



The effect of nurses' perception of the gap between knowledge and practice on productive work performance

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Abstract

This study examines the impact of nurses' beliefs of the disparity between knowledge and practice on their work performance efficacy. Nursing professionals have a key role in providing care across various healthcare settings, making it essential for them to maintain a balance between theoretical understanding and practical application. A continuous disparity between nursing knowledge and practice impedes their capacity to provide optimal care. This descriptive correlational study sought to evaluate nurses' perceptions of this gap and its effects on their individual work performance, task performance, contextual performance, and counterproductive behaviors. Data were gathered from 120 nursing educators at Imam Abdulrahman Alfaisal Hospital utilizing standardized questionnaires. The results revealed that a substantial proportion of nurses experience instances where their knowledge is insufficient for practice, with a noteworthy gap between training and practical needs. Workload constraints and insufficient resources were recognized as obstacles to closing this gap. Notwithstanding these limitations, numerous respondents reported that their company offered help via ongoing professional development and knowledge dissemination initiatives. The study identified a positive association among improved knowledge and practice,

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task performance, and individual work performance. Nevertheless, unproductive behaviors, including mistakes attributed to exhaustion or procrastination, were documented. The results highlight the necessity of bridging the knowledge-practice gap to enhance nurse efficacy and patient care results. Recommendations encompass enhancing resource accessibility, delivering specialized practical training, and cultivating a learning environment that facilitates the application of knowledge in practice. Improving nurses' capacity to apply knowledge in practice would likely result in enhanced work performance and superior healthcare delivery.

Keywords Knowledge Practice Gap, Learning, Nurse, Nursing Knowledge, Nursing Practice, Scale Measurement

Introduction

Nursing is defined as the provision of help to patients across various medical environments. Nurses instruct patients on enhancing their health and preventing illness (Speros et al., 2011). A nurse must remain informed on the latest advancements in the field to maintain an effective equilibrium between knowledge and practice. This research examines the disparity between nursing knowledge and practice, proposing solutions based on a survey of the existing literature (Stalpers et al., 2015). The term "education" denotes the process of transmitting information, encompassing facts, principles, and standards of behavior. The primary objective of education is to enhance the quality of care delivered to the public by reconciling the disparity between knowledge and practice (Risjord, 2011). This research focuses on the disparity between nursing knowledge and practice. All nurses can be positioned along a continuum, with knowledge and practical expertise at opposite extremes; the majority will be in the intermediate range.

Effective care planning, conversations regarding pathophysiology and treatment rationale, and related duties are significantly enhanced by nurses with robust knowledge, as demonstrated in the literature (Ackley & Ladwig, 2010). Nursing is distinctive in its reliance on information to inform and enhance practice, so ensuring that patients receive optimal care and maximum safety (Vaismoradi et al., 2011). The knowledge-practice divide is particularly significant in the nursing profession. Patients exhibit greater happiness and satisfaction following care that is based on evidence (Jacobs, 2016).

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The knowledge-practice gap is characterized as the "discrepancy between research and practice" (Roshan Essani & Ali, 2011). The nursing profession is undoubtedly confronting significant challenges due to the expanding gap between knowledge and practice. The knowledge-practice gap hinders healthcare practitioners from addressing patients' changing needs. Nonetheless, bridging the gap necessitates the initial identification of its sources. By enhancing knowledge of the issue, we can assist nurses in improving their research literacy and practicing more consistently in alignment with the best available evidence (Brown, 2014).

Eliminating knowledge and practice deficiencies can enhance nursing performance. The dimensions of the gap between knowledge and practice are knowledge, practice, environment, and learning. Knowledge constitutes a collection of statements or principles formulated to elucidate a body of data or facts, especially those that have endured throughout time or are widely accepted, and can be employed to forecast the behavior of natural events. The definition of practice is the act or process of performing an activity. Despite initial appearances of competition between these notions, they must be harmonized to enable the application of knowledge in a professional setting (Stalpers et al., 2015).

An effective and constructive workplace is one where employees can freely articulate their thoughts. The characteristics of a healthy workplace include growth, emotional and physical well-being, and security. A firm that esteems its people and treats them with dignity is more likely to cultivate a pleasant work environment (Lowe, 2010). Learning is defined as behavioral and physiological adaptations to a specific environment; numerous research have shown that fostering a learning environment is essential in the nursing profession (Cusack et al., 2016). Eliminating knowledge and practice deficiencies can enhance nursing performance.

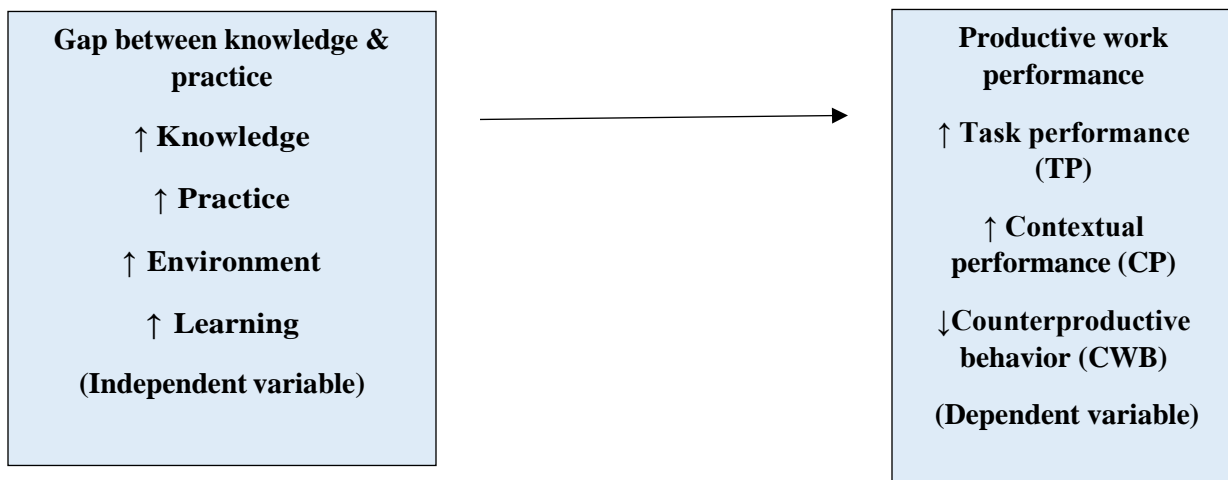
An individual's work performance (IWP), defined as "behaviours or actions pertinent to the organization's objectives", is a significant result examined and utilized across several domains. The traditional emphasis of the IWP construct in work and organizational psychology has been on task performance, defined as the proficiency with which an individual executes the fundamental substantive or technical responsibilities central to their role. Task performance (TP), contextual performance (CP), and counterproductive workplace behavior (CWB) are now widely recognized as components of the IWP domain.

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Task performance (TP) refers to behaviors that are directly linked to the technical core, processes, maintenance, and services. Consequently, TP is contingent upon tasks and roles, predominantly forecasted by capacity, integrated within role behavior, and incorporated in the formal job description. To achieve essential activities, individuals frequently rely on contextual performance (CP). CPs are not directly associated with job responsibilities; however, they significantly influence the organizational, social, and psychological contexts in which employees function. The phrase "counterproductive work behaviour" (CWB) denotes activities by employees that adversely affect the overall effectiveness of the organization (Koopmans et al., 2014).

The validity and reliability of research instruments are considered essential attributes of these tools (Souza et al., 2017). In social science research, the quality of a scale is generally assessed through validity and reliability. Heale and Twycross (2015) asserted that verifying an instrument's validity and reliability enhances the quality of research. The term "validity" denotes the efficacy of a specific measuring instrument or scale in yielding the intended outcomes. The degree to which a measuring instrument yields precise outcomes for the variables it was intended to monitor. Validity can be categorized into four fundamental types: content validity, construct validity, criterion validity, and face validity. The reliability of a measurement is described as its ability to yield consistent results upon repeated assessments, whether conducted by the same observer or by various observers. The four pillars of reliability are consistency, stability, equivalence, and homogeneity (Koopmans et al., 2014).

Conceptual framework



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Figure (1). Proposed Conceptual Framework.

Significant of the study

Enhancing knowledge, practice, a healthy atmosphere, and effective learning will result in a reduction of counterproductive behavior.

Aim of this study

The objective of the study is to do a psychometric assessment of nurses' perceptions on the knowledge-practice gap.

Research hypothesis:

- Hypothesis 1 (H1): A positive correlation exists among knowledge, practice, a healthy atmosphere, effective learning, and individual work performance.
- Hypothesis 2 (H2): A positive correlation exists between task performance and individual work performance.
- Hypothesis 3 (H3): A positive correlation exists between contextual performance and individual work performance.
- Hypothesis 4 (H4): A correlation exists between counterproductive work behavior and individual work performance.
- Hypothesis 5 (H5): The influence of task performance and contextual performance on individual work performance will be augmented by enhanced knowledge, practice, a healthy environment, and effective learning.
- Hypothesis 6 (H6): The influence of counterproductive work behavior on individual performance will diminish with the enhancement of knowledge, practice, a healthy atmosphere, and effective learning.

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Methodology

Research Design: A descriptive correlational research design was employed to accomplish the aim of the study.

Settings: The study was conducted in the Imam Abdulrahman Alfaisal Hospital.

Subjects: All nursing educators (N = 120) who were working at the Imam Abdulrahman Alfaisal Hospital, were included in the study.

Tools:

Two standardized questionnaires were used in this empirical study:

1. **Gap Between Knowledge & Practice:** This tool was developed by Polit and Beck (2017) and comprised two sections. The first section collected basic demographic information about the respondents, such as gender, age range, education level, occupation, and whether they had attended a research workshop. The second section focused on assessing how the knowledge gap affected their work, divided into three categories: nurse, environment, and organization. A 5-point Likert scale was used, and the items were reviewed by a panel of experts for relevance and clarity, achieving an item-level content validity index (ICVI) of 0.89.
2. **Productive Work Performance:** This tool was developed by Koopmans et al. (2014) and used the Individual Work Performance Questionnaire v.1.0 (IWPQ) to assess nursing productivity across three dimensions: task performance, contextual performance, and counterproductive work behavior. Convergent validity was tested using presenteeism questions from the HPQ, and the tool was found to be reliable and valid for measuring work performance.

Method:

Approval for conducting the study was obtained from the Ethical Research Committee of the Imam Abdulrahman Alfaisal Hospital. Permission for conducting the study was granted by the manager of the Imam Abdulrahman Alfaisal Hospital. The study tools were translated into Arabic, and a back-to-back translation process was conducted. The study tools were tested for face and content

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validity by five experts in the field, and necessary modifications were made based on their feedback. Reliability of the study tools was examined using appropriate statistical tests to ensure consistency of the items. A pilot study was conducted on 10% of the nurses ($n = 12$) who were not included in the final sample to ensure clarity, applicability, and feasibility of the tools and to identify any obstacles during data collection. Modifications were made accordingly. Data collection was carried out through self-administered questionnaires, which were hand-delivered to participants, who were asked to return them to the researcher in the study setting. After data collection, statistical tests were used to assess the relationship between leadership and nurse competitiveness

Ethical Considerations:

Written informed consent was obtained from all study participants after explaining the aim of the study. Confidentiality of data and anonymity of participants were maintained throughout the research. Participation was voluntary, and subjects had the right to withdraw from the study at any time.

Statistical design:

Data were verified prior to entry into the computer. The Statistical Package for Social Sciences SPSS version (22.0) was used for that purpose, followed by data analysis and tabulation. Descriptive statistics were applied quantitative data (frequency and percentages). Chi-square test (χ^2) was utilized to compare percentage between studied variables. Paired t test was used to compare mean scores between pre, post program and follow up phases. Pearson correlation(r) test was used for association between total scores. A significant level value was considered when $p \leq 0.05$ and a highly significant level value were considered when $p \leq 0.00$. The standard deviation: as a measure of dispersion of results around the mean (for quantitative variable).

Results

The table provides a breakdown of demographic characteristics of the 120 survey respondents. It shows the distribution across gender, age groups, education levels, and attendance at a research workshop. The majority of respondents are male (58.3%) and fall within the 31-40 age group

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(41.7%). Half of the respondents hold a Bachelor's degree (50.0%), and a significant majority (66.7%) have attended a research workshop. This data highlights a diverse sample with varied educational backgrounds and experiences in research settings.

Table 1: Demographic data summary of survey respondents

Category	Option	Number of Responses	Percentage
Gender	Male	70	58.30%
	Female	50	41.70%
Age	20-30	40	33.30%
	31-40	50	41.70%
	41-50	20	16.70%
	Over 50	10	8.30%
Education Level	Diploma	30	25.00%
	Bachelor	60	50.00%
	Master	25	20.80%
	Doctorate	5	4.20%
Attended Research Workshop	Yes	80	66.70%
	No	40	33.30%

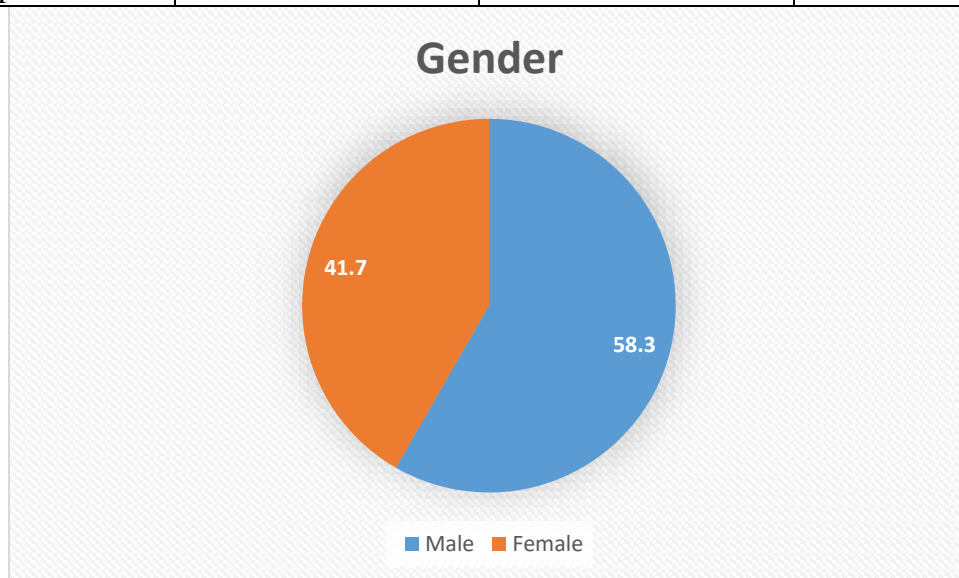


Figure 1: Gender distribution of respondents

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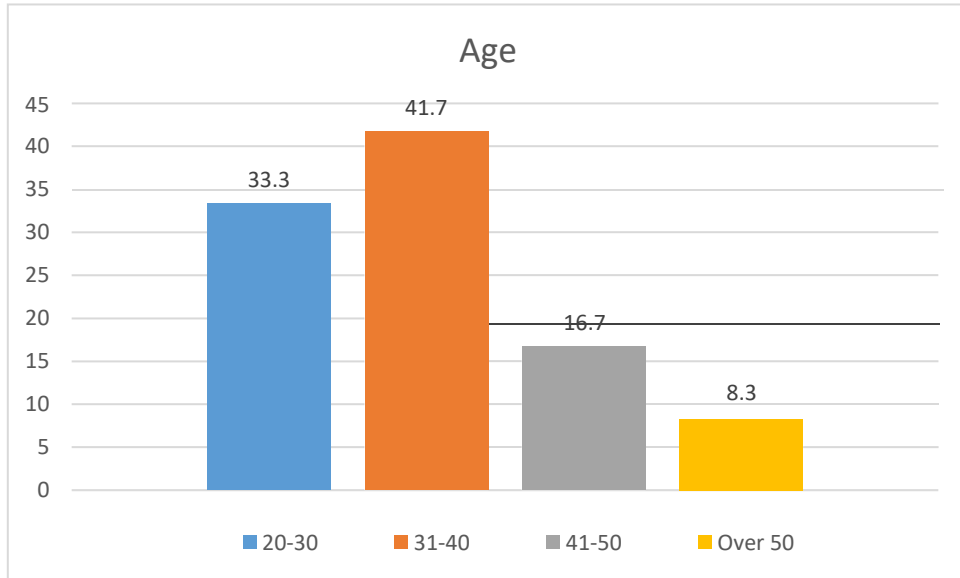


Figure 2: Age distribution of respondents

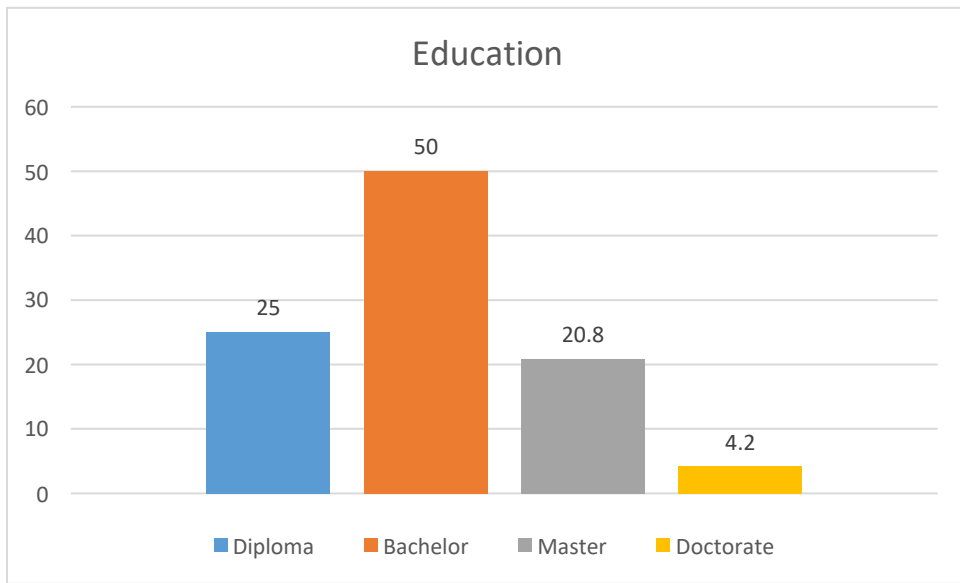


Figure 3: Education level of respondents

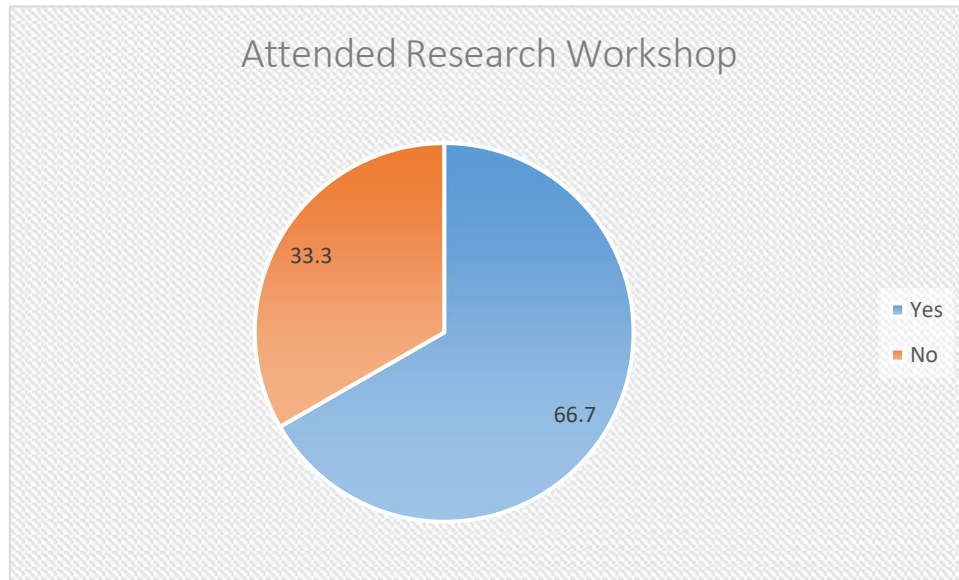


Figure 4: Attendance at research workshops

The data underscores many facets of the knowledge-practice gap encountered in the workplace. A considerable proportion of respondents (41.7%) experience instances where their knowledge is inadequate for practice, whilst 37.5% recognize inconsistencies between training and practical requirements. Notwithstanding these hurdles, a majority see help from their employer in bridging this gap (49.9%), with continuous training targeting knowledge deficiencies (50%). Access to resources and workload pressures are identified as significant hurdles, with 29.2% reporting that low resources hinder their capacity to apply knowledge, while workload impedes practice alignment (29.2%). Notably, 41.7% perceive that organizational regulations facilitate the implementation of best practices, and an equivalent percentage (41.7%) report being motivated by colleagues and superiors to utilize new knowledge. Knowledge translation is advocated (37.5%), and continual improvement through reflection and pertinent research workshops is esteemed; yet, chances for practice enhancement remain.

The data on productive work performance reflects positive trends in various aspects of task management and teamwork. A majority of respondents (45.8%) effectively manage unexpected challenges, and 41.7% engage in continuous professional development, indicating a commitment to self-improvement. Many respondents also assist co-workers (37.5%) and maintain high work quality under pressure (37.5%). However, challenges like errors due to fatigue or lack of focus are acknowledged by 29.2%, and 25% report engaging in non-productive behaviors such as procrastination. Nevertheless, 41.7% consistently meet professional goals, and 41.7% take the

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initiative to suggest workplace improvements. Overall, the results suggest a generally strong work ethic, with room for improvement in managing errors and non-productive behaviors.

Table 2: Responses on the knowledge-practice gap, productive work performance and workplace support

Question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	p-value
Knowledge-Practice Gap						
1. I encounter situations where my knowledge is not sufficient for practice.	10 (8.3%)	15 (12.5%)	25 (20.8%)	50 (41.7%)	20 (16.7%)	0.03
2. I feel supported by my workplace in closing the knowledge-practice gap.	5 (4.2%)	20 (16.7%)	35 (29.2%)	40 (33.3%)	20 (16.7%)	0.015
3. I often learn on the job to fill knowledge gaps.	8 (6.7%)	12 (10.0%)	30 (25.0%)	50 (41.7%)	20 (16.7%)	0.02
4. The ongoing training provided by my organization addresses my knowledge gaps.	15 (12.5%)	20 (16.7%)	25 (20.8%)	40 (33.3%)	20 (16.7%)	0.05
5. Limited access to resources affects my ability to apply knowledge in practice.	12 (10.0%)	22 (18.3%)	30 (25.0%)	35 (29.2%)	21 (17.5%)	0.2
6. The workplace environment encourages knowledge sharing among staff.	12 (10.0%)	18 (15.0%)	30 (25.0%)	40 (33.3%)	20 (16.7%)	0.04
7. There are discrepancies	10 (8.3%)	22 (18.3%)	25 (20.8%)	45 (37.5%)	18 (15.0%)	0.03

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between the training provided and actual practice needs.						
8. Organizational policies support the application of best practices.	8 (6.7%)	12 (10.0%)	35 (29.2%)	50 (41.7%)	15 (12.5%)	0.01
9. Knowledge translation (the ability to apply knowledge) is promoted in my workplace.	15 (12.5%)	18 (15.0%)	25 (20.8%)	45 (37.5%)	17 (14.2%)	0.05
10. Workload pressures prevent me from practicing according to the knowledge I possess.	20 (16.7%)	25 (20.8%)	30 (25.0%)	35 (29.2%)	10 (8.3%)	0.018
11. I am provided opportunities to reflect on and improve my practice.	7 (5.8%)	15 (12.5%)	40 (33.3%)	38 (31.7%)	20 (16.7%)	0.03
12. The research workshops are relevant to my day-to-day work.	9 (7.5%)	12 (10.0%)	35 (29.2%)	45 (37.5%)	19 (15.8%)	0.02
13. My peers and superiors encourage me to apply new knowledge.	6 (5.0%)	14 (11.7%)	30 (25.0%)	50 (41.7%)	20 (16.7%)	0.05
14. My work involves tasks	10 (8.3%)	13 (10.8%)	25 (20.8%)	40 (33.3%)	22 (18.3%)	0.04

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that require knowledge beyond my current training.						
15. Knowledge gaps impact my ability to deliver high-quality patient care.	11 (9.2%)	19 (15.8%)	29 (24.2%)	35 (29.2%)	16 (13.3%)	0.03
Productive Work Performance						
1. I complete all assigned tasks within the expected timeframe.	7 (5.8%)	18 (15.0%)	35 (29.2%)	45 (37.5%)	15 (12.5%)	0.01
2. I stay organized and manage multiple tasks effectively.	10 (8.3%)	20 (16.7%)	30 (25.0%)	40 (33.3%)	20 (16.7%)	0.1
3. I go beyond my regular duties to help co-workers.	5 (4.2%)	15 (12.5%)	25 (20.8%)	55 (45.8%)	20 (16.7%)	0.03
4. I actively seek feedback to improve my task performance.	8 (6.7%)	12 (10.0%)	35 (29.2%)	50 (41.7%)	15 (12.5%)	0.25
5. I effectively manage unexpected challenges in my work.	6 (5.0%)	12 (10.0%)	30 (25.0%)	55 (45.8%)	17 (14.2%)	0.04
6. I assist others in completing their tasks when needed.	10 (8.3%)	20 (16.7%)	25 (20.8%)	45 (37.5%)	20 (16.7%)	0.05
7. I engage in continuous	9 (7.5%)	15 (12.5%)	35 (29.2%)	50 (41.7%)	11 (9.2%)	0.02

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professional development.						
8. I handle work-related stress without it affecting my performance.	8 (6.7%)	14 (11.7%)	30 (25.0%)	50 (41.7%)	18 (15.0%)	0.03
9. I engage in activities that improve team cohesion.	7 (5.8%)	12 (10.0%)	35 (29.2%)	48 (40.0%)	18 (15.0%)	0.01
10. The quality of my work is high even when under pressure.	10 (8.3%)	18 (15.0%)	30 (25.0%)	45 (37.5%)	17 (14.2%)	0.05
11. I take responsibility for mistakes made at work.	9 (7.5%)	11 (9.2%)	32 (26.7%)	45 (37.5%)	23 (19.2%)	0.02
12. I encounter errors due to lack of focus or fatigue.	15 (12.5%)	25 (20.8%)	30 (25.0%)	35 (29.2%)	15 (12.5%)	0.04
13. I engage in non-productive behaviors such as wasting time or procrastination.	20 (16.7%)	18 (15.0%)	35 (29.2%)	30 (25.0%)	17 (14.2%)	0.09
14. I consistently meet my professional goals.	8 (6.7%)	14 (11.7%)	30 (25.0%)	50 (41.7%)	18 (15.0%)	0.05
15. I take the initiative to suggest improvements in my work environment.	9 (7.5%)	13 (10.8%)	28 (23.3%)	50 (41.7%)	20 (16.7%)	0.04

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The table presents the correlation coefficients (r) and p-values between four independent variables (knowledge, practice, environment, and learning) and three performance dimensions: task performance, contextual performance, and counterproductive behavior. Knowledge and practice show significant positive correlations with both task and contextual performance, with the highest correlations observed for practice in task performance ($r = 0.989$, $p = 0.010$) and for knowledge in contextual performance ($r = 0.978$, $p = 0.030$). However, the correlation between practice and counterproductive behavior is weak ($r = 0.09$, $p = 0.048$). Meanwhile, environment shows low correlations with task and contextual performance but a moderate negative correlation with counterproductive behavior ($r = 0.534$, $p = 0.031$). Lastly, learning has a moderate positive correlation with both task and contextual performance, but its correlation with counterproductive behavior is relatively low ($r = 0.253$, $p = 0.01$). All correlations are statistically significant at various levels.

Table 3: Correlation between independent variables and various performance dimensions

Independent Variable		Task Performance	Contextual Performance	Counterproductive Behavior
Knowledge	r	0.910	0.978	0.797
	P value	0.015	0.03	0.023
Practice	r	0.989	0.978	0.09
	P value	0.010	0.021	0.048
Environment	r	0.097	0.08	0.534
	P value	0.005	0.007	0.031
Learning	r	0.600	0.612	0.253
	P value	0.012	0.011	0.01

Discussion

The data on work performance indicates predominantly favorable trends, with participants demonstrating effective task management, collaboration, and resilience in overcoming problems. Numerous individuals participate in ongoing professional development, support colleagues, and uphold superior work standards despite pressure. Nonetheless, there exist opportunities for enhancement, including the mitigation of errors attributable to weariness or diminished concentration, as well as the reduction of unproductive habits such as procrastination. Notwithstanding these hurdles, responders frequently achieve their professional objectives and proactively propose enhancements in the workplace, exemplifying a robust work ethic.

Stalpers et al. (2015) investigated nurses' perspectives regarding the knowledge-practice gap and discovered that numerous nurses encountered difficulties in applying knowledge to practice. This aligns with our findings, as a considerable proportion of respondents reported encountering

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circumstances where their knowledge is inadequate for practice. Both studies emphasize the necessity of closing this gap by organizational assistance and training.

Cheraghi et al. (2010) examined ambiguity in information transmission and its influence on practice, paralleling our findings where participants indicated difficulties in implementing knowledge due to insufficient clarity and resources. Both studies underscore the necessity for improved knowledge translation systems inside the workplace.

Dall'Ora et al. (2016) investigation into nursing students' perceptions of the theory-practice gap corroborates our findings, as both studies indicate that continuous education and practical training frequently do not align with workplace reality. Participants in both research emphasized the necessity for enhanced practical, experiential training to address this disparity.

Kaddoura et al. (2010) discovered that seminars focused on collaborative knowledge enhanced nurses' performance. Our respondents similarly reported that workplace support and training mitigate the knowledge-practice gap, corroborating the notion that focused educational interventions might improve work performance.

Van Bogaert et al. (2014) examined the influence of cooperation on job performance, concluding that a favorable teaming atmosphere enhances productivity. Our research corroborates these outcomes, as numerous respondents indicated that aiding colleagues and fostering teamwork favorably impacted their performance, particularly in addressing unforeseen obstacles.

Abou Hashish (2017) concluded that organizational support is essential for improving work performance in their study on talent management techniques in nursing. This aligns with our findings, indicating that respondents who perceived support from their job were more inclined to handle duties efficiently and pursue ongoing professional growth.

Akhu-Zaheya et al. (2015) identified obstacles and remedies pertaining to the theory-practice gap in nursing services. Our findings align with this study, as participants identified obstacles such as constrained resources and workload demands, while simultaneously emphasizing organizational policies that facilitate knowledge application as a remedy.

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Aluko et al. (2016) investigated the disparity between nursing education and clinical practice, highlighting the necessity for improved alignment. Likewise, our respondents noted that the training offered by their business frequently fails to adequately fulfill their practical requirements, indicating that enhanced practical training could bridge these deficiencies.

Atrous and Hassan (2017) assessed the disparity between knowledge and practice in endotracheal suctioning, which is pertinent to our conclusions regarding the necessity of bridging knowledge gaps to guarantee superior patient care. Both research underscore the influence of the knowledge gap on clinical practice and patient outcomes.

Germain, & Cummings (2010) made investigation on nurses' knowledge and performance in diagnostic applications revealed that continuous training is essential for closing knowledge gaps. This corresponds with our findings, which highlighted continuing professional development as a crucial element in enhancing task performance.

Keyko et al. (2016) emphasize the significance of information dissemination and communication in teamwork within critical care nursing. Our research also demonstrated that a workplace climate fostering information sharing markedly enhances work performance and bridges the knowledge-practice divide.

Conclusion

This study's findings underscore critical elements of the knowledge-practice gap and effective work performance among healthcare professionals. Participants exhibited proficiency in task management, collaboration, and adaptability; nevertheless, they encountered difficulties in applying information practically, mostly due to resource constraints, misalignments between training and practical requirements, and workload pressures. The research highlights the significance of ongoing professional growth, institutional support, and cultivating a workplace conducive to information exchange and practical implementation. The findings corroborate prior research, underscoring the necessity for targeted interventions, including practical training programs, resource allocation, and policies that connect theoretical understanding with practical application to enhance overall performance and patient care outcomes. Rectifying these deficiencies can result in improved job satisfaction, fewer errors, and superior quality of care delivery.

References

- Abou Hashish, E. A. (2017). Relationship between ethical work climate and nurses' perception of organizational support, commitment, job satisfaction and turnover intent. *Nursing ethics*, 24(2), 151-166.
- Ackley, B. J., & Ladwig, G. B. (2010). *Nursing diagnosis handbook-e-book: An evidence-based guide to planning care*. Elsevier Health Sciences.
- Akhu-Zaheya, L. M., Shaban, I. A., & Khater, W. A. (2015). Nursing students' perceived stress and influences in clinical performance. *International Journal of Advanced Nursing Studies*, 4(2), 44.
- Aluko, O. O., Adebayo, A. E., Adebisi, T. F., Ewegbemi, M. K., Abidoye, A. T., & Popoola, B. F. (2016). Knowledge, attitudes and perceptions of occupational hazards and safety practices in Nigerian healthcare workers. *BMC research notes*, 9, 1-14.
- Atrous, A. E. H., & Hassan, M. (2017). Evaluation the gap between knowledge and practice in open system endo-tracheal suctioning among critical care nurses. *Egyptian Journal of Health Care*, 8(3), 248-260.
- Bertolini, L. R. L., Spiri, W. C., & Juliani, C. M. C. M. (2016). Perception of the nursing team at a specialized hospital about the work process. *International Archives of Medicine*, 9.
- Brown, S. J. (2014). *Evidence-based nursing: The research-practice connection*. Jones & Bartlett Publishers.
- Cheraghi, M. A., Salsali, M., & Safari, M. (2010). Ambiguity in knowledge transfer: The role of theory-practice gap. *Iranian Journal of Nursing and Midwifery Research*, 15(4), 155.
- Cusack, L., Smith, M., Hegney, D., Rees, C. S., Breen, L. J., Witt, R. R., ... & Cheung, K. (2016). Exploring environmental factors in nursing workplaces that promote psychological resilience: Constructing a unified theoretical model. *Frontiers in psychology*, 7, 600.

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Dall'Ora, C., Ball, J., Recio-Saucedo, A., & Griffiths, P. (2016). Characteristics of shift work and their impact on employee performance and wellbeing: A literature review. *International journal of nursing studies*, 57, 12-27.

Germain, P. B., & Cummings, G. G. (2010). The influence of nursing leadership on nurse performance: a systematic literature review. *Journal of nursing management*, 18(4).

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-based nursing*, 18(3), 66-67.

Jacobs, S. (2016). *Knowledge-in-Practice in the Caring Professions: Multidisciplinary Perspectives*. Routledge.

Kaddoura, M. A. (2010). New graduate nurses' perceptions of the effects of clinical simulation on their critical thinking, learning, and confidence. *The Journal of Continuing Education in Nursing*, 41(11), 506-516.

Kessler, R. C., Barber, C., Beck, A., Berglund, P., Cleary, P. D., McKeen, D., ... & Wang, P. (2003). The world health organization health and work performance questionnaire (HPQ). *Journal of occupational and environmental medicine*, 156-174.

Kessler, R. C., Petukhova, M., McInnes, K., & Üstün, T. B. (2007). Content and scoring rules for the WHO HPQ absenteeism and presenteeism questions. Boston (MA): Harvard Medical School.

Keyko, K., Cummings, G. G., Yonge, O., & Wong, C. A. (2016). Work engagement in professional nursing practice: A systematic review. *International journal of nursing studies*, 61, 142-164.

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., De Vet, H. C., & Van der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of occupational and environmental medicine*, 56(3), 331-337.

Lowe, G. S. (2010). *Creating healthy organizations: How vibrant workplaces inspire employees to achieve sustainable success*. University of Toronto Press.

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- Moneke, N., & Umeh, O. J. (2013). Factors influencing critical care nurses' perception of their overall job satisfaction: An empirical study. *JONA: The Journal of Nursing Administration*, 43(4), 201-207.
- Polit, D. F., & Beck, C. T. (2017). *Nursing research: Generating and assessing evidence for nursing practice* Tenth ed., 784.
- Qteat, M., & Sayej, S. (2014). Factors affecting time management and nurses' performance in Hebron hospitals. *Journal of Education and Practice*, 5(35), 41-58.
- Risjord, M. (2011). *Nursing knowledge: Science, practice, and philosophy*. John Wiley & Sons.
- Roshan Essani, R., & Ali, T. S. (2011). Knowledge and practice gaps among pediatric nurses at a tertiary care hospital Karachi Pakistan. *International Scholarly Research Notices*, 2011(1), 460818.
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2003). *Utrecht work engagement scale-9*. Educational and Psychological Measurement.
- Souza, A. C. D., Alexandre, N. M. C., & Guirardello, E. D. B. (2017). Psychometric properties in instruments evaluation of reliability and validity. *Epidemiologia e servicios de saude*, 26, 649-659.
- Souza, M. G. D., Mandu, E. N. T., & Elias, A. N. (2013). Perceptions of nurses regarding their work in the family health strategy. *Texto & Contexto-Enfermagem*, 22, 772-779.
- Speros, C. I. (2011). Promoting health literacy: a nursing imperative. *Nursing Clinics*, 46(3), 321-333.
- Stalpers, D., de Brouwer, B. J., Kaljouw, M. J., & Schuurmans, M. J. (2015). Associations between characteristics of the nurse work environment and five nurse-sensitive patient outcomes in hospitals: a systematic review of literature. *International journal of nursing studies*, 52(4), 817-835.

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Vaismoradi, M., Salsali, M., & Marck, P. J. I. N. R. (2011). Patient safety: nursing students' perspectives and the role of nursing education to provide safe care. *International Nursing Review*, 58(4), 434-442.

Van Bogaert, P., Timmermans, O., Weeks, S. M., van Heusden, D., Wouters, K., & Franck, E. (2014). Nursing unit teams matter: Impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care, and patient adverse events—A cross-sectional survey. *International journal of nursing studies*, 51(8), 1123-1134.

Appendix

Demographics characters

- **Gender**
 1. Male
 2. Female
- **Age**
 1. 20-30
 2. 31-40
 3. 41-50
 4. Over 50
- **What is your education level?**
 1. Diploma
 2. Bachelor
 3. Master
 4. Doctorate
- **Have you attended a research workshop?**
 1. Yes
 2. No

Question	strongly disagree	disagree	neutral	strongly agree	agree
Knowledge-Practice Gap					
1. I encounter situations where my knowledge is not sufficient for practice.					
2. I feel supported by my workplace in closing the knowledge-practice gap.					
3. I often learn on the job to fill knowledge gaps.					
4. The ongoing training provided by my organization addresses my knowledge gaps.					
5. Limited access to resources affects my ability to apply knowledge in practice.					
6. The workplace environment encourages knowledge sharing among staff.					

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7. There are discrepancies between the training provided and actual practice needs.					
8. Organizational policies support the application of best practices.					
9. Knowledge translation (the ability to apply knowledge) is promoted in my workplace.					
10. Workload pressures prevent me from practicing according to the knowledge I possess.					
11. I am provided opportunities to reflect on and improve my practice.					
12. The research workshops are relevant to my day-to-day work.					
13. My peers and superiors encourage me to apply new knowledge.					
14. My work involves tasks that require knowledge beyond my current training.					
15. Knowledge gaps impact my ability to deliver high-quality patient care.					
Productive Work Performance					
1. I complete all assigned tasks within the expected timeframe.					
2. I stay organized and manage multiple tasks effectively.					
3. I go beyond my regular duties to help co-workers.					
4. I actively seek feedback to improve my task performance.					
5. I effectively manage unexpected challenges in my work.					
6. I assist others in completing their tasks when needed.					
7. I engage in continuous professional development.					
8. I handle work-related stress without it affecting my performance.					
9. I engage in activities that improve team cohesion.					
10. The quality of my work is high even when under pressure.					
11. I take responsibility for mistakes made at work.					
12. I encounter errors due to lack of focus or fatigue.					
13. I engage in non-productive behaviors such as wasting time or procrastination.					
14. I consistently meet my professional goals.					

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15. I take the initiative to suggest improvements in my work environment.					
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