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The Relationship between General Self-Efficacy and Nursing Practice Competence among REU Nursing Students: A Cross-Sectional Survey

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Abstract

Background: General self-efficacy is a personal belief that influences student nurses to increase their motivation and perform task in the clinical setting competently. Exploring the association of clinical nurse practice competence is important for enhancing student learning outcomes in nursing education.

Aim: This study aims to determine the relationship between clinical nurse practice competences with the general self-efficacy of the nursing students.

Methods: This study employed descriptive cross sectional research design. Using a purposive sampling technique, a total of 222 nursing students from the nursing level 4 to level 8 participated in an online survey. The researcher used the Clinical Competence Questionnaire (CCQ) and the General Self-Efficacy Scale (GSE) in collecting the needed data of the study. Descriptive statistics and Pearson's correlation analysis were applied using SPSS version 29.

Results: This study revealed that nursing students have moderate level of nursing practice competency under four domains. The nursing students have high level of general self-efficacy (mean = 2.73 ± 0.81). The nursing students has mean = 3.22 ± 1.13 in the professional behavior in the clinical practice. Pearson's correlation analysis showed a strong positive correlation between general self-efficacy and clinical practice competence (r = 0.853, p = 0.001).

Conclusion: The self-efficacy and clinical practice competence is strongly associated. Having a better self-efficacy may contribute to the nursing students competence in the nursing practice which helps them in preparation for the professional role of nurses.

Introduction

Nowadays, healthcare organizations place a greater emphasis on nursing student, and they must be assertive, operational, and capable of making well-informed decisions about patient care and delivering high-quality patient care. Nursing students should get solid theoretical knowledge in a variety of subjects and develop their practical abilities to effectively integrate theory and practice for apply effective care (Chekerwa, 2023) [1]. Self-efficacy is the conviction or confidence one requires to accomplish their individual objectives in each field, it also acted as a mediator between mindfulness and resilience. (Berdida., Lopez, and Grande, 2023) [2].

Clinical competence is termed as the student's capacity to integrate knowledge, skills, attitudes, and values within precise nursing practices, and is a crucial aspect of professional standards for nurses (Yu, *et al*., 2021) [3]. It seems that undergraduate nursing students acquire the knowledge and skills necessary to deliver their patients with safe, high-quality nursing care. Numerous nursing researchers are studying the variables that might affect undergraduate nursing students' clinical competency to advance their clinical competency (Albagawi, *et al*., 2019) [4].

By concentrating on nursing students' proficiency and effectiveness, instructors can improve their methods and assist aspiring nurses in developing their patient-care skills. As far as the researchers are aware, there aren't many studies that evaluate Saudi Arabian nursing students' clinical competency levels, which made this study necessary. Nursing curricula and the clinical learning environment may be improved by evaluating nursing students' competencies and identifying relevant characteristics. To pinpoint their students' areas of weakness and improve the quality of the learning process, nursing educators should assist

their students in reaching significant levels of self-efficacy and competence in clinical settings. (Cant, Ryan, and Cooper, 2021) [5].

Significance of the Study

Identifying the relationship of self-efficacy and clinical competence is vital in nursing education and developing future nursing professional. The student's self-efficacy reflects their capacity to effectively plan in the completion of work task as they believe on their abilities and confidently perform the high completed task. (Bandura, 1982) [6]. In nursing education, nursing students with high self-efficacy are confident in performing clinical works and solve educational problems about theoretic al course and apply the psychomotor skills in the care of the patients. (Cheraghi *et al*., 2009) [7].

This study is important in formative stages of the nursing students in Riyadh Elm University for their professional development while ensuring that their nursing practice competency will be maintained in order to ensure quality patient safety. Consequently, nursing intervention of the nursing students need self-efficacy to perform is effectively to manage patient care, reducing stress and increasing preparedness in giving care. (Havyer *et al*., 2017) [8]. By determining how self-efficacy affects clinical competence, this study can provide valuable insight to nurse educators in effective implementation of simulation-based learning, mentorship program and implementing nursing care.

Materials and Methods
Study Design

This study utilized a descriptive, cross-sectional research design. The online survey was used to determine the relationship between general self-efficacy and nursing practice competence.

Data Collection Method

This study was conducted at Riyadh El University, Nursing department. This study utilized 3 gathering tool sections. The first section contains the socio demographic data of the students which includes students ID, academic level, GPA. The second was the clinical competence questionnaire (CCQ) which determines the supposed clinical competence among participants. The CCQ includes four competency components: part 1 Professional Behavior (16 items), (b) part 2 General performance (12 items), (c) part three Core nursing skills (12 items), and (d) part four Advanced nursing skills (6 items). The scale utilized a five-point Likert scale, with respond ranging from 1 ("do not have a clue") to 5 ("known in theory, competent in practice without any supervision"). The entire scores range from 46 to 230, a higher value representing an individual's self-perception of elevated rank of clinical competence. The reliability and validity of this tool was reported to be .98, 0.99 by developer (Liou, S.R. and Cheng, C.Y., 2014) [9]. The last is the General Self-Efficacy Scale (GSE) Emotion, optimism, and job satisfaction which are connected with the General Self-Efficacy Scale. Anxiety, burnout, health issues, depression, and stress all had negative coefficients. The sum of all the components is used to determine the final score. A higher score on the GSE indicates greater self-efficacy; the total score goes from 10 to 40 (Zhang, and Schwarzer, 1995) [10].

Sample Characteristics

Nursing students from level three academic to intern who fulfill criteria and accept to participate were recruited. For the eligibility criteria.

Inclusion criteria
1. Participants must be currently enrolled as nursing students in nursing program in REU.
2. Must have completed at least one clinical rotation or practical nursing experience.

Exclusion criteria
1. Individuals enrolled in programs outside of nursing in REU.
2. Students who are on a leave of absence or have not yet begun their clinical rotations.
3. Individuals who may not be able to understand or complete the survey due to cognitive or physical disabilities.

Sampling Technique

Purposive sampling was utilized. Using the PASS11 system to calculate the sample size, with a 95% confidence level and a 5% margin of error, a total of 222 students were recruited.

Survey Administration

The questionnaire was distributed via online by their mail or whatsapp groups of students after explaining the aim of the study.

Study Preparation

The study will be conducted through the following framework: (1) The research ethics committee of Riyadh ELM University's College of Nursing grant ethical permission. (2) 10% of the study sample participated in a pilot study to assess the viability and applicability of the produced tool; the result was removed from the research sample, and any necessary adjustments were made. (3) Start collecting data from student who agree to participate to enrolled in the study (4)The researcher initiate data collection and assessing socio-demographic data using a tool I and tool II and tool III to assess self-efficacy and competencies.

Statistical Methods

The Statistical Package for the Social (SPSSS), which was published in 2013, was used to code, analyze, and tabulate the data that has been gathered. Version 22.0. NY: IBM Corp., Armonk. This study employ the proper statistical tests. Following data collection, the "SPSS version 22" Package for Social Sciences was used for revision, tabulation, and statistical analysis. Before any computations are made, the data was checked for normality of distribution. Whereas categorical data was presented as numbers and percentages, continuous data will be presented as mean ± standard deviation. For variables with continuous data, a t-test used to determine the comparisons. When comparing variables using categorical data, the chi-square test was employed. The following was the findings' significance: $p<0.05$ indicates statistical significance.

Ethical Considerations

Riyadh Elm University's research ethics granted approval of this research. Following thorough explanation of the study's

purpose, nature, and advantages, each participant was asked for their written consent. The researcher stress that involvement is entirely voluntary. Participants were made aware of their freedom to decline participation in the study at any moment and that their decision was not have any consequences. Throughout the entire study, confidentiality, privacy, safety, and anonymity were guaranteed.

Results and Discussion

Table 1: Demographic Characteristics of the Nursing Students (n=222)

Variable	Indicators	Frequency	Percentage
Age	20-24 years old	143	64.71%
	25-29 years old	52	23.53%
	30-34 years old	13	5.88%
	35 years old above	13	5.88%
Gender	Male	13	5.88%
	Female	208	94.12%
Semester of Study	First	65	29.41%
	Second	156	70.59%
GPA	A	103	46.61%
	B	65	29.41%
	C	51	23.08%
	D	2	0.90%
Academic Level	Level 4	26	11.76%
	Level 5	13	5.88%
	Level 6	26	11.76%
	Level 7	39	17.65%
	Level 8	117	52.94%

The Table 1 shows the demographic profile of the nursing students. It can be seen on the results that most of the respondents were young adults with age ranging from 20 years old up to 24 years old accounted for 24.72% of the total study sample. Next to the higher number of respondents is the 25 to 29 years old with 23.53% of the study participants. The age of the respondents reflects the common age of the undergraduate students of nursing. The age of the students represents the early adulthood (Hershner & Chervin, 2014) [11].

In terms of gender, the study has more female with 94.12% of the respondents while male composed of 5.88% of the participants. This findings is align with the trend in the nursing course where it is common among females them in males. The majority of the nursing workforces are consisting of female population (Bouchoucha et al., 2020).

In the semester of study, majority of the students was enrolled in the second semester having 70.59% as compared to the first semester with 29.41%. As for academic performance, it shows that almost half of the students have an excellent grade of A garnering 46.61% while only 1% achieved a D grade.

In the areas of academic level, it can be seen in the results that more than half of the nursing students were level 8 having 52.94% next was the level 7 with 17.65%. This suggests that the higher number of level 8 reflects better progression of the nursing students to their course as there is increased clinical training and clinical demands.

Table 2: Clinical Competence Score of Nursing Students (n=222)

Clinical Component	Number of Items	Mean Score (± SD)	Interpretation
Professional Behavior	16	3.22 ± 1.13	Moderate
General performance	12	3.03 ± 1.07	Moderate
Core nursing skills	12	2.99 ± 1.05	Moderate
Advanced nursing skills	6	2.78 ± 0.95	Moderate

The above table shows the level of clinical competence of the nursing students under its four components. It can be seen on the results, the nursing students were reported to have moderate level of clinical competence based on the overall assessment made by the study sample.

The first component is the professional behavior; this component achieved the high mean score garnering a mean score of 3.22 and standard deviation of 1.13. This reflects that the nursing students possess god competence in ethical conduct, accountability, and code of conduct. The current study results agreed with the study of Bouchoucha et al., (2020) which signify that professional behavior should be adhered for a better conduct in the nursing education especially during clinical training.

In terms of general performance, it is reflected that nursing students have moderate level of competence. It has a mean score and standard deviation of mean = 3.03 ± 1.07 respectively. This suggest that the nurse through clinical training have the ability to apply nursing knowledge and implement nursing interventions to the patient and performed the clinical nursing tasks which relates to the novice to experts (Benner et al., 2010). Similarly, the core nursing skills got a mean score of 2.99 under moderate level of competence which suggest that nursing students have essential skills for nurses. This agreed with the theory of Benner (2010) which indicates that an individual progress through these levels, changes is reflected in three aspects of skill performance. From dependency, individual perception and becoming involved to performance of the skills (Benner et al., 2010).

Last components are the advanced nursing skills. This got the lowest mean score of 2.78 but still within the moderate category. The nursing students do lack exposure to clinical situations needing advanced skills. These often implemented during their internship years. Oermann et al., (2018) [14] study concluded that the nursing students have a lower competence in the advanced skills for nurses due to limited exposure as they have restriction to clinical performance.

Table 3: General Self-Efficacy Scores of the Nursing Students (n=222)

Domain / Component	Number of Items	Mean Score (± SD)	Interpretation
Self-Efficacy (Overall)	10	2.73 ± 0.81	High level

The Table 3 shows the general self-efficacy scores of the nursing students. With the total sample of 222 nursing students, it has been found that across the 10 item scale the students have high level of self-efficacy. This garnered a mean score of 2.73 with standard deviation of 0.81.

Since the current study demonstrates high self-efficacy among nursing students, it is believed that they can manage both theory and clinical challenges, adapt and perform task required in the clinical situations. Bandura (1997) [15] reiterated that self-efficacy is a key element in the motivation, persistence and performance in the clinical training. Based on the results, nursing student's higher self-efficacy relates with their clinical performance ad resiliency to stressful learning environment (Oermann et al., 2018) [14].

The presence of greater self-efficacy scores among students resonate their ability to maintain satisfaction both in academic and clinical performance. Despite the several challenges that the nursing students experienced in the clinical setting such as academic stress, increased workload, sleep disturbance and burnout. Finally, the findings of this study reflect nursing student's confidence to positively influence their better academic and clinical learning outcomes.

Table 4: Relationship between General Self-Efficacy and Nursing Practice Competence

Variables	Statistical Test	Correlation Coefficient (r)	p-value (Sig.)	Decision rule	Results	Interpretation
General Self-Efficacy vs Nursing Practice Competence	Pearson r	0.853	0. 001	Reject the H_0	Statistically Significant	Strong positive correlation

The table above presents the association between general self-efficacy and nursing practice competence using Pearson's correlation analysis. Using the correlation analysis, the results found a strong positive correlation between the general self-efficacy and nursing practice competence (r = 0.853), which is statistically significant (p = 0.001). Based on the findings, it suggests that students with higher self-efficacy levels tend to demonstrate a higher competency levels on clinical practice. This made the null hypothesis being rejected resulting to a significant association between the variables being correlated. This finding aligns with Bandura (1997) [15] which explained that self-efficacy is essential in developing the confidence of the nursing students in the clinical practice, enhance skills in nursing procedures and improve competence in the clinical training.

Discussions
This study explores the association between general self-efficacy and nursing practice competence among nursing students at Riyadh Elm University. The findings of this research offers valuable evidenced about the nursing clinical competence, their psychological readiness including the strength of relationship between the self-efficacy and clinical competence.

The study reveals that the nursing students under study reported to have a moderate level of competence in the nursing practice especially in the following domains professional behavior, general performance, core nursing skills, and advanced nursing skills. With all of these domains, professional behavior of the nursing students garnered the highest mean score while the lowest was got by advanced nursing skills. This agreed in the Novice to Expert theory of Benner (1995) which explains that the levels reflect movement from reliance on past principles to the use of past experience and change in the action to the situation as a complete whole making it from refined to clinical expertise. Oermann et al., 2018 [14] explained that nursing students demonstrate confidence in a technical and not more complex situation.

Attaining the highest score for professional behavior indicates that ethical practice, accountability, and professional conduct were properly emphasized at Riyadh Elm University. According to Bouchoucha et al., (2021) [12] those competencies were effectively reinforced in the curricula. It is always evaluated among nursing students which leads to their better clinical performance. They cited that professional behavior is a vital aspect in the nursing practice towards better quality patient safety and teamwork.

In contrast, the advanced nursing skills garnered the lowest mean score. This is probably due to limited exposure of the nursing students in the high-acuity clinical situations. They were restricted to some advanced and complicated procedure relative to independent practice. Advanced nursing skills require the nursing students to be trained in a more hands on experience and complex situation in order to achieved autonomy and clinical decision making. The result of this study agreed with the novice-to-expert theory of Benner, which suggests that clinical competence develops progressively by having hands on experience and time spent in practice settings (Benner et al., 2010).

In relation to psychological attributes, this study found that the nursing students under study possess a moderate self-efficacy. This means that the undergraduate students are capable of managing academic responsibilities, clinical challenges, and stressful learning environments. This aligns with self-efficacy theory of Bandura which posits that self-efficacy is a determinant in clinical performance, motivation, perseverance in a demanding clinical training. Sabeti et al., 2009 found that students with high self-efficacy have better clinical skills among nursing students.

Using the correlation analysis, it was revealed a strong positive and statistically significant correlation between general self-efficacy and nursing practice competence. This means that the nursing students with higher self-efficacy tend to demonstrate better skills in clinical practice. This findings aligns with the study of Albagawi et al., 2019 [4] which explicated that self-efficacy is a strong predictor of clinical competence and skills acquisition among student nurses. From the theoretical perspective, the result of association among variables supports the theory of Social Cognitive which reiterates that it is more likely that students will engage in challenging tasks if they have high self-efficacy levels (Bandura, 1997) [15].

Conclusion
This research concludes that undergraduate nursing students are moderately competent in the clinical practice. The correlation analysis found a statistically significant having a strong positive relationship between general self-efficacy and nursing practice competence. This suggests that self-efficacy play an essential role in the academic performance of the nursing students. Through a targeted intervention, the nursing student's self-efficacy and clinical training environment can be improve to make them competent, confident, and prepared for professional practice.

This study offers a valuable evidenced on the association between general self-efficacy and competence of nursing

student in the clinical practice. This findings means that the nursing students are moderately competent and high self-efficacy. This underscores the strength and weakness for further development of the nursing students. Meanwhile, the results suggest strengthening the student's self-efficacy. The clinical instructor should enhance teaching strategies. This could also be part of the strategic planning in nursing education.

In conclusion, the identified levels of clinical competence and self-efficacy of the nursing students has a potential of further improvement not only for one student but for the overall students in preparation for clinical training. By addressing the two components of learning both psychological and skill-based, nursing education programs can better prepare nursing students to meet the complex demands of existing healthcare settings.

References
1. Chekerwa P. Nursing students' perceptions of the barriers to applying theory to practice in clinical placement settings [doctoral dissertation]. Stellenbosch: Stellenbosch University, 2023. Available from: http://hdl.handle.net/10019.1/127339
2. Berdida D, Lopez V, Grande R. Nursing students' perceived stress, social support, self-efficacy, resilience, mindfulness and psychological well-being: A structural equation model. Int J Ment Health Nurs. 2023; 32(5):1390-1404. Doi: 10.1111/inm.13179
3. Yu M, Tong H, Li S, Wu X, Hong J, Wang W. Clinical competence and its association with self-efficacy and clinical learning environments among Chinese undergraduate nursing students. Nurse Educ Pract. 2021; 53:103055. Doi: 10.1016/j.nepr.2021.103055
4. Albagawi B, Hussein FM, Alotaibi J, Albougami A, Amer M, Alsharari M, et al. Self-efficacy and clinical competence of fourth-year nursing students: A self-reported study. Int J Adv Appl Sci. 2019; 6:65-70.
5. Cant R, Ryan C, Cooper S. Nursing students' evaluation of clinical practice placements using the Clinical Learning Environment, Supervision and Nurse
6. Teacher scale: A systematic review. Nurse Educ Today. 2021; 104:104983. Doi: 10.1016/j.nedt.2021.104983
6. Bandura A. Self-efficacy mechanism in human agency. Am Psychol. 1982; 37(2):122-147.
7. Cheraghi F, Hassani P, Yaghmaei F, Alavi-Majed H. Developing a valid and reliable self-efficacy in clinical performance scale. Int Nurs Rev. 2009; 56(2):214-221. Doi: 10.1111/j.1466-7657.2008.00685.x
8. Havyer RD, Havyer RD, Van Ryn M, Van Ryn M, Wilson PM, Wilson PM, et al. The effect of routine training on the self-efficacy of informal caregivers of colorectal cancer patients. Support Care Cancer. 2017; 25(4):1071-1077.
9. Liou SR, Cheng CY. Developing and validating the Clinical Competence Questionnaire: A self-assessment instrument for upcoming baccalaureate nursing graduates. J Nurs Educ Pract. 2014; 4(2):56-65.
10. Zhang JX, Schwarzer R. Measuring optimistic self-beliefs: A Chinese adaptation of the General Self-Efficacy Scale. Psychologia. 1995; 38(3):174-181.
11. Hershner SD, Chervin RD. Causes and consequences of sleepiness among college students. Nat Sci Sleep. 2014; 6:73-84.
12. Bouchoucha SL, Kilpatrick M, Lucas JJ, Phillips NM, Hutchinson A. The Factors Influencing Adherence to Standard Precautions Scale–Student Version (FIASP-SV): A psychometric validation. Infect Dis Health. 2021; 26(2):85-94.
13. Benner P. From novice to expert: Excellence and power in clinical nursing practice. Am J Nurs. 1984; 82(3):402-407.
14. Oermann MH, De Gagne JC, Phillips BC. Teaching in nursing and role of the educator: The complete guide to best practice in teaching, evaluation, and curriculum development. 2nd ed. New York: Springer Publishing Company, 2018.
15. Bandura A. Self-efficacy: The exercise of control. New York: W.H. Freeman and Company, 1997.
16. Benner P, Tanner CA, Chesla CA. Expertise in nursing practice: Caring, clinical judgment, and ethics. New York: Springer Publishing Company, 1995.
17. Sabeti F, Akbari-Nassaji N, Haghighy-Zadeh MH. Nursing students' self-assessment regarding clinical skills achievement in Ahvaz Jundishapur University of Medical Sciences. Iran J Med Educ. 2011; 11(5):506-515.