

**INTERPERSONAL COMMUNICATION SKILLS, WORK ADAPTABILITY AND
PROFESSIONAL COMPETENCE AMONG NURSES IN SELECTED
GOVERNMENT HOSPITAL IN SOUTH COTABATO**

Erwin S. Tenecio, RN

Davao Doctors College, Inc.
Davao City, Philippines

Abstract

This study examined the relationship and predictive influence of interpersonal communication skills and work adaptability on nurses' professional competence in a government hospital in South Cotabato. A predictive correlational design was used with 126 nurses selected through quota sampling, utilizing standardized assessment tools. Findings revealed that nurses demonstrated high levels of communication skills, adaptability, and professional competence. Both interpersonal communication and work adaptability showed significant positive relationships with professional competence and were strong predictors of it, with work adaptability emerging as the most influential factor. Demographic variables showed no significant associations, except for sex in relation to professional competence. These results highlight that strong communication and adaptability are key drivers of nursing competence. The study emphasizes the importance of developing targeted training programs to enhance these skills and improve overall performance in hospital settings.

Keywords: *Interpersonal Communication Skills, Work Adaptability, Professional Competence, Predictive-Correlational, South Cotabato*

Corresponding email: tenecioerwin0@gmail.com

ORCID ID: <https://orcid.org/0009-0007-0740-8884>

INTRODUCTION

Nurses in government hospitals often work under high-pressure conditions characterized by heavy workloads, urgent patient needs, and limited staffing—factors that contribute to miscommunication, reduced adaptability, and compromised performance. Unclear handover instructions, delayed information flow, and hierarchical communication patterns further heighten clinical risks,

making communication satisfaction a crucial factor in patient safety culture (Noviyanti et al., 2021). As demands on the nursing workforce grow, clear communication and strong adaptability have become essential for sustaining quality care and effective professional functioning (Wu et al., 2025).

International evidence supports these observations. Herrmann et al. (2023) found that strong communication skills enhance coordination, reduce conflicts, and improve professional performance. Similarly, Middleton et al. (2022) reported that nurses

with higher adaptability demonstrate greater resilience and clinical efficiency in fast-paced environments. Communication also strengthens nurses' confidence and self-efficacy (Mehralian et al., 2023) and improves clinical competence through enhanced reasoning and decision-making (Kim & Kang, 2024).

In the Philippines, effective interpersonal communication is vital in culturally diverse and multilingual hospital settings. Nurses rely on therapeutic communication strategies to support patient understanding and comfort (Alcorano, 2023). Work adaptability is equally important, enabling nurses to manage shifting workloads and resource constraints while maintaining well-being and performance. Career adaptability facilitates better job adjustment, retention, and psychological health (Ocampo et al., 2022). Both communication and adaptability significantly shape professional competence, influencing clinical judgment, teamwork, and job satisfaction among Filipino nurses (Afianda et al., 2025).

At the local level, Lumactod et al., (2022) described the experiences of nurses in South Cotabato highlighting heavy workloads, infection risk, and the need for clear communication with patients and families. Similarly, Deocades and Bacon (2025) documented how health workers in South Cotabato adapted to logistical and communication challenges emphasizing the importance of teamwork and flexible role performance. Moreover, when language barriers are present, those nurses who succeed in overcoming

them through effective communication report higher perceived care quality (Dumaguing et al., 2024).

Despite the growing body of literature on nursing performance, a key gap remains: limited studies have examined interpersonal communication skills and work adaptability as combined predictors of professional competence, particularly in government hospital settings in Mindanao. Most existing research treats these variables independently, offering insufficient insight into how their interaction shapes competence in resource-constrained and high-pressure environments. Furthermore, there is a lack of localized evidence reflecting the unique clinical, cultural, and operational challenges faced by nurses in South Cotabato. Addressing this gap is essential to generate context-specific evidence that can guide targeted interventions to strengthen communication, adaptability, and overall nursing competence. This study aims to determine the relationship and predictive influence of interpersonal communication skills and work adaptability on the professional competence of nurses in a government hospital in South Cotabato

METHODS

The study employed a predictive correlational design, a methodological approach suitable for examining naturally occurring behaviors and characteristics. This design allows for the exploration of associations among multiple variables without manipulation, making it appropriate for real-world clinical settings. It supports the identification of patterns and relationships while also examining how specific variables may predict outcomes (Sousa, Driessnack, & Mendes, 2007). In this study, the design was used to assess the levels of interpersonal communication skills, work adaptability, and professional competence among nurses in a selected government hospital in South Cotabato, and to determine the relationships among these variables.

However, several methodological limitations must be acknowledged. First, the correlational nature of the design limits the ability to establish causal relationships; findings can only indicate associations and predictive tendencies, not direct cause-and-effect links. Second, the use of quota sampling and a single study site may limit the generalizability of the results to other hospitals or regions. Third, data were collected through self-reported questionnaires, which may be subject to response bias, including social desirability and overestimation of competencies. Additionally, the use of an online survey platform (Google Forms) may exclude individuals with limited digital access or influence how participants interpret and respond to items. These limitations suggest that findings should be interpreted with caution and highlight the need for future studies using mixed methods, longitudinal designs, or multi-site sampling to strengthen external validity and causal inference.

The study was conducted in a selected government hospital in South Cotabato, which employs a substantial number of registered nurses across diverse clinical units, including ICU, ER, medical and surgical wards, OB and pediatric units, OR, dialysis and renal units, NICU, OPD, ambulance services, and emergency management units. This setting provided a realistic and comprehensive context for examining nursing competencies within actual clinical environments. A total of 126 registered nurses participated in the study. Nurses in purely administrative roles were excluded to maintain focus on direct

patient care. Data were collected during non-critical hours to minimize disruption to clinical responsibilities and to capture authentic work experiences.

The study utilized adopted and validated research instruments. The questionnaire consisted of four sections: (1) Demographic Profile; (2) Interpersonal Communication Skills, adapted from Siamian et al. (2014); (3) Work Adaptability, based on Liang et al. (2024); and (4) Professional Competence, using the Nurse Professional Competence Scale–Short Version (NPC-SV) by Nilsson et al. (2018). All instruments used a 5-point Likert scale to ensure consistency in measurement. The use of established tools enhanced the reliability and validity of the data collected.

Ethical considerations were strictly observed throughout the study. Prior to data collection, ethical approval was obtained from the appropriate institutional authority. Participants were provided with a clear and comprehensive informed consent form, which explained the purpose of the study, procedures involved, voluntary nature of participation, and their right to withdraw at any time without penalty. Consent was obtained electronically before respondents could access the survey.

To ensure confidentiality and anonymity, no personally identifiable information was collected. Responses were coded and stored securely, accessible only to the researcher. Data were reported in aggregate form to prevent the identification of individual participants or specific units.

Measures were also taken to ensure participant protection. The study posed minimal risk, as it involved non-invasive survey methods. Participants were allowed to complete the questionnaire at their convenience, reducing

potential stress or interference with work duties. They were also informed that they could skip any question they were uncomfortable answering. These

safeguards ensured that participants' rights, dignity, and well-being were fully protected throughout the research process.

RESULTS AND DISCUSSIONS

Demographic Profile	Frequency (n=126)	Percentage
Age:		
20-25 yo	15	11.9
26-30 yo	17	13.5
31-35 yo	22	17.5
36-40 yo	46	36.5
41 yo & above	26	20.6
Total	126	100%
Sex:		
Male	32	25.4%
Female	94	74.6%
Total	126	100%
Area of Assignment:		
ICU	3	2.4
ER	23	18.3
MEDICAL WARD	37	29.4
SURGICAL WARD	11	8.7
OB WARD	4	3.2
PEDIATRIC WARD	9	7.1
OR	10	7.9
DR	5	4.0
HEMODIALYSIS UNIT	11	8.7
NICU	4	3.2
OPD	5	4.0
NSO	4	3.2
Total	126	100%
Years of Experience:		
< 1yr	13	10.3
1-3 yrs	27	21.4
4-6 yrs	12	9.5
> 6 yrs	74	58.7
Total	126	100%
Highest Educational Attainment:		
BSN	112	88.9
Masters in Nursing	14	11.1
Doctorate in Nursing	0	0
Total	126	100%

The results show that most respondents belong to the 36–40 age group (36.5%), which recorded the highest frequency, while the 20–25 age group (11.9%) had the lowest. In terms of sex, female respondents (74.6%) represented the highest proportion, whereas male respondents (25.4%) comprised the lowest. For the area of assignment, the Medical Ward

(29.4%) had the highest number of respondents, while the ICU, OB Ward, NICU, and NSO, each with 3.2% or below, had the lowest representation. Regarding years of experience, the highest frequency was observed among those with more than 6 years of experience (58.7%), while the lowest group consisted of respondents with 4–6 years of experience (9.5%). Finally, in terms of educational attainment, BSN graduates (88.9%) constituted the highest proportion and followed by Masters in Nursing which constituted 11.1%.

2. What is the level of interpersonal communication skills among nurses in terms of general communication, speaking, listening, interpretation and clarification, asking, feedback and punishment-reward?

Table 2. Level of Interpersonal Communication Skills Among Nurses

Indicators	Mean	SD	Interpretation
1. General Communication	4.56	0.77	Very High
2. Speaking	4.47	0.78	Very High
3. Listening	4.35	0.86	Very High
4. Interpretation and Clarification	4.17	0.89	High
5. Asking	4.20	0.86	High
6. Feedback	3.90	0.92	High
7. Punishment-Reward	4.43	0.78	Very High
Overall Mean	4.30	0.84	Very High

Note: 4.21-5.00---Very High ;3.41-4.20---High; 2.61-3.40---Moderate; 1.81-2.60---Low; 1.00-1.80---Very Low; SD- Standard Deviation.

The highest mean score among the indicators of interpersonal communication skills was observed in General Communication ($M = 4.56$, $SD = 0.77$), indicating that nurses excel most in expressing courtesy, professionalism, and positive non-verbal behavior during interactions. This implies that foundational communication behaviors such as greeting, maintaining a pleasant demeanor, and closing conversations politely are consistently and effectively demonstrated by nurses. In contrast, the lowest mean score was found in Feedback ($M = 3.90$, $SD = 0.92$), suggesting that nurses show comparatively less consistency in providing clear, focused, and timely feedback. This implies an important area for improvement, as strengthening feedback skills can further enhance clarity, patient understanding, and collaborative communication. The overall mean of 4.30 ($SD = 0.84$) indicates a very high level of interpersonal communication skills among nurses, reflecting strong competencies across most indicators.

These findings align with Konlan et al. (2021), who report that behaviors such as calling patients by name, maintaining a pleasant tone, and listening carefully help create a comfortable communication environment and enhance patients' willingness to communicate. Similarly, Babaii et al. (2021) emphasize that empathetic communication marked by humility, sincerity, and warmth reduces patient anxiety and strengthens the

therapeutic relationship. This supports the present finding that foundational communication behaviors are nurses' strongest competency. Consistently, Lee et al. (2025) highlight that respectful tone and language are central to person-centered care and significantly contribute to improved patient outcomes and overall satisfaction.

Meanwhile, Kämäräinen et al. (2024) found that although nurses excel in basic communication behaviors, they often struggle with delivering structured or corrective feedback for skills that require higher-level interaction and confidence. Mohammadi et al. (2024) further note that limitations in these advanced communication competencies can hinder clarity in nurse–patient interactions and affect collaborative decision-making. Research on spiritual and sensitive assessments reinforces this challenge as Giske and Cone (2021) show that nurses and patients respond more positively to open, nonjudgmental questions that feel supportive rather than evaluative. In line with this, Healy et al. (2022) recommend avoiding “Why?” questions, as such phrasing can unintentionally increase patient defensiveness and anxiety, highlighting the need for feedback practices that are clear, gentle, guided, and non-threatening

3. What is the level of work adaptability among nurses in terms of concern, control, curiosity and confidence?

Table 3. Level of Work Adaptability Among Nurses

Indicators	Mean	SD	Interpretation
1. Concern	4.57	0.72	Very High
2. Control	4.29	0.82	Very High
3. Curiosity	4.42	0.75	Very High
4. Confidence	4.51	0.74	Very High
Overall Mean	4.45	0.76	Very High

Note: 4.21-5.00---Very High ;3.41-4.20---High; 2.61-3.40---Moderate; 1.81-2.60---Low; 1.00-1.80---Very Low; SD- Standard Deviation.

The highest mean score among the work adaptability indicators was observed in Concern (M = 4.57, SD = 0.72), indicating that nurses show the strongest competence in planning, preparing for the future, and demonstrating awareness of career-related responsibilities. This implies that they possess a highly future-oriented mindset, enabling them to proactively set goals and make informed decisions that support long-term professional growth. On the other hand, the lowest mean score was found in Control (M = 4.29, SD = 0.82), suggesting that while still very high, nurses exhibit comparatively less consistency in demonstrating autonomy, decision-making, and self-management. This implies a potential area for development, as strengthening control-related behaviors such as assertiveness and confidence in personal choices which may further enhance their overall adaptability. Overall, with a mean score of 4.45 (SD = 0.76) reflect a very high level of work adaptability among nurses, showing strong readiness, self-management, curiosity, and confidence in meeting workplace demands.

Awad et al. (2024) support the present finding that concern is the strongest adaptability indicators among nurses. Their study showed that career concern defined as imagining future career paths and planning strategies to achieve professional goals significantly enhances proactive work behavior. This demonstrates how future-oriented thinking and long-term planning strengthen nurses' readiness to cope with workplace changes. A similar emphasis on future planning is found in Xiang et al. (2024), who reported moderately high adaptability among nursing students and highlighted that career concern improves preparedness for clinical responsibilities. Their findings show that when individuals pay deliberate attention to their future careers, they transition more smoothly into professional roles. This is further reinforced by Ma et al. (2025), who found that nurses with higher adaptability profiles characterized in part by stronger concern held more positive perceptions of patient safety culture. This indicates that planning and preparation for one's career are essential foundations for safe and competent practice in demanding clinical settings.

Potomkin (2024) also underscores the importance of career concern by demonstrating that self-concept and educational success positively predict adaptability among nurses. Strengthening concern allows nurses to plan learning pathways, embrace development opportunities, and remain resilient amid healthcare system changes. Likewise, Sun et al. (2023) showed that strong career concern reduces turnover intention among nursing assistants by helping them remain engaged and better manage work-related stressors.

Transitioning to the control indicator, identified as the lowest mean in this study, literature also reflects similar trends. Mahmoud and Abou Ramadan (2023) found that control, which involves autonomy, self-management, and directing one's career path, is strongly associated with academic motivation and the ability to manage adversity. Their results indicate that individuals with stronger control feel more capable of making decisions and navigating challenges, underscoring why this dimension remains an essential, though slightly less developed, component of adaptability. Further, Du et al. (2025) showed that nurses with higher levels of control demonstrated better work-related outcomes and greater access to resources. Their study highlights that autonomy and decisiveness as core aspects of control contribute to improved professional functioning. Supporting this, Rahbar Zeraati et al. (2024) found that responsible professional behavior and self-regulation significantly predict adaptability, demonstrating that individuals who manage themselves effectively are more likely to feel in control of their career development.

4. What is the level of professional competence among nurses in terms of nursing care, value-based nursing care, medical and technical care, care pedagogies, documentation and administration of nursing care and development, leadership and organization of nursing care?

Table 4. Level of Professional Competence Among Nurses

Indicators	Mean	SD	Interpretation
1. Nursing Care	4.38	0.78	Very High

2. Value-Based Nursing Care	4.62	0.73	Very High
3. Medical and Technical Care	4.46	0.82	Very High
4. Care Pedagogies	4.54	0.76	Very High
5. Documentation and Administration of Nursing Care	4.53	0.77	Very High
6. Development, Leadership and- Organization of Nursing Care	4.38	0.80	Very High
Overall Mean	4.48	0.78	Very High

Note: 4.21-5.00---Very High ;3.41-4.20---High; 2.61-3.40---Moderate; 1.81-2.60---Low; 1.00-1.80---Very Low; SD- Standard Deviation.

The highest mean score among the dimensions of professional competence was observed in Value-Based Nursing Care ($M = 4.62$, $SD = 0.73$), indicating that nurses demonstrate exceptional ability in respecting patient dignity, autonomy, and individual values. This implies that the strongest aspect of their competence lies in their ethical sensitivity, patient-centeredness, and commitment to compassionate care that are key qualities that enhance trust, therapeutic relationships, and overall patient satisfaction. In contrast, the lowest mean scores were found in Nursing Care ($M = 4.38$, $SD = 0.78$) and Development, Leadership and Organization of Nursing Care ($M = 4.38$, $SD = 0.80$), which, while still rated very high, reflect slightly lower consistency compared to other dimensions. This implies opportunities for improvement particularly in hands-on clinical care refinement, leadership development, and organizational involvement. Strengthening these areas may further enhance overall professional competence by improving clinical accuracy, team coordination, and readiness to assume advanced professional roles. Overall, the results reflect a very high level of professional competence among nurses.

The finding that Value-Based Nursing Care received the highest mean score is strongly supported by recent studies emphasizing the central role of ethical sensitivity and compassion in contemporary nursing practice. Flodén et al. (2025) report that value-based care consistently ranks highest among professional competence domains, reflecting nurses' strong commitment to patient dignity, respect, and individualized care. This aligns with Gastmans et al. (2025), who highlight that moral competence and ethical sensitivity form the foundation of therapeutic relationships, fostering trust and strengthening patient–nurse rapport. Similarly, Zarrinkolah et al. (2025) found high competence in the compassion sensitivity domain, underscoring the importance of empathy, emotional attunement, and patient-centered values as core components reflected in the highest score of the present study.

In contrast, the lower (though still very high) mean scores in Nursing Care and Development, Leadership, and Organization of Nursing Care are consistent with literature identifying these indicators as areas where nurses typically show slightly less consistency. Bjuresäter et al. (2022) note that competencies related to leadership, delegation, and organization often score lower compared to ethical or relational competencies, suggesting

ongoing developmental needs in managerial confidence and coordination. Likewise, Zaitoun (2024) reports that hands-on clinical skills and technical care, while generally strong, may lag behind value-based competencies, indicating the need for continuous practice refinement and additional institutional support.

5. Is there a significant relationship between interpersonal communication and professional competence among nurses?

Table 5. The Test of Relationship between the Nurses' Level of Interpersonal Communication Skills and Professional Competence.

Interpersonal Communication Skills	Professional Competence			
	r	p-value	Decision	Remarks
1. General Communication	.844	<.001	Reject H ₀₁	S
2. Speaking	.866	<.001	Reject H ₀₁	S
3. Listening	.816	<.001	Reject H ₀₁	S
4. Interpretation and Clarification	.717	<.001	Reject H ₀₁	S
5. Asking	.765	<.001	Reject H ₀₁	S
6. Feedback	.581	<.001	Reject H ₀₁	S
7. Punishment-Reward	.781	<.001	Reject H ₀₁	S
Overall	.767	<.001	Reject H₀₁	S

Note: $p < 0.05$ (Significant); IV-Interpersonal Communication; DV-Professional Competence.

Table 5 shows the test of relationship between level of interpersonal communication skills and professional competence among nurses. The results revealed that there is a significant, positive relationship between nurse's professional competence and interpersonal communication skills in terms of general communication ($r = .844$, $p < .001$), speaking ($r = .866$, $p < .001$), listening ($r = .816$, $p < .001$), interpretation and clarification ($r = .717$, $p < .001$), asking ($r = .765$, $p < .001$), feedback ($r = .581$, $p < .001$), and punishment-reward ($r = .781$, $p < .001$). Moreover, it suggests that as nurses' interpersonal communication skills increase in general, their level of their professional competence also increases.

Noh and Kang (2024) demonstrated that nurses with higher communication competence exhibit greater professional abilities, job satisfaction, and clinical performance. For example, a cross-sectional study found a strong positive correlation between communication competence and clinical reasoning competence ($r = 0.59$, $p < 0.001$), as well as a moderate positive correlation with professional autonomy ($r = 0.38$, $p < 0.001$). Another study by Lee et al., (2023) reported significant positive correlations between professionalism, communication competence, and job satisfaction ($r = 0.36$ – 0.72 ,

$p < 0.001$), with communication competence mediating the relationship between professionalism and job satisfaction. Similarly, research on nursing students found that interpersonal skills fully mediated the relationship between communicative and clinical competencies, highlighting the central role of communication in professional development (Kang et al., 2021).

6. Is there a significant relationship between work adaptability and professional competence among nurses?

Table 6. The Test of Relationship between the Nurses' Level of Work Adaptability and Professional Competence.

Work Adaptability	Professional Competence			
	r	p-value	Decision	Remarks
1. Concern	.853	<.001	Reject H_{02}	S
2. Control	.761	<.001	Reject H_{02}	S
3. Curiosity	.891	<.001	Reject H_{02}	S
4. Confidence	.907	<.001	Reject H_{02}	S
Overall	.853	<.001	Reject H_{02}	S

Note: $p < 0.05$ (Significant); IV-Work Adaptability; DV-Professional Competence.

As shown in Table 6, the results revealed that there is a significant, positive relationship between nurse's professional competence and work adaptability in terms of concern ($r = .853$, $p < .001$), control ($r = .761$, $p < .001$), curiosity ($r = .891$, $p < .001$), and confidence ($r = .907$, $p < .001$). It further suggests that as nurses' work adaptability increases in general, their level of their professional competence also increases.

Multiple studies confirm that higher levels of work adaptability measured through the dimensions of concern, control, curiosity, and confidence are strongly associated with greater professional competence among nurses. Consistent with this trend, Wanas and Hamed (2024) found that newly graduated nurses demonstrate statistically significant positive correlations between career adaptability and professional competence, with these relationships remaining stable across different hospital settings. Similarly, Lee and Lee (2021) reported a positive correlation between clinical competence and career adaptability ($r = .453$, $p < .001$), further reinforcing this association.

Broadening the evidence base, meta-analyses and empirical studies also indicate that all four adaptability dimensions positively influence professional competence, job performance, and career satisfaction (Rudolph et al., 2021). In addition, career adaptability has been shown to mediate the effects of stress and transition challenges on nurses' adaptation and professional development, highlighting its critical role in workforce readiness (Sun et al., 2023). Complementing these findings, Malak et al. (2025) emphasize

that professional behavior, self-esteem, and assertiveness further enhance both adaptability and competence, strengthening the overall linkage between these constructs.

7. To what extent do interpersonal communication skills and work adaptability jointly predict professional competence among nurses?

Table 7. Test of Prediction of Interpersonal Communication Skills and Work Adaptability on the Professional Competence.

Variables	Professional Competence							Remarks
	Unstandardized		Standardized			CI (95%)		
	Coefficients		Coefficient					
	β	SE	Beta	t	p	LB	UB	
(Constant)	-0.179	0.157		-1.139	0.257	-0.49	0.132	
ICS	0.278	0.063	0.258	4.391	<.001	0.152	0.403	S
WA	0.781	0.065	0.709	12.081	<.001	0.653	0.909	S

Note: $p < .05$ *(Significant); Adjusted $R^2 = 0.877$; $F = 448.510$; SE- Standard Error; IV- IC (Interpersonal Communication Skills), WA-(Work Adaptability); DV-Professional Competence; CI- Confidence Interval; LB= Lower Bound; UB- Upper Bound.

Table 7 revealed that interpersonal communication skills ($\beta = .278$, $p < .001$) and work adaptability ($\beta = .781$, $p < .001$) significantly predict the professional competence of nurses. This means that for every one-unit increase in interpersonal communication skills, professional competence increases by 0.278 units, while every one-unit increase in work adaptability results in a 0.781-unit increase in professional competence. These results led to the rejection of the null hypothesis (H_{03}), as both predictors obtained p-values less than the 0.05 level of significance. Additionally, the parametric regression analysis showed that 87.7% of the variance in professional competence can be explained by interpersonal communication skills and work adaptability, as indicated by an adjusted R^2 of 0.877. This means that only 12.3% of the variance in professional competence is attributable to factors outside these two predictors.

The predictive role of interpersonal communication skills aligns with Kang et al. (2021), who confirm that strong interpersonal and communication abilities are fundamental components of nursing competence, significantly influencing clinical performance, job satisfaction, and the overall quality of patient care. Their study also notes that interpersonal communication mediates the relationship between communicative and clinical competencies, explaining up to 53.8% of performance variation supporting the present findings. Complementing this, Baek and Han (2024) found that robust interpersonal skills improve nurses' adaptation to organizational environments and buffer the negative effects of occupational stress, further reinforcing their importance in shaping professional competence.

Likewise, the strong predictive value of work adaptability is supported by literature identifying adaptability as a critical determinant of job satisfaction, clinical competence, and professional development. Huaman et al. (2023) demonstrate that models integrating communication skills and work engagement—both closely linked to adaptability can explain up to 71% of the variance in job satisfaction. These findings collectively highlight that work adaptability not only strengthens nurses’ resilience and readiness to handle workplace demands but also contributes substantially to their overall professional competence.

8. Do the interpersonal communication skills and work adaptability predict the professional competence among nurses?

Table 8. The Test of Association between the Demographic Profile and Interpersonal Communication Skills

Demographic Profile	Interpersonal Communication Skills			
	Coefficient	p-value	Decision	Remarks
Age	LR=240.869	.913	Accept H ₀₄	NS
Sex	LR=85.426	.075	Accept H ₀₄	NS
Area of Assignment	LR=373.408	1.000	Accept H ₀₄	NS
Years of Experience	LR=168.575	.967	Accept H ₀₄	NS
Highest Educational Attainment	LR=45.950	.982	Accept H ₀₄	NS

Note: *p* < .05 (Significant); NS- Not Significant; LR- Likelihood Ratio.

Table 8 showed that nurses’ demographic profile in terms of age (LR=240.869, *p*=.913), sex (LR=85.426, *p*=.075), area of assignment (LR=373.408, *p*=1.000), years of experience (LR=168.575, *p*=.967), and highest educational attainment (LR=45.950, *p*=.982), did not show any significant association with their interpersonal communication skills. These led to the acceptance of the null hypothesis (H₀₄) as their *p*-values are more than the 0.05 alpha level of significance.

Mohammed and Adea (2022) reported no significant associations between nurses’ interpersonal communication skills and age, gender, years of experience, or workplace setting, with only education level and participation in training showing some influence. Similarly, Abbas and Mohammed (2022) found in psychiatric wards that communication skills were not significantly related to age, gender, or years of experience, with social status and qualifications exhibiting only a reverse correlation. Further corroborating these findings, Ahmadpour et al. (2025) demonstrated that demographic variables including age, gender, academic semester, and parents’ education or occupation did not significantly affect changes in communication skills following an intervention.

9. Is there a significant association between demographic profile and work adaptability among nurses?

Table 9. The Test of Association between the Demographic Profile and Work Adaptability.

Demographic Profile	Work Adaptability			
	Coefficient	p-value	Decision	Remarks
Age	LR=204.472	.144	Accept H ₀₅	NS
Sex	LR=61.246	.066	Accept H ₀₅	NS
Area of Assignment	LR=290.418	1.000	Accept H ₀₅	NS
Years of Experience	LR=133.730	.587	Accept H ₀₅	NS
Highest Educational Attainment	LR=38.267	.784	Accept H ₀₅	NS

Note: $p < .05$ (Significant); NS- Not Significant; LR- Likelihood Ratio.

Table 9 revealed that the demographic profile of nurses in terms of age (LR=204.472, $p=.144$), sex (LR=61.246, $p=.066$), area of assignment (LR=290.418, $p=1.000$), years of experience (LR=133.730, $p=.587$), and highest educational attainment (LR=38.267 $p=.784$), did not show any significant association with their work adaptability. These led to the acceptance of the null hypothesis (H₀₅) as their p-values are more than the 0.05 alpha level of significance.

This finding is consistent with the study by Hapsari (2025) in Indonesia, which reported no significant relationship between age, gender, or length of service and work stress (p-values all > 0.05). Research on job satisfaction and workplace engagement further indicates that educational level and other demographic factors often do not significantly influence these outcomes (Alzuman & Alzouman, 2023). Although a few studies suggest that higher education may be linked to lower stress and greater resilience, these effects are not consistently observed across all research contexts (Wu et al., 2022).

10. Is there a significant association between demographic profile and professional competence among nurses?

Table 10. The Test of Association between the Demographic Profile and Professional Competence

Demographic Profile	Professional Competence			
	Coefficient	p-value	Decision	Remarks
Age	LR=303.921	.996	Accept H ₀₆	NS
Sex	LR=121.692	.025	Reject H ₀₆	S
Area of Assignment	LR=443.710	1.000	Accept H ₀₆	NS

Years of Experience	LR=219.351	.997	Accept H ₀₆	NS
Highest Educational Attainment	LR=68.980	.971	Accept H ₀₆	NS

Note: $p < .05$ (Significant); NS- Not Significant; LR- Likelihood Ratio.

As displayed in Table 10, it showed that the demographic profile of nurses in terms of age (LR=303.921, $p=.144$), area of assignment (LR=443.710, $p=1.000$), years of experience (LR=219.351, $p=.997$), and highest educational attainment (LR=68.980, $p=.971$), did not show any significant association with their professional competence. Conversely, as revealed by the likelihood ratio from the Pearson chi-square test, only sex (LR=61.246, $p=.066$) had a significant association with professional competence, leading to the rejection of its null hypothesis (H_{06}).

The results are consistent with the findings of Zaitoun (2024), who reported no significant differences in overall professional competence based on age, area of assignment, or years of experience across studies conducted in Palestine, India, and Jordan, although some weak correlations with age or education were occasionally noted. The present finding that sex showed a significant association with professional competence is supported by Romem et al. (2024), who found that male and female nurses differed in their scope-of-practice utilization, particularly in patient-centered aspects of care. These patterns indicate that sex can influence how nurses enact their professional roles and competencies in clinical settings. In addition, Masibo et al. (2024) identified statistically significant gender differences across multiple domains of professional performance, noting that female nurses tended to excel in communication, leadership, and teamwork, whereas male nurses scored higher in tasks requiring independence and problem-solving.

Conclusions and Recommendations

This study aimed to explore the interpersonal communication skills, work adaptability, and professional competence of nurses in a government hospital in South Cotabato, and determined the relationships and predictive influence among these variables. To understand how these competencies influence nursing performance and patient care within real clinical environments. The study employed adopted research instruments to assess the interpersonal communication skills, work adaptability, and professional competence of nurses. Using a predictive correlational research design, 126 nurses were selected through

quota sampling. Conducted from October to November 2025, the research focused on nurses directly involved in patient care across various clinical units. The following sections present the summary findings of this research.

The level of interpersonal communication skills among nurses is Very High, indicating that they consistently demonstrate strong abilities in general communication, speaking, listening, interpretation and clarification, asking, feedback, and the punishment–reward dimension. The level of work adaptability among nurses is Very High, showing that they possess strong levels of concern, control, curiosity, and confidence in fulfilling their professional roles. The level of professional

competence among nurses is Very High, reflecting consistently strong performance across nursing care, value-based nursing care, medical and technical care, care pedagogies, documentation and administration, and development, leadership, and organization of nursing care. There is a significant relationship between interpersonal communication skills and professional competence, indicating that higher interpersonal communication skills are associated with higher levels of professional competence among nurses. There is a significant relationship between work adaptability and professional competence, confirming that nurses with higher work adaptability also tend to exhibit higher professional competence. Interpersonal communication skills and work adaptability jointly predict professional competence, demonstrating that both variables substantially contribute to explaining variations in nurses' professional competence.

Based on this conclusion, Given the Very High level of interpersonal communication skills, the hospital may continue reinforcing communication standards and may provide regular refresher training to sustain strengths in general communication, speaking, and listening. With nurses demonstrating a Very High level of work adaptability, the hospital may maintain practices and policies that encourage professional flexibility, continuous learning, and readiness for workplace changes. With nurses demonstrating a High professional competence, the hospital may maintain practices and policies that encourage professional flexibility, continuous learning, and readiness for workplace changes.

Future studies may employ probability-based sampling methods, such as random or stratified sampling, to improve representativeness and overcome the limitation posed by the use of quota sampling in the current study. Further examination of the significant association between sex and professional competence may be undertaken to explore underlying factors such as role expectations, workload differences, or leadership opportunities that may influence competence levels. Qualitative or Explanatory sequential research method approaches may be added in future research, such as interviews or focus groups, to capture deeper insights and explain why Very High scores were consistently observed across variables. Future studies may have a bigger population.

References

- Abbas, H., & Mohammed, Q. (2022). The relationships between use of interpersonal communication skills and job satisfaction among nurses working in psychiatric wards at teaching hospitals in Baghdad City. *Kufa Journal for Nursing Sciences*. <https://doi.org/10.36321/kjns/2022/120107>
- Abdeen, M. A., & Mohamed, W. M. (2021). Effect of communication skills training program for head nurses on interpersonal relations and nurses' organizational commitment. *Egyptian Journal of Health Care*. <https://doi.org/10.21608/ejhc.2021.198467>
- Abo Elnour Mostafa, S., Adam, S., & Abd Elazeem Mostafa, H. (2025).

- The relation between communication skills and self-efficacy among nurse interns. *Egyptian Journal of Health Care*, 16(3), 250–258. <https://doi.org/10.21608/ejhc.2025.444760>
- Abraham, S. A., Nsatimba, F., Agyare, D. F., Agyeiwaa, J., Opoku-Danso, R., Ninnoni, J. P., Doe, P. F., Kuffour, B. O., Anumel, B. K., Berchie, G. O., Boso, C. M., Druye, A. A., Okantey, C., Owusu, G., Obeng, P., Amoadu, M., & Commey, I. T. (2024). Barriers and outcomes of therapeutic communication between nurses and patients in Africa: A scoping review. *BMC Nursing*, 23, 362. <https://doi.org/10.1186/s12912-024-02038-0>
- Afianda, Z., Ginting, C., Armansyah, A., & Novalinda, C. (2025). Analysis of Emotional Intelligence on Communication Skills Mediated by Nurses' Job Satisfaction at Pidie Jaya Regional General Hospital. *Proceeding of The International Conference of Inovation, Science, Technology, Education, Children, and Health*. <https://doi.org/10.62951/icistech.v5i1.160>.
- Ahmadpour, N., Shariati, A., & Moghadam, M. (2025). Effect of narrative writing based on Gibbs' reflective model on the empathy and communication skills of nursing students. *BMC Medical Education*, 25. <https://doi.org/10.1186/s12909-024-06593-7>
- Akpinar, H., Ozcan Mircali, F., & Bulut Ugurlu, N. (2025). The relationship between therapeutic communication skills and spiritual care competencies of nurses: The example of Türkiye. *Journal of Religion and Health*, 64(5), 4059–4073. <https://doi.org/10.1007/s10943-025-02348-w>
- Akturan, A., Arslan, A., Yener, S., & Kilinc, S. (2024). Understanding career adapt abilities, career stress, work stress, career regret, and job satisfaction among nursing professionals. *Journal of Advanced Nursing*. <https://doi.org/10.1111/jan.16516>
- Alcorano, J. H. (2023). The extent of therapeutic communication skills of the nurses of medical and surgical wards of Philippine public hospital. *American Journal of Multidisciplinary Research and Innovation*, 2(2), 30–39. <https://doi.org/10.54536/ajmri.v2i2.1344>
- Ali, E., & Khalifa, M. (2025). Professional competency and moral courage among staff nurses. *BMC Nursing*, 24. <https://doi.org/10.1186/s12912-025-03197-4>.
- Allah, H. A., Shazly, M. M., & Mahmoud, S. I. (2023). Effect of nurses' professional competence program on their occupational personality. *Journal of Nursing Science Benha University*. <https://doi.org/10.21608/jnsbu.2023.310948>
- Allvin, R., Bisholt, B., Blomberg, K., Baath, C., & Wangesteen, S. (2021). Self-assessed competence and need for further training among registered nurses in somatic hospital wards in

- Sweden: A cross-sectional survey. *BMC Nursing*.
<https://doi.org/10.1186/s12912-020-00466-2>
- Almarwani, A., & Alzahrani, N. (2023). Factors affecting the development of clinical nurses' competency: A systematic review. *Nurse education in practice*, 73, 103826.
<https://doi.org/10.1016/j.nepr.2023.103826>.
- Alzuman, A., & Alzouman, O. (2023). Nurses' generational differences related to the workplace and leadership. *Saudi Journal of Nursing and Health Care*.
<https://doi.org/10.36348/sjnhc.2023.v06i08.003>
- Andang, B., Rauf, S., & Ningsih, S. (2023). The relationship between verbal and non-verbal communication of nurses and patient satisfaction at Mattombong Health Center. *Healt Journal*, 7(2), 45–53.
<https://ejournal.seaninstitute.or.id/index.php/healt/article/download/3504/2778/9791>
- Anker-Hansen, C., & Johansen, E. K. (2025). Navigating care and communication: A qualitative study on nurses' perspectives in response centres. *BMC Nursing*, 24, 170.
<https://doi.org/10.1186/s12912-025-02811-9>
- Ansari, A. (2021). The role of interpersonal communication skills in human resource and management. *International Journal of Science and Research (IJSR)*.
<https://doi.org/10.21275/sr211118020911>
- Asmirajanti, M., Hamid, A., & Hariyati, R. (2019). Nursing care activities based on documentation. *BMC Nursing*, 18.
<https://doi.org/10.1186/s12912-019-0352-0>
- Awad, N. H. A., Zabady, H. A. H., Elbialy, G. G., & Ali Ashour, H. M. A. (2024). Entrepreneurial leadership, nurses' proactive work behavior, and career adaptability: A structural equation model. *BMC Nursing*, 23, 140.
<https://doi.org/10.1186/s12912-024-01804-4>
- Babaii, A., Mohammadi, E., & Sadooghiasl, A. (2021). The meaning of the empathetic nurse–patient communication: A qualitative study. *Journal of Patient Experience*, 8.
<https://doi.org/10.1177/23743735211056432>
- Baek, H., & Han, K. (2024). Interpersonal competence as a moderator in the relation between occupational stress and organizational adaptation among nurses: A cross-sectional study. *Heliyon*, 10.
<https://doi.org/10.1016/j.heliyon.2024.e34450>
- Baharum, H., Ismail, A., Mckenna, L., Mohamed, Z., Ibrahim, R., & Hassan, N. (2023). Success factors in adaptation of newly graduated nurses: a scoping review. *BMC Nursing*, 22.
<https://doi.org/10.1186/s12912-023-01300-1>.
- Bandura, A. (1977). *Social learning theory*. Prentice-Hall.
- Bassett, J., Henderson, A., Baldwin, A., & Frost, J. (2025). Nurses'

- learning about professional interpersonal communication: Findings from an integrative review. *Nurse Education Today*, 150, 106698. <https://doi.org/10.1016/j.nedt.2025.106698>
- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Addison-Wesley.
- Bjuresäter, K., Olsson, C., Larsson, M., & Nilsson, J. (2022). Self-reported Professional Competence Among Swedish Contact Nurses in Cancer Care: A Cross-sectional Study. *Cancer Care Research Online*. <https://doi.org/10.1097/cr9.000000000000024>
- Bohlin, V., Gunnarsdóttir, H., Patriksson, K., & Dahlborg, E. (2025). The nurse in child healthcare as a craftsman to use professional competence and build a health promotive relationship- an observation study. *International Journal of Qualitative Studies on Health and Well-being*, 20. <https://doi.org/10.1080/17482631.2025.2527146>.
- Brittler, M. C., Amponin, A. M., & De Guzman, M. S. (2025). Communication skills of Generation Z nursing students in establishing nurse-patient relationships. *International Journal of Current Science Research and Review*, 8(2), 1-12. <https://ijcsrr.org/wp-content/uploads/2025/02/02-0302-2025.pdf>
- Butler, S. (2024). Feedback in nursing practice: Exploring barriers to and strategies for effective delivery. *Nursing Management*. <https://doi.org/10.7748/nm.2024.e2145>
- Cabrera-Aguilar, E., Zevallos-Francia, M., Morales-García, M., Ramírez-Coronel, A., Morales-García, S., Sairitupa-Sanchez, L., & Morales-García, W. (2023). Resilience and stress as predictors of work engagement: the mediating role of self-efficacy in nurses. *Frontiers in Psychiatry*, 14. <https://doi.org/10.3389/fpsyt.2023.1202048>.
- Carson, O., McAloon, T., Brown, D., & Mcilfattrick, S. (2023). Exploring the contribution and impact of master's education for leadership development in adult general nursing: A scoping review.. *Nurse education in practice*, 71, 103697. <https://doi.org/10.1016/j.nepr.2023.103697>.
- de León Oliva, B., Rodríguez Gómez, J. Á., & Rodríguez Novo, N. (2025). Difficulties in communicating between nurses and relatives of patients admitted to intensive care units: A scoping review. *Nursing in Critical Care*, 30(5), e70148. <https://doi.org/10.1111/nicc.70148>
- Dehghani, A., Mosalanejad, L., & Jowkar, F. (2022). The effect of communication skills training on nurses' moral distress: A randomized controlled trial. *Electronic Journal of General Medicine*, 19(6), em404. <https://doi.org/10.29333/ejgm/12313>
- Del Vecchio, A., Moschella, P., Lanham, J. G., & Zavertnik, J. (2022).

- Acting to teach communication skills to nurses. *The Clinical Teacher*, 19, 289–293. <https://doi.org/10.1111/tct.13489>
- Deocades, E. I. C., & Bacon, Q. J. M. (2025). Lived experiences of health workers in the implementation of soil-transmitted helminthiasis deworming program in South Cotabato: A phenomenological inquiry. *Acta Medica Philippina*, 59(4), 78–89. <https://doi.org/10.47895/amp.v59i4.9004>
- Dieppe, P., Fussell, I., & Warber, S. (2020). The power of caring in clinical encounters. *BMJ*. <https://doi.org/10.1136/bmj.m4100>
- Du, Y., Wu, C., Gai, Z., Gao, L., He, S., Guo, S., Zhang, L., Guo, X., & Yang, Y. (2025). Current status of career adaptability among Chinese cardiovascular specialist nurses: A latent profile analysis. *BMC Nursing*, 24, 1237. <https://doi.org/10.1186/s12912-025-03887-z>
- Duka, B., Stievano, A., Prendi, E., Spada, F., Rocco, G., & Notarnicola, I. (2023). An observational cross-sectional study on the correlation between professional competencies and self-efficacy in Albanian registered nurses. *Healthcare (Basel)*, 11(15), 2156. <https://doi.org/10.3390/healthcare11152156>
- Dumaguing, P. J. M. O., Dela Cruz, Z. D. S., Dufourt, E. J. A., Dumlao, M. H., Dy, E. A. B., Esguerra, S. E. R., Ferrer, M. D., & Figueroa, E. W. R. (2024). Impact of language barriers on nurse–patient communication and quality of care of nurses working in a hospital in Marikina City (Undergraduate thesis, Trinity University of Asia). *Trinity University of Asia – Health Sciences Library*. <https://www.herdin.ph/index.php?cid=89941&view=research>
- El Shiraey, N. E. (2021). Assessment of verbal communication skills of healthcare providers in selected clinical settings. *Middle East Nursing Journal*, 15(1), 1–11. https://mnj.journals.ekb.eg/article_213207_75997654b6f2d2d9c1210397a20ebc72.pdf
- Epp, S., Reekie, M., Denison, J., De Bosch Kemper, N., Willson, M., & Marck, P. (2021). Radical transformation: Embracing constructivism and pedagogy for an innovative nursing curriculum. *Journal of professional nursing: official journal of the American Association of Colleges of Nursing*, 37(5), 804–809. <https://doi.org/10.1016/j.profnurs.2021.06.007>
- Flodén, A., Lepp, M., Tilander, P., Svensson, A., & Nilsson, J. (2025). Nurses' Self-Reported Professional Competence: A Cross-Sectional Study at a Regional Teaching Hospital in Sweden. *Journal of clinical nursing*. <https://doi.org/10.1111/jocn.70057>
- Furber, L. (2024). Using active listening in practice. *Independent Nurse*, 2024(8), 19–20. <https://doi.org/10.12968/indn.2024.8.19>

- Gao, X., Yan, D., Zhang, Y., Ruan, X., Kang, T., Wang, R., Zheng, Q., Chen, S., & Zhai, J. (2024). Comparison of the impact of team-based learning and lecture-based learning on nursing students' core competencies: A systematic review and meta-analysis.. *Nurse education in practice*, 76, 103945 . <https://doi.org/10.1016/j.nepr.2024.103945>.
- Gastmans, C., Mertens, E., Palese, A., Keogh, B., Apolloni, F., Wiisak, J., ... Chiappinotto, S. (2025). Perspectives of nurses and patient representatives on the morally competent nurse: An international focus group study. *International Journal of Nursing Studies Advances*, 8. <https://doi.org/10.1016/j.ijnsa.2025.100296>
- Gilligan, C., Powell, M. B., Lynagh, M., Ward, B., Lonsdale, C., Harvey, P., ... Silverman, J. (2021). Interventions for improving medical students' interpersonal communication in medical consultations. *The Cochrane Database of Systematic Reviews*, 2, CD012418. <https://doi.org/10.1002/14651858.CD012418.pub2>
- Girma, M., Wuhib, M., Mekonnen, L., Tadesse, B., Seid, F., Ayenew, B., Zeleke, M., Yalew, Z., Yimer, N., Goshiye, D., Dires, A., Dagnaw, K., Gedamu, S., & Anbesaw, T. (2025). Holistic nursing care competence and associated factors among nurses working in government hospitals of South Wollo Zone, Northeast Ethiopia, 2022. *BMC Nursing*, 24. <https://doi.org/10.1186/s12912-025-02795-6>.
- Giske, T., & Cone, P. (2021). Comparing nurses' and patients' comfort level with spiritual assessment. *Religion*, 11, 671. <https://doi.org/10.3390/rel11120671>
- Go, E., Serad, J., Bacarisas, J., Amores, G., & Picardo, R. (2025). Clinical Competence on Patient Care Quality with Workplace Support as Mediator among Nurses. *International Journal of Research and Scientific Innovation*. <https://doi.org/10.51244/ijrsi.2025.12060030>.
- Grant, J., Jones, J., Candrian, C., Oman, K., & Reed, S. (2025). The role of nursing communication: A critical interpretive synthesis. *International Journal of Nursing Studies Advances*, 9. <https://doi.org/10.1016/j.ijnsa.2025.100373>
- Gustavell, T., Silén, C., Petersson, L., & Boman, L. (2025). How experienced nurses think and act in supporting patient learning: an interview study. *BMC Nursing*, 24. <https://doi.org/10.1186/s12912-025-03542-7>.
- Halabi, J., Nilsson, J., & Lepp, M. (2021). Professional competence among registered nurses working in hospitals in Saudi Arabia and their experiences of quality of nursing care and patient safety. *Journal of Transcultural Nursing*. <https://doi.org/10.1177/1043659621992845>
- Hargie, O. (2021). *Skilled interpersonal communication: Research, theory, and practice*.

- <https://doi.org/10.4324/9781003182269>
- Hassan, M. (2024, March 25). *Research method: Simple random sampling*.
<https://researchmethod.net/simple-random-sampling/>
- Healy, M., Richard, A., & Kidia, K. (2022). How to reduce stigma and bias in clinical communication: A narrative review. *Journal of General Internal Medicine*, 37, 2533–2540.
<https://doi.org/10.1007/s11606-022-07609-y>
- Hermansson, S., Norström, F., Hilli, Y., Vaag, J., & Bölenius, K. (2024). Job satisfaction, professional competence, and self-efficacy: a multicenter cross-sectional study among registered nurses in Sweden and Norway. *BMC Health Services Research*, 24.
<https://doi.org/10.1186/s12913-024-11177-8>.
- Herrmann, L., Elliott, L., Sucharew, H., Jerardi, K., Zackoff, M., Klein, M., & Real, F. (2023). Impact of a Remote Virtual Reality Curriculum Pilot on Clinician Conflict Communication Skills. *Hospital pediatrics*.
<https://doi.org/10.1542/hpeds.2022-006990>.
- Högländer, J., Holmström, I., Lövenmark, A., Van Dulmen, S., Eide, H., & Sundler, A. (2022). Registered nurse–patient communication research: An integrative review for future directions in nursing research. *Journal of Advanced Nursing*.
<https://doi.org/10.1111/jan.15548>
- Huaman, N., Morales-García, W., Castillo-Blanco, R., Saintila, J., Huancahuire-Vega, S., Morales-García, S., ... Palacios-Fonseca, A. (2023). An explanatory model of work-family conflict and resilience as predictors of job satisfaction in nurses: The mediating role of work engagement and communication skills. *Journal of Primary Care & Community Health*, 14.
<https://doi.org/10.1177/21501319231151380>
- Huang, Q., Pun, J., & Huang, S. (2022). Using a mixed-methods needs analysis to ensure the sustainability and success of English for nursing communication courses: Improving nurse–patient engagement practices in globalized health care. *Sustainability*, 14(21), 14077.
<https://doi.org/10.3390/su142114077>
- Hwang, E., Kim, M., & Lee, Y. (2024). Factors affecting the field adaptation of early-stage nurses in South Korea. *Healthcare*, 12.
<https://doi.org/10.3390/healthcare12141447>
- Hynnekleiv, I. I., Jensen, J. K., Giske, T., Lausund, H., Maeland, E., & Heggdal, K. (2023). Patients' and nurses' experiences of caring in nursing: An integrative literature review across clinical practices. *Journal of Clinical Nursing*.
<https://doi.org/10.1111/jocn.16964>
- Ivanišević, K., Hauser, G., & Bošković, S. (2025). The Role of Competence in Nursing: A Cross-Sectional Study Among Croatian Undergraduate and Graduate Students: Empirical Research

- Quantitative. *Nursing Open*, 12. <https://doi.org/10.1002/nop2.702> 85.
- Jilong, C., Tao, L., Zeng, L., & Zhang, Y. (2024). The impact of perceived work dirtiness on nursing students' professional commitment: The mediating role of career adaptability and the moderating role of social support – A cross-sectional study. *BMC Nursing*, 23, 304. <https://doi.org/10.1186/s12912-024-01963-4>
- Kämäräinen, P., Mikkola, L., Nurmeksela, A., & Kvist, T. (2025). Nurse leaders' interpersonal communication competence. *Nursing Research*, 74(5), 378–384. <https://doi.org/10.1097/NNR.0000000000000837>
- Kang, K., Lee, M., & Cho, H. (2021). Interpersonal skills mediate the relationship between communicative and clinical competencies among nursing students: A descriptive study. *Nurse Education Today*, 99, 104793. <https://doi.org/10.1016/j.nedt.2021.104793>
- Khaki, S., Fallahi-Khoshknab, M., Mohammadi-Shahboulaghi, F., Can, G., & Hosseini, M. (2024). The role of nurses in delivering bad news to the patient and family: An integrated review study. *International Journal of Cancer Management*, 17(1), e145579. <https://doi.org/10.5812/ijcm-145579>
- Kholiq, A., Purwoko, B., & Sartinah, E. (2020). Improving the interpersonal communication skill through classical guidance. <https://doi.org/10.2991/assehr.k.201201.026>
- Kim, J., & Kang, G.-Y. (2024). Factors influencing clinical reasoning competence in nursing students. *Edelweiss Applied Science and Technology*, 8(5), 1601–1607. <https://doi.org/10.55214/25768484.v8i5.1877>
- Kindie, L., Mitiku, H. Z., Muche, M., Wondimneh, B. Y., & Geletie, H. A. (2024). Nurses' communication to patients and associated factors at East Gojjam Zone, governmental hospitals, Amhara Region, Ethiopia, 2022: An institution-based cross-sectional study. *Nursing Research and Reviews*, 14, 137–148. <https://doi.org/10.2147/NRR.S409428>
- Konlan, K., Saah, J., Doat, A., Amoah, R., Abdulai, J., Mohammed, I., & Konlan, K. (2021). Influence of nurse-patient relationship on hospital attendance: A qualitative study of patients in the Kwahu Government Hospital, Ghana. *Heliyon*, 7. <https://doi.org/10.1016/j.heliyon.2021.e06319>
- Kwame, A., & Petrucka, P. (2021). A literature-based study of patient-centered care and communication in nurse-patient interactions: Barriers, facilitators, and the way forward. *BMC Nursing*, 20. <https://doi.org/10.1186/s12912-021-00684-2>
- Lase, I., Priadana, S., & Mulyaningrum, M. (2025). Influence of competence and motivation on performance and impact on

- reward among nurses. *Jurnal Medicoeticolegal dan Manajemen Rumah Sakit*, 14(2), 263–279.
<https://doi.org/10.18196/jmmr.v14i2.589>
- Lee, G., Barisone, M., Dendale, P., Jennings, C., Jones, H., Kindermans, H., ... Gibson, I. (2025). The importance of respectful language to enhance care: A statement of the Association of Cardiovascular Nurses & Allied Professions (ACNAP) of the ESC, the ESC patient forum and the ESC advocacy committee. *European Journal of Cardiovascular Nursing*, 24(3), 344–351.
<https://doi.org/10.1093/eurjcn/zvaf020>
- Lee, K., & Lee, M. (2021). The effect of new nurses' clinical competence on career adaptation. *bioRxiv*.
<https://doi.org/10.1101/2019.12.20.0884270>
- Lee, P. C., Yang, W., & Xu, S. (2021). Is career adaptability a double-edged sword? The impact of work social support and career adaptability on turnover intentions during the COVID-19 pandemic. *International Journal of Hospitality Management*, 94, 102875.
<https://doi.org/10.1016/j.ijhm.2021.102875>
- Lee, S., Choi, J., Lee, H., Sang, S., Lee, H., & Hong, H. (2021). Factors influencing nurses' willingness to speak up regarding patient safety in East Asia: A systematic review. *Risk Management and Healthcare Policy*, 14, 1053–1063.
<https://doi.org/10.2147/rmhp.s297349>
- Lee, T., Rosario, H., Cifuentes, E., Cui, J., Lin, E., Miller, V., & Lin, H. (2021). Review of interruptions in a pediatric subspecialty outpatient clinic. *PLoS ONE*, 16.
<https://doi.org/10.1371/journal.pone.0254528>
- Li, Y., Liu, Y., & Wen, J. (2024). Knowledge, attitude, and practice toward value-based care among Chinese nurse: a cross-sectional study. *BMC Nursing*, 23.
<https://doi.org/10.1186/s12912-024-02249-5>
- Lindig, A., Mielke, K., Frerichs, W., et al. (2024). Evaluation of a patient-centered communication skills training for nurses (KOMPAT): Study protocol of a randomized controlled trial. *BMC Nursing*, 23, 2.
<https://doi.org/10.1186/s12912-023-01660-8>
- Liu, L., Liu, M., Lv, Z., Mao, Y., & Liu, Y. (2024). Self-awareness and career adaptability of new nurses in the oncology hospital: a chain mediating model of creative self-efficacy and work readiness. *Current Psychology*.
<https://doi.org/10.1007/s12144-024-06540-1>
- Liu, M., Liu, L., Lv, Z., Mao, Y., & Liu, Y. (2024). Career adaptability among new oncology nurses: A longitudinal exploration. *International Nursing Review*.
<https://doi.org/10.1111/inr.12988>
- Lumactod, C., Ortigosa, C., Rabino, R. & Badie, J. Y. (2022). Caring for COVID-19 Positive Patients: The Case of Three Nurses in South Cotabato. *Psychology and*

- Education: A Multidisciplinary Journal*, 6(3), 1297-1309. <https://10.5281/zenodo.7447063>
- Ma, F., Liu, M., Liu, L., et al. (2025). Career adaptability and patient safety culture perceptions among newly graduated oncology nurses: A latent profile analysis. *BMC Nursing*, 24, 340. <https://doi.org/10.1186/s12912-025-03018-8>
- Mabunda, N., Masondo, I., & Beer, A. (2025). Nurses' understanding of quality documentation: A qualitative study in a Mental Health Institution. *Curationis*, 48. <https://doi.org/10.4102/curationis.v48i1.2737>
- Madayag, R. A. (2024). Nursing students lived experiences with using AIDET in patient communication: A qualitative study in the Philippines. *Belitung Nursing Journal*, 10(2), 135–143. <https://www.belitungraya.org/BRP/index.php/bnj/article/view/3258/956>
- Maggiori, C., Johnston, C., Krings, F., & Rossier, J. (2022). Adaptability. In *Saints of Feather and Fang*. <https://doi.org/10.5040/9781350103375.ch-008>
- Mahmoud, S. A., & Abou Ramadan, A. H. (2023). Nursing students' academic motivation and career adaptability: Mediating role of adversity quotient. *Menoufia Nursing Journal*, 8(3), 273–290. <https://doi.org/10.21608/menj.2023.329053>
- Malak, M., Ayed, A., Shehadeh, A., Ejheisheh, M., & Batran, A. (2025). The association between self-esteem, assertiveness, and professional competence among Palestinian newly graduated emergency and critical care nurses. *International Nursing Review*, 72(2), e70033. <https://doi.org/10.1111/inr.70033>
- Masibo, R.M., Kibusi, S.M. & Masika, G.M. Gender dynamics in nursing profession: impact on professional practice and development in Tanzania. *BMC Health Serv Res* 24, 1179 (2024). <https://doi.org/10.1186/s12913-024-11641-5>
- Mehralian, G., Yusefi, A. R., & Dastyar, N. (2023). Communication competence, self-efficacy, and spiritual intelligence: Evidence from nurses. *BMC Nursing*, 22, 99. <https://doi.org/10.1186/s12912-023-01262-4>
- Mehri, Z., Zarshenas, L., Rakhshan, M., Khademian, Z., Mehrabi, M., & Jamshidi, Z. (2025). Novice nurses' professional competence: A qualitative content analysis. *Journal of Education and Health Promotion*, 14. https://doi.org/10.4103/jehp.jehp_1819_23
- Meneses-La-Riva, M. E., Fernández-Bedoya, V. H., Suyó-Vega, J. A., Ocupa-Cabrera, H. G., Grijalva-Salazar, R. V., & Ocupa-Meneses, G. D. D. (2025). Enhancing healthcare efficiency: The relationship between effective communication and teamwork among nurses in Peru. *Nursing Reports*, 15(2), 59. <https://doi.org/10.3390/nursrep15020059>
- Mercan, N. (2023). Efficacy of a communication skills training for

- nursing students: A quasi-experimental study. *Journal of Psychiatric Nursing*. <https://doi.org/10.14744/phd.2023.02438>
- Messaoudi, I., & Sakale, S. (2024). Interpersonal skills: A gateway to emotional intelligence in the workplace. *International Journal of English Language Studies*, 6(2), 25–37. <https://doi.org/10.32996/ijels.2024.6.2.25>
- Miao, C., Liu, C., Zhou, Y., Zou, X., Song, L., Chung, J., ... Li, D. (2024). Nurses' perspectives on professional self-concept and its influencing factors: A qualitative study. *BMC Nursing*, 23. <https://doi.org/10.1186/s12912-024-01834-y>
- Middleton, R., Kinghorn, G., Patulny, R., Sheridan, L., Andersen, P., & McKenzie, J. (2022). Qualitatively exploring the attributes of adaptability and resilience amongst recently graduated nurses. *Nurse Education in Practice*, 63, 103406. <https://doi.org/10.1016/j.nepr.2022.103406>
- Moch, S., Hidayah, N., & Wahyuni, F. (2024). Behavioral approach through assertive training in improving interpersonal communication skills of students: A systematic literature review. *Indonesian Journal of Educational Counseling*. <https://doi.org/10.30653/001.202482.401>
- Mohamed, R. A., Alharbi, M. F. J., Aloufi, R., Abraham, N., Taref, N., Bauomy, E. S., Alkalash, S. H., Marzouk, M. M., & Almowafy, A. A. (2024). Perceived clinical competence and its related factors among registered nurses employed at selected outpatient clinics in Egypt. *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0314206>
- Mohammadi, S.Z., Mohammadi, B., & Moghimi Hanjani, S. (2024). Interpersonal communication skills of nursing students: A cross-sectional study during the COVID-19 pandemic. *Journal of Archives in Military Medicine*, 11(4), e143468. <https://doi.org/10.5812/jamm-143468>
- Mohammed, A., & Adea, M. (2022). Effect of nurses' interpersonal communication skills on quality of care in hospitals. *International Journal of Health Sciences*, 6(3), 7609. <https://doi.org/10.53730/ijhs.v6n3.7609>
- Moon, Y., & Lee, S. (2024). Experiences of Generation Z nurses adapting to work in a tertiary hospital: A grounded theory study. *Journal of Advanced Nursing*. <https://doi.org/10.1111/jan.16439>
- Mrayyan, M., Abunab, H., Khait, A., Rababa, M., Al-Rawashdeh, S., Algunmeeyn, A., & Saraya, A. (2023). Competency in nursing practice: a concept analysis. *BMJ Open*, 13. <https://doi.org/10.1136/bmjopen-2022-067352>
- Nabizadeh-Gharghozar, Z., Alavi, N., & Ajorpaz, N. (2021). Clinical competence in nursing: A hybrid concept analysis. *Nurse*

- Education Today*.
<https://doi.org/10.1016/j.nedt.2020.104728>
- Nachtergaele, S., De Roo, N., Allart, J., De Vriendt, P., Embo, M., & Cornelis, E. (2024). Exploring influencing factors to clinical leadership development: a qualitative study with healthcare professionals in Flemish nursing homes. *BMC Health Services Research*, 24. <https://doi.org/10.1186/s12913-024-11613-9>.
- Neal, J. (2021). Overview of workforce development in education. In *Research Anthology on Business and Technical Education in the Information Era*. <https://doi.org/10.4018/978-1-5225-4083-0.CH001>
- Noh, S., & Kang, Y. (2024). The relationships among communication competence, professional autonomy and clinical reasoning competence in oncology nurses. *Nursing Open*, 11(8), e70003. <https://doi.org/10.1002/nop.2.70003>
- Noviyanti, W. L., Ahsan, A., & Sudartya, T. S. (2021). Exploring the relationship between nurses' communication satisfaction and patient safety culture. *Journal of Public Health Research*, 10(2), 2225. <https://doi.org/10.4081/jphr.2021.2225>
- Ocampo, A., Restubog, S., Wang, L., Garcia, P., & Tang, R. (2022). Home and away: How career adaptability and cultural intelligence facilitate international migrant workers' adjustment. *Journal of Vocational Behavior*. <https://doi.org/10.1016/j.jvb.2022.103759>.
- Oviedo, A. D., Riquelme, L. L., & Hernandez, E. T. (2023). Novice nurses and factors that influence job adaptation after incorporation into the world of work. *Escola Anna Nery*. <https://doi.org/10.1590/2177-9465-ean-2022-0236en>
- Ozdemir, N., Demirel, M., Bakay, S., & Kaya, B. (2025). The effects of professional nursing values and intercultural sensitivities on patient-centred care competencies among senior student nurses: a cross-sectional study using structural equation modeling. *BMC Nursing*, 24. <https://doi.org/10.1186/s12912-025-03653-1>.
- Peter, E., Mohammed, S., & Variath, C. (2024). Compassionate nursing in challenging contexts: The importance of judgments. *Nursing Ethics*, 32, 738–751. <https://doi.org/10.1177/09697330241272892>
- Potomkin, V. (2024). Self-concept and educational success on career adaptability among nurses. *Management Issues in Healthcare System*, 2024(10), 25–36. <https://doi.org/10.32038/mihs.2024.10.03>
- Prendi, E., Stievano, A., Caruso, R., Duka, B., Spada, F., Rocco, G., & Notarnicola, I. (2022). Measuring professional competencies of registered nurses and nursing students: A cross-sectional comparative study. *Acta Bio*

- Medica: Atenei Parmensis*, 93(4), 13332.
<https://doi.org/10.23750/abm.v93i4.13332>
- Pullen, R. (2025). Developing nurse leaders through mentorship. *Nursing management*.
<https://doi.org/10.1097/nmg.000000000000230>.
- Purwanti. (2022). Hubungan reward dan punishment dengan disiplin kerja pada perawat RSUD Leuwiliang tahun 2021 [Relationship between reward and punishment with work discipline for nurses in hospital]. *Indonesian Scholar Journal of Medical and Health Science*, 1(6).
<https://doi.org/10.54402/isjmh.v1i06.137>
- Puscas, L., Kogan, J., & Holmboe, E. (2021). Assessing interpersonal and communication skills. *Journal of Graduate Medical Education*, 13(2 Suppl), 91–95.
<https://doi.org/10.4300/JGME-D-20-00883.1>
- Putra, K. R., Andayani, T., & Ningrum, E. H. (2021). Job satisfaction and caring behavior among nurses in a military hospital: A cross-sectional study. *Journal of Public Health Research*, 10(2).
<https://doi.org/10.4081/jphr.2021.2212>
- Qedair, J., Balubaid, R., Almadani, R., Ezzi, S., Qumosani, T., Zahid, R., & Alfayea, T. (2022). Prevalence and factors associated with burnout among nurses in Jeddah: A single-institution cross-sectional study. *BMC Nursing*, 21.
<https://doi.org/10.1186/s12912-022-01070-2>
- Rahbar Zeraati, A., Eskandari, N., & Fathnezhad-Kazemi, A. (2024). Association between personality traits and professional behavior with career adaptability in nursing and midwifery students. *BMC Nursing*, 23, 906.
<https://doi.org/10.1186/s12912-024-02595-4>
- Rodríguez-Pérez, M., Mena-Navarro, F., Domínguez-Pichardo, A., & Teresa-Morales, C. (2022). Current social perception of and value attached to nursing professionals' competences: An integrative review. *International Journal of Environmental Research and Public Health*, 19(3), 1817.
<https://doi.org/10.3390/ijerph19031817>
- Romem, A., Rozani, V. Gender-related differences in the scope of nursing practice: evidence from a cross-sectional study in geriatric healthcare settings. *BMC Nurs* 23, 852 (2024).
<https://doi.org/10.1186/s12912-024-02516-5>
- Roy, C. (1970). *Adaptation: A conceptual framework for nursing*. *Nursing Outlook*, 18(3), 42–45.
- Rudolph, C., Lavigne, K., Katz, I., & Zacher, H. (2021). Linking dimensions of career adaptability to adaptation results: A meta-analysis. *Journal of Vocational Behavior*, 102, 151–173.
<https://doi.org/10.1016/j.jvb.2021.06.003>
- Sa'd, R., & Malak, M. (2025). The effect of disaster management training program on emergency nurses' knowledge, skills, and personal preparedness in Palestine.

- International Nursing*, 80, 101601.
<https://doi.org/10.1016/j.ienj.2025.101601>
- Salahshouri, A., Fathi, S., Jiba, M., & Mohamadian, H. (2023). Psychometric of the interpersonal communication skills scale: A confirmatory factor analysis. *Qeios*.
<https://doi.org/10.32388/QZO140>
- Sevinc, S., & Ozdemir, S. (2024). Relationship between cultural intelligence and career and work adaptability in nursing students. *The Journal of the Pakistan Medical Association*, 74(3), 459–463.
<https://doi.org/10.47391/jpma.8365>
- Sharkiya, S. (2023). Quality communication can improve patient-centred health outcomes among older patients: A rapid review. *BMC Health Services Research*, 23.
<https://doi.org/10.1186/s12913-023-09869-8>
- Sousa, V., Driesnack, M., & Mendes, I. A. (2007). An overview of research designs relevant to nursing: Part 1: Quantitative research designs. *Artigo de Atualização*, 502–507.
- Sri Mujiyanti, R., Haryani, A., & Rahmawati, D. (2023). Interpersonal communication skills of nurse and patient satisfaction in outpatient unit. *KnE Social Sciences*, 8(14), 13840.
<https://doi.org/10.18502/kss.v8i14.13840>
- Subathra, A., Sasmal, P., Kumar, P., Mishra, T., Shetty, A., Misra, S., Sahoo, M., & Patro, B. (2025). High-end Workshop Training on Perioperative Surgical Competencies among the Nurses Working in Operation Theatres (HEWON) at Selected Centres: A Participatory Action Research. *Nursing Journal of India*.
<https://doi.org/10.48029/nji.2025.cxvi309>.
- Sun, C., Ge, J., Xiang, Y., Li, J., & Zhang, Y. (2023). Association between career adaptability and turnover intention among nursing assistants in nursing homes: The mediating role of psychological capital. *BMC Nursing*, 22, 293.
<https://doi.org/10.1186/s12912-023-01187-y>
- Sun, C., Xing, Y., Wen, Y., Wan, X., Ding, Y., Cui, Y., ... Yuan, M. (2023). Association between career adaptability and turnover intention among nursing assistants: The mediating role of psychological capital. *BMC Nursing*, 22.
<https://doi.org/10.1186/s12912-023-01187-y>
- Tholia, S. N., Rastogi, M., Gupta, S., & Pandey, D. (2022). Role of interpersonal communication in workplace. *World Journal of English Language*, 12(3), 64–72.
<https://doi.org/10.5430/wjel.v12n3p64>
- Tsapnidou, E., Katharakis, G., Kelesi-Stavropoulou, M., Rovithis, M., Koukouli, S., Sigala, E., Moudatsou, M., Papageorgiou, D., & Stavropoulou, A. (2025). Fostering Organizational and Professional Commitment Through Transformational Leadership in Nursing: A

- Systematic Review. Hospitals. <https://doi.org/10.3390/hospitals2020010>.
- van de Mortel, T. F., Nilsson, J., & Lepp, M. (2021). Validating the nurse professional competence scale with Australian baccalaureate nursing students. *Collegian*. <https://doi.org/10.1016/j.colegn.2020.06.010>
- Vives, M., Lorenzo, J., & González, B. (2023). Pedagogical training in nursing, professional competencies and modes of action in community care. SCT Proceedings in Interdisciplinary Insights and Innovations. <https://doi.org/10.56294/piii202336>.
- Wanas, A., & Hamed, H. (2024). Newly graduated nurses' career adaptability and its relation to professional competence and professional development in intensive care: A comparative study. *Assiut Scientific Nursing Journal*. <https://doi.org/10.21608/asnj.2024.323140.1917>
- Warsame, R., & D'Souza, A. (2019). Patient-reported outcomes have arrived: A practical overview for clinicians in using patient-reported outcomes in oncology. *Mayo Clinic Proceedings*. <https://doi.org/10.1016/j.mayocp.2019.04.005>
- Winarti, T. D., Trigantara, R., & Fatmawati, D. N. (2024). Nurses' therapeutic communication and its correlation with family anxiety in the intensive care unit setting. *Journal of Palembang Nursing Studies*, 3(3), 127–133. <https://jpns-journal.com/index.php/jpns/article/download/135/61>
- Wit, R., De Veer, A., Batenburg, R., & Francke, A. (2023). International comparison of professional competency frameworks for nurses: a document analysis. *BMC Nursing*, 22. <https://doi.org/10.1186/s12912-023-01514-3>.
- Wu, P.-L., Liu, N.-Y., Chung, C.-H., Lu, W.-J., Tseng, S. M., & Cheng, H.-H. (2025). The correlation and impact of nursing students' communication ability on nursing competence. *Teaching and Learning in Nursing*, 20(4), e1106–e1112. <https://doi.org/10.1016/j.teln.2025.05.023>
- Wu, Y., Ahorsu, D., Chen, J., Lee, C., Lin, C., & Griffiths, M. (2022). Resilience among nurses: The role of demographic factors, mindfulness, and perceived stress. *Journal of Nursing Management*. <https://doi.org/10.1111/jonm.13715>
- Wu, Y., Larrabee, J. H., & Putman, H. (2006). Caring behaviors inventory. *Nursing Research*, 55(1), 18–25. https://math.wvu.edu/~ywu/Paper_pdf/Ying%20-%202006%20NR%20CBI-24.pdf
- Xiang, Y., Li, L., Yang, Q., Fang, Y., Xu, W., Ding, X., & Yang, Q. (2024). Career adaptability and correlating factors among secondary vocational nursing students in China. *Frontiers in Public Health*, 12, 1377323. <https://doi.org/10.3389/fpubh.2024.1377323>

- Xiang, Y., Zhang, Y., Li, J., Zhang, X., & Sun, C. (2024). Career adaptability and correlating factors among secondary vocational nursing students in China. *Frontiers in Public Health*, 12, 1377323. <https://doi.org/10.3389/fpubh.2024.1377323>
- Yang, Z., Huang, H., & Li, G. (2024). Status and influencing factors of work stress among nurse managers in western China: A cross-sectional survey study. *BMC Nursing*, 23, 68. <https://doi.org/10.1186/s12912-024-01731-4>
- Yoong, S. Q., Wang, W., Chao, F. F. T., Dong, Y., Goh, S. H., Chan, Y. S., Lim, S., Seah, A. C. W., Wu, X. V., & Zhang, H. (2023). Using peer feedback to enhance nursing students' reflective abilities, clinical competencies, and sense of empowerment: A mixed-methods study. *Nurse Education in Practice*, 69, 103623. <https://doi.org/10.1016/j.nepr.2023.103623>
- Younas, A., Inayat, S., Dal Molin, A., & Durante, A. (2023). Nurses' challenges to developing interpersonal relationships during integrated care for complex patients. *Western Journal of Nursing Research*, 45(10), 894–901. <https://doi.org/10.1177/01939459231189789>
- Yue, M., Yao, C., Zhang, Q., et al. (2025). Nurses' attitudes towards communication with patients: A hybrid concept analysis. *BMC Medical Education*, 25, 1377. <https://doi.org/10.1186/s12909-025-07914-0>
- Zaitoun, R. (2024). Assessing nurses' professional competency: A cross-sectional study in Palestine. *BMC Nursing*, 23. <https://doi.org/10.1186/s12912-024-02064-y>
- Zaitoun, R., Said, N., & De Tantillo, L. (2023). Clinical nurse competence and its effect on patient safety culture: A systematic review. *BMC Nursing*, 22. <https://doi.org/10.1186/s12912-023-01305-w>
- Zarrinkolah, E., Ghafourifard, M., & Dehghannezhad, J. (2025). The relationship between compassion competence, caring behaviours, and professional commitment among nursing students: A cross-sectional study. *BMC Medical Education*, 25. <https://doi.org/10.1186/s12909-025-07253-0>
- Zetterström, L., Linde, M., Blomqvist, M., & Jormfeldt, H. (2023). Anxiety Communication Notes—A tool to facilitate anxiety management and improve the nurse–patient relationship in mental health nursing. *Issues in Mental Health Nursing*, 44(9), 900–910. <https://doi.org/10.1080/01612840.2023.2251058>
- Zhang, H., Jiang, J., Zhong, M., Yu, C., Pang, Q.-Y., Mao, Y.-L., & Duan, X. (2022). Career adaptability of newly graduated nurses at an obstetrics and gynecology hospital in China: A qualitative study. *Journal of Nursing Management*.

- <https://doi.org/10.1111/jonm.13661>
- Zhang, N., Liu, X., Li, J., et al. (2023). The spillover effect of after-hours electronic communication on nurses' cyberloafing: The mediating role of psychological contract breach. *BMC Nursing*, 22, 335. <https://doi.org/10.1186/s12912-023-01525-0>
- Zhao, C., Yu, G., Cai, Y., Zheng, P., Xu, H., Li, F., Zhang, G., & Zhang, J. (2024). The relationships among career adaptability, career commitment, career identity, and career well-being in Chinese nursing undergraduates: A longitudinal study. *Heliyon*, 10(15), e35152. <https://doi.org/10.1016/j.heliyon.2024.e35152>
- Zhou, H., & Zheng, Q. (2022). Work stressors and occupational health of young employees: The moderating role of work adaptability. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.796710>