fairly affected; 2.61 – 3.40 moderately affected; 3.41 – 4.20 highly affected; 4.21 – 5.00 extremely affected

4.5. Life Experiences Factors Influencing the Nursing Care of Infectious Disease Patients

The table 5 below presents the life experiences factors influencing the nursing care of infectious disease patients. The life experiences factors had an overall mean of 3.99, interpreted as highly affected, indicating that prior personal and professional experiences strongly influenced the nursing care of infectious disease patients. The highest-rated indicator was professional growth from past challenges with M = 4.09. This was followed by cultural background influencing care positively (M = 4.01), reflecting on previous experiences to improve future patient interactions (M = 4.01), and background shaping healthcare attitudes (M = 4.01). Other highly rated indicators were drawing on past professional experiences to manage stressful situations effectively (M = 3.99), life experiences as a significant resource in managing complex clinical situations (M = 3.99), previous experiences with infectious outbreaks prepared me for current challenges (M = 3.97), learned valuable coping strategies from past work in critical care units (M = 3.97), and life experiences make me more resilient at work (M = 3.96). These findings show that accumulated experiences, reflection,

and prior exposure to challenging situations served as important strengths in nursing care delivery (Bloomer & Walshe, 2021; Chau et al., 2022; Fernandez et al., 2022; Rodríguez-Almagro et al., 2021).

Table 5 Life Experiences Factors that Affect the Nursing Care of Infectious Disease Patients

Statement	Mean	Descriptor
Learning from past challenges has contributed to my growth as a nursing professional.	4.09	Highly affected
Cultural background influences my approach to patient care in positive ways.	4.01	Highly affected
I frequently reflect on my previous experiences to improve my future patient interactions.	4.01	Highly affected
My background (personal or cultural) shapes my attitudes toward healthcare delivery.	4.01	Highly affected
I draw on my past professional experiences to manage stressful situations effectively.	3.99	Highly affected
I consider my life experiences as a significant resource in managing complex clinical situations.	3.99	Highly affected
Previous experiences with infectious outbreaks have prepared me for current challenges.	3.97	Highly affected
I have learned valuable coping strategies from past work experiences in critical care units.	3.97	Highly affected
I believe that my life experiences make me more resilient at work.	3.96	Highly affected
My previous exposure to high-stress environments enhances my adaptability to new crises.	3.90	Highly affected
Overall Mean Rating	3.99	Highly affected

Legend for the Mean Rating: 1.00 – 1.80 poorly affected; 1.81 – 2.60 fairly affected; 2.61 – 3.40 moderately affected; 3.41 – 4.20 highly affected; 4.21 – 5.00 extremely affected

4.6. Relationship Between Respondents' Profiles and Their Behavioral Factors Influencing Their Nursing Care of the Infectious Disease Patients

Table 6 presents the relationship between respondents' age and factors affecting their nursing care of infectious disease patients. The relationship analysis showed that age was significantly related only to personal factors, with $\chi^2(5) = 13.11$, $p = 0.022$, $\varepsilon^2 = 0.1957$, indicating a moderate effect. In contrast, age had no significant relationship with physical ($\chi^2(5) = 4.64$, $p = 0.461$, $\varepsilon^2 = 0.0693$), emotional ($\chi^2(5) = 4.47$, $p = 0.484$, $\varepsilon^2 = 0.0667$), psychological ($\chi^2(5) = 3.14$, $p = 0.679$, $\varepsilon^2 = 0.0468$), and life experiences ($\chi^2(5) = 6.29$, $p = 0.279$, $\varepsilon^2 = 0.0939$). This means that differences across age groups were observed only in the personal domain, while the other factors were generally similar regardless of age (Zakeri et al., 2022; Joy et al., 2024; Chau et al., 2022; Smith et al., 2020).

Table 6 Kruskal–Wallis Test on the Relationship Between Age and Factors Affecting the Nursing Care of Infectious Disease Patients

Factors	χ^2	df	P - value	ε^2
Physical	4.64	5	0.461	0.0693
Personal	13.11	5	0.022	0.1957
Emotional	4.47	5	0.484	0.0667
Psychological	3.14	5	0.679	0.0468
Life Experience	6.29	5	0.279	0.0939

** significant at $\alpha = .01$; * significant at $\alpha = .05$

Table 7 presents the relationship between respondents' sex and the factors affecting their nursing care of the infectious disease patients. The relationship between sex and behavioral factors showed no significant differences across the five domains, indicating that sex did not significantly influence physical, personal, emotional, psychological, or life experiences factors affecting nursing care (Bloomer & Walshe, 2021; Brešan et al., 2021; Fernandez et al., 2022; Havaei et al., 2021; Yang et al., 2022; Lee & Kang, 2019; Oware et al., 2024; Pujiyanto et al., 2022; Zakeri et al., 2022).

Table 7 Mann – Whitney Test on the Relationship Between Sex and Factors Affecting the Nursing Care of Infectious Disease Patients

Factors	Mann – Whitney U	P – value		Effect Size
Physical	362	0.432	Rank biserial correlation	0.1310
Personal	391	0.678	Rank biserial correlation	0.0601
Emotional	367	0.468	Rank biserial correlation	0.1190
Psychological	393	0.742	Rank biserial correlation	0.0553
Life Experience	410	0.925	Rank biserial correlation	0.0144

** significant at $\alpha = .01$; * significant at $\alpha = .05$

Table 8 presents the relationship between respondents' unit/ward assignment and the factors affecting the nursing care of infectious disease patients. The relationship between unit or ward assignment and behavioral factors revealed that only physical factors were significant, with $\chi^2(7) = 15.73$, $p = 0.028$, $\varepsilon^2 = 0.2348$, suggesting that the work unit mainly influenced the physical aspect of nursing care. The remaining domains were not significant: personal ($\chi^2 = 7.06$, $p = 0.423$), emotional ($\chi^2 = 6.98$, $p = 0.431$), psychological ($\chi^2 = 13.12$, $p = 0.069$), and life experiences ($\chi^2 = 6.15$, $p = 0.522$) (Brešan et al., 2021; Havaei et al., 2021; Smith et al., 2020; Zakeri et al., 2022; Bloomer & Walshe, 2021; Fernandez et al., 2022).

Table 8 Kruskal–Wallis Test on the Relationship Between Unit / Ward Assignment and Factors Affecting the Nursing Care of Infectious Disease Patients

Factors	χ^2	df	P - value	ε^2
Physical	15.73	7	0.028	0.2348
Personal	7.06	7	0.423	0.1053
Emotional	6.98	7	0.431	0.1042
Psychological	13.12	7	0.069	0.1958
Life Experience	6.15	7	0.522	0.0918

** significant at $\alpha = .01$; * significant at $\alpha = .05$

Table 9 Kruskal–Wallis Test on the Relationship Between Length of Service and Factors Affecting the Nursing Care of Infectious Disease Patients

Factors	χ^2	df	P - value	ε^2
Physical	5.73	6	0.455	0.0855
Personal	5.85	6	0.440	0.0874
Emotional	1.71	6	0.944	0.0255
Psychological	8.64	6	0.195	0.1290
Life Experience	5.62	6	0.467	0.0838

** significant at $\alpha = .01$; * significant at $\alpha = .05$

Table 9 presents the relationship between respondents' length of service and the factors affecting the nursing care of infectious disease patients. The relationship between length of service and behavioral factors showed no significant

relationship across all domains: physical ($\chi^2(6) = 5.73$, $p = 0.455$), personal ($\chi^2(6) = 5.85$, $p = 0.440$), emotional ($\chi^2(6) = 1.71$, $p = 0.944$), psychological ($\chi^2(6) = 8.64$, $p = 0.195$), and life experiences ($\chi^2(6) = 5.62$, $p = 0.467$). This indicates that years of service did not significantly affect the behavioral factors influencing nursing care (Fernandez et al., 2022; Bloomer & Walshe, 2021; Havaei et al., 2021; Pujiyanto et al., 2022; Zakeri et al., 2022; Oware et al., 2024; Radosz-Knawa et al., 2022; Brešan et al., 2021; Chau et al., 2022).

5. Discussion

The present study demonstrates that the nursing care of infectious disease patients at Chuuk State Hospital was shaped more by nurses' internal capacities than by the physical environment in which care was delivered. Although physical conditions remained relevant, the strongest influences were found in the personal, life experience, emotional, and psychological domains, suggesting that nurses sustained care primarily through professional commitment, adaptive coping, and experiential knowledge rather than through structural supports alone. This pattern is consistent with evidence that nursing performance in high-risk clinical settings depends not only on material resources, but also on resilience, professional identity, and coping capacity (Brešan et al., 2021; Dellafiore et al., 2021; Havaei et al., 2021; Hu et al., 2024;).

Physical factors received the lowest overall rating among the five domains, indicating that workplace conditions were important but comparatively less influential. The relatively favorable ratings for the availability of personal protective equipment, the adequacy of physical resources, and environmental conditions such as lighting and ventilation suggest that respondents recognized the value of a functional and protective work environment in infectious disease care. This finding aligns with prior research showing that adequate protective supplies and infrastructure are fundamental to safe practice, infection prevention, and care quality (Brešan et al., 2021; Lee & Kang, 2019; Radosz-Knawa et al., 2022; Yang et al., 2022). At the same time, lower ratings for ergonomic design, access to break areas, physical fatigue, and especially staffing adequacy indicate that nurses continued to work under conditions of strain. The implication is that material preparedness alone did not fully offset the burdens imposed by workload and workforce limitations. This interpretation is consistent with studies linking insufficient staffing and prolonged physical exhaustion to diminished care quality and increased occupational stress among nurses (Alrimali & Alreshidi, 2023; Młynarska et al., 2020).

Among all domains, personal factors emerged as the most influential. High ratings for ethical commitment under pressure, intrinsic motivation, professional identity, patient advocacy, and the desire to provide high-quality care suggest that respondents approached infectious disease nursing as both a professional obligation and a moral commitment. In this context, personal values appear to have functioned as a stabilizing foundation for practice, enabling nurses to maintain care despite uncertainty and risk. This interpretation accords with earlier work showing that professional identity, ethical commitment, and self-efficacy strengthen nurses' perseverance, decision-making, and care performance in challenging clinical settings (Kuesakul et al., 2024; Sikorska et al., 2023). The prominence of this domain also suggests that institutional readiness should be understood not only in terms of equipment and staffing, but also in relation to how effectively healthcare systems cultivate and sustain nurses' professional agency.

Emotional factors were likewise highly influential, indicating that the affective dimensions of nursing practice played a substantial role in care delivery. Strong ratings for empathy, emotional awareness, and the ability to remain calm in difficult situations suggest that respondents relied heavily on emotional regulation to preserve therapeutic relationships and maintain professional functioning. In infectious disease settings, where fear of transmission, patient deterioration, and family distress are often pronounced, the capacity to manage emotion is central to both compassionate care and clinical effectiveness. This interpretation is consistent with evidence that empathy and emotional competence support nurse-patient relationships, while unmanaged emotional strain may undermine performance and well-being (Cui et al., 2022; Dellafiore et al., 2021; Hu et al., 2024; Lee & Kang, 2019;). However, the comparatively lower rating for institutional emotional support indicates that this emotional labor may have been borne largely by nurses themselves rather than adequately buffered by the workplace. That finding is important because sustained emotional labor without sufficient support may contribute to exhaustion over time (Dellafiore et al., 2021; Hu et al., 2024).

A similar pattern emerged in the psychological domain. Respondents reported high levels of psychological adaptability, including the ability to remain focused under pressure, recover from difficult experiences, and continue functioning despite stress. These findings suggest that psychological flexibility and resilience were central mechanisms through which nurses navigated the demands of infectious disease care. Such a pattern is consistent with previous research demonstrating that resilience, stress tolerance, and adaptive coping are associated with sustained clinical performance and lower vulnerability to distress in high-pressure healthcare environments (Almeida et al., 2023; Huang et al., 2021; Zakeri et al., 2022). Nevertheless, not all indicators in this domain were equally strong, particularly those related to

workplace psychological support. This suggests that nurses' psychological functioning was supported more by personal coping resources than by formal institutional mechanisms. From an organizational perspective, that distinction matters because resilience is more sustainable when it is reinforced by accessible psychological support systems rather than treated as an individual responsibility alone (Almeida et al., 2023; Pujiyanto et al., 2022; Shi et al., 2024; Smith, 2023; Zakeri et al., 2022).

Life experience factors also exerted a strong influence on nursing care, underscoring the importance of accumulated personal and professional experience in shaping practice. High ratings for growth from past challenges, reflection on previous experiences, and the role of background in shaping attitudes toward care suggest that respondents drew meaningfully from prior adversity and clinical exposure in managing present demands. This finding supports the view that nursing competence in complex care settings develops not only through formal training, but also through reflective learning grounded in lived and professional experience. Consistent with this interpretation, prior studies have shown that reflective practice and experience-based learning strengthen judgment, resilience, and response capacity in demanding clinical situations (Fernandez et al., 2022; Bloomer & Walshe, 2021; Chau et al., 2022). In the context of infectious disease nursing, these findings suggest that prior experience may serve as an important adaptive reservoir, helping nurses respond more effectively to uncertainty, pressure, and rapidly changing patient needs (Bloomer & Walshe, 2021; Chau et al., 2022; Fernandez et al., 2022).

The demographic analysis provides additional context for these domain-level findings. Age was significantly associated only with personal factors, suggesting that motivation, values, confidence, and professional self-concept may vary across age groups, whereas physical, emotional, psychological, and life experience domains were comparatively stable. This pattern is plausible given that age and life stage often influence professional orientation and self-perception more directly than exposure to workplace demands themselves (Pujiyanto et al., 2022; Zakeri et al., 2022; Joy et al., 2024), Chau et al., 2022; Smith et al., 2020). By contrast, sex and length of service showed no significant relationships with any of the five domains, indicating that the key influences on nursing care were broadly shared across respondents despite differences in gender and years of practice (Fernandez et al., 2022; Havaei et al., 2021; Oware et al., 2024; Pujiyanto et al., 2022; Zakeri et al., 2022). Unit or ward assignment was significantly related only to physical factors, which is consistent with the expectation that work area would shape access to equipment, staffing patterns, and environmental conditions more directly than it would shape internal dispositions or accumulated experience (Brešan et al., 2021; Fernandez et al., 2022; Havaei et al., 2021; Smith et al., 2020).

Taken together, these findings suggest that the quality and continuity of infectious disease nursing care in this setting were sustained chiefly by nurses' internal strengths rather than by fully optimized institutional conditions. The respondents appeared to compensate for limitations in staffing, emotional support, and psychological support through professional commitment, emotional steadiness, psychological adaptability, and experience-based judgment. While this reflects a highly resilient nursing workforce, it also signals a structural vulnerability. Systems of care that depend too heavily on individual resilience may remain functional in the short term, but they are less likely to be sustainable over time. The broader implication of this study, therefore, is that effective infectious disease nursing care requires more than committed nurses; it also requires organizational conditions that preserve, reinforce, and extend the capacities those nurses already possess. Strengthening staffing adequacy, workplace recovery conditions, emotional support, and psychological support may therefore be essential not only for nurse well-being, but also for the long-term safety, quality, and sustainability of patient care (Havaei et al., 2021; Joy et al., 2024; Xu et al., 2024; Zakeri et al., 2022).

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

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

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