

Assessment the Level of Self-Efficacy among Newly Graduate Nursing Students Faculty of Nursing – Alexandria University

Shimaa Mohamed Ahmed Rady, Clinical Instructor

Nursing Administration Department, Faculty of Nursing, Alexandria University

Gehan Galal El-Bialy, professor

Nursing Administration Department, Faculty of Nursing, Alexandria University

Nancy Sabry Hassan ElIiethey, Assistant Professor

Nursing Administration Department, Faculty of Nursing, Alexandria University

Abstract

Background: Self-efficacy (SE) is crucial for improving students' clinical performance, competence, and motivation in nursing education. SE was defined as the degree of one's feelings about one's ability to accomplish goals. SE played a mediating role between clinical learning environments and clinical competence. **Objective:** To determine the level of self-efficacy among newly graduate nursing students. **Settings:** The study was conducted at the Faculty of Nursing – Alexandria University. **Subjects:** A convenience sample of 65 newly graduated nursing students 2020 – 2021 before they started their internship program and after end the last exam of eighth semester. **Tools:** one tool was used, perceived level of Self-Efficacy (SE) Structured Interview. **Results:** about one third of nurse students (32.3 %) have Grade Point Average (GPA) (B 3.1–3.39) last year. Furthermore, the study showed that 61.5% of the study participants had moderate level of SE. **Conclusion:** the present study concluded that high sense of SE among newly graduate nursing students, which is considered a key component for acting independently and competently in the nursing profession. **Recommendations:** The nursing students should have the opportunity to practice clinical skills in clinical settings under the direct supervision of a clinical educator before graduation and under the direct supervision of a clinical preceptor after graduation in order to mastering skills and increase level of SE, they should receive ongoing and constructive feedback throughout their studies, clinical educators should encourage nursing students to act independently and under the indirect supervision to reach a certain level of competence.

Keywords: Self-Efficacy, nursing students, motivation.

Introduction

Self-Efficacy (SE) plays a key role in the motivation process as well as outcome achievement (Hussain et al, 2022). Regarding the motivation process, it could either enhance or impede motivation, whereas professionals with high SE levels choose to perform more challenging tasks, aspiring to higher goals. It leads to professionals anticipating either an optimistic or a pessimistic scenario due to actions being pre-shaped in thought before acting (Abd Elhamed et al., 2019). SE refers to an individual's confidence in their ability to

complete a task or achieve a goal (Soudagar et al, 2015).

Self-efficacy has an impact on people's inspiration, success, and capacity to learn. Increased loyalty led to higher achievement when SE was higher. One of the most important factors influencing academic success is SE. People who have higher SE are more enthusiastic (Ismail, 2019). The SE of nursing students enables them to excel in clinical settings. SE is an important predictor of nursing students' performance in clinical settings (Hussain et al, 2022).

In some ways, SE mediates the connection between competence and professional identity. To increase students' competence, educators in nursing faculties and clinical mentors should focus more on students' professional identities and SE. (Jutavitaya et al, 2017).

Banduras' Social Cognitive Theory (SCT) is one of the most frequently applied theories of SE, health behavior and motivation. SCT focuses on the interaction between internal factors such as thinking and symbolic processing (e.g., attention, memory, motivation) and external determinants (e.g., rewards and punishments) in determining behavior (Bandura, 2012).

Bandura (2012) proposed that SE beliefs are the most important and powerful of influencing people's decisions to attempt or not attempt certain behaviors and to persist in the face of obstacles. Also, he proposed that SE beliefs developed from four main sources: mastery experiences/performance outcome, vicarious experiences, verbal persuasion, and physiological feedback. Furthermore, Banduras' four main sources of SE considered also dimensions of it (Elsayed et al., 2019).

In addition, SE factor plays an important role in individuals' thoughts, adapting with problems, tension and decision making. Some graduates jump to the nursing carrier just after their graduation. SE in newly nursing graduates help them to feel competent in meeting the entry level in clinical fields and to accept this challenging role. With increased SE, nurses have greater confidence in their ability lead to be more engaged in healthy behaviors which results in positive patient health outcomes and improved quality of care (Abd - Elrahman et al., 2021; Alizadeh et al., 2020)

Newly nursing graduates works under the supervision of professional nurse, performing a variety of clinical and health-related duties in a hospital or other facility. A nursing internship program is a system of instruction and experience planned within an

academic environment that result in the acquisition of knowledge, abilities, and qualities necessary for the practice of professional nursing (Ghazy & El Shahat, 2021)

Significance of the study

Nursing education is a fundamental and curial factor that affects nursing students' level of SE. Nursing student's satisfaction with the motivation and confidence acquired from faculty curricula and clinical settings are beneficial to improve nursing student's SE. Also, evaluation of the level of SE among newly graduate nursing students is significant for strengthening the future nursing workforce through nurturing nursing students with confidence within four years of faculty.

Aims of the Study

This study aims to assess the level of SE among newly graduate nursing students.

Research question

- What is the level of SE among newly graduate nursing students?

Materials and Method

Materials

Design: A descriptive research design was utilized to conduct this study.

Settings: This study was conducted at the Faculty of Nursing – Alexandria University.

Subjects: A purposive sampling of 65 newly graduated nursing students 2020 – 2021 before they started their internship program.

Tool: One tool was utilized to conduct this study:

Tool: “Perceived Self-Efficacy (SE) Questionnaire”. This tool was developed by Schwarzer & Jerusalem (1979) and validated by Abou-Elala (2012) & Salanova, et al., (2012). It was adapted by the researcher to assess the study participants' perceived self-efficacy.

It consists of two parts:

Part I: Nursing students' demographic sheet: as age, sex, marital status, last GPA, previous received training programs, current working unit in private hospital and years of experience in private hospital.

Part II: Perceived level of Self-Efficacy (SE) structured interview: This part was used to assess the study participants perceived self-efficacy. It consists of 10 items measured on four-point Likert scale ranged from (4) = exactly true to (1) = not at all true. The overall score ranges from 10 – 40, < 50% (< 20 score) indicates low perceived SE, from ≥50% - 75% (20 - 30 score) indicates moderate perceived SE and > 75% (> 30 score) indicates high perceived SE.

Method

Approval of the research ethical committee at the faculty of nursing was obtained. An official approval to conduct this study was obtained after providing explanation of the aim of the study from the Vice Dean for student's affair at Faculty of Nursing. An informed consent was obtained from the nursing students. The study tool was tested for its content validity by 7 experts in the field of the study. They were one professor, one assistant professor and one lecturer from nursing administration department. One professor and one assistant professor from nursing education department. One assistant professor of critical care and emergency nursing department. One assistant professor of psychiatric nursing department. The necessary modifications were done accordingly. A pilot study was carried out on 10% of the study sample in order to test the clarity and applicability of the research tools. Reliability of the tool was tested using Cronbach's Alpha test. The reliability coefficient of the Perceived Self-Efficacy (SE) Structured Interview was 0.78 for tool. Data was

collected by the researchers during the period from July 2021 to October 2021.

Ethical considerations:

Written informed consent was obtained from nursing students after explaining the aim of the study and the right to refuse to participate in the study and/ or withdraw at any time. Nursing student's privacy was assured. Data confidentiality was maintained.

Statistical Analysis

The collected data were organized, tabulated and statically analyzed using the statistical package for social studies (SPSS) Version 20.0. Quantitative data were described number & % and mean ± standard deviation. Finally, analysis and interpretation of data were conducted. P-values of 0.05 or less were considered statistically significant.

Results

Table 1 presents the frequency distribution of nurse students according to their demographic data. The median age of nursing students was (22 year) and 89.2 % of nursing students were single, with female making up the bulk of this group (83.1%). About one third of nurse students (32.3 %) have Grade Point Average (GPA) B 3.1–3.39 last year. Moreover, two third (66.2 %) of nurse students have previous experience in private hospitals, While, 53.5% working at Intensive Care Units (ICU). The large percentage of nursing students (88.4%) had less than five years of work experience in private hospitals. Only (9.2%) of nurse students received workshops bout Basic Life Support (BLS) and communication.

Table 2 demonstrates the nurse students' levels of SE. It appears from the table that, more than 60% of the study participants perceived their self-efficacy as moderate, while 32.3% perceived their self-efficacy as

high. Those who perceived their self-efficacy as low were only 6.2%.

Table 3 shows the relation between mean difference of overall Perceived SE and demographic. It displays that there was statistically significant differences between perceived SE and GPA where $F = 5.406$ ($p=0.001^*$). Furthermore, there were statistically significant differences between years of experience, previous training programs received and perceived SE where $t = 2.536$, ($p=0.015^*$) and $t = 2.819$ ($p=0.006^*$) respectively.

Discussion

Healthcare organizations have undergone rapid changes in recent years to keep up with medical advancement especially in the field of critical care. These changes related to increased demand for patient-centered care, evidence-based practice, addressing patients' satisfaction with care, and staff reorganization issues. SE affects work stress, burnout, self-development and satisfaction in clinical nurses (Chan, 2013; Masoudi-Alavi, 2014; Heidari Gorji et al., 2018; Khalil & Abou Hashish, 2022).

The main findings of the current study revealed that the highest 61.5% of nurse students' have moderate level of perceived SE this could be attributed due to that, they reported that they can manage difficult problems and confident in dealing efficiently with unexpected events. In addition, they reported that they remain calm when facing difficulties and find out several ways of coping. Also, increase ability to influence their decisions lead to improve the perceived SE. These findings are reinforced by several studies, as Abdal et al., (2015), Caruso et al., (2016) and El-Sayed et al., (2021) who stated that more than half nursing students were perceived low to moderate level of SE, resulting in lack teaching thinking skills that could be support nursing students in changing their viewpoints regarding themselves and gaining self-confidence. Furthermore, they recommended that design nursing curricula which encourage students'

autonomy, reasoning, judging and critical thinking skills that are required for their academic motivation. Alavi, (2014) pointed that majority of newly nursing graduates had low self-esteem and SE. Also, they need to be encouraged to act independently and under indirect supervision of clinical preceptors, in order to reach to a certain level of competency.

On another hand, Kotb & Nagib (2018) and Defriyanto & Sugiharta (2020) revealed that high levels of SE among nursing students were due to history of successful experience of decision making, feel more self-assured, are more motivated to set goals, positive feedback from supervisors, and to see problems as challenges. Moreover, Abd Elhamed et al (2019) confirmed that high levels of SE increase the sense of self-control and job performances and help one to perform tasks with higher efficiency level. It makes a difference in personnel thoughts, feelings and actions. Furthermore, El-Sayed et al (2021) pointed out that continuing education and training programs focuses on training competent interns in all dimensions of knowledge, skills and professional attitude. SE creates motivation to seek new knowledge and skills. Also, it governs changing behaviors and attitudes.

The present study illustrated that there were statistically significant differences between the nurse students' Grade Point Average (GPA), years of experience, received previous training programs and SE. This might be because nursing students are getting older and have more experience than novice nursing students, which broadens their capacity for analysis and increases the variety of situations they encounter. In addition, they received previous training programs as communication, Basic Life Support (BLS), marketing, media photo-shop, public relations, logistics and organization, these kinds of training empower nursing students to have confidence, try out new things, and exercise critical thinking skills.

The finding is in line with, Perry et al., (2018) described that age, GPA, training and experience are facilitating factors of SE. Mostafa et al., (2014) found that there was a positive correlation between educational level, years of experience and high SE of nurses.

Conclusion

Based upon the findings of the current study, it could be concluded that high sense of SE among newly graduate nursing students, which is considered a key component for acting independently and competently in the nursing profession.

Recommendations

In line with the findings of the study, the following recommendations are made:

- For undergraduate and newly graduate nursing students, the concept of SE should be applied in theoretical and practical courses, both in terms of knowledge and behavior, in order to foster positive attitudes and understanding of thought differences among nursing students throughout the educational process.
- Assess and evaluation of the factors influencing and impeding nursing students' and newly graduate nursing students self-confidence.
- Measurement of nursing students' and newly graduate nursing students' satisfaction about the clinical learning environment should be conducted periodically and in compassionate way.
- Opportunities should be allowed for nursing students and newly graduate nursing students to express their opinions about effectiveness of faculty curricula.
- Design nursing curricula which encourage students' autonomy, reasoning, judging and critical thinking skills that are required for their academic motivation.

- Encourage the nursing students and newly graduate nursing students to participate in continuing education and training programs that focus on training competencies in all dimensions of knowledge, skills and professional attitude.
- Newly graduate nursing students must see success on the tasks they had expected to fail.
- Newly graduate nursing students should receive continuous and effective feedbacks throughout their study in clinical courses and internship period.

Suggestions for the further research

- Compare the level of SE among four level nursing students and associated factors.
- Compare the level of SE before and after the internship training program.
- A qualitative research is recommended to address factors that contribute to level of SE among nursing students.

Limitation of the study

- Interview session with study participants was repeatedly postponed.

Table (1): Distribution of nurse students according to their demographic data (N = 65)

Demographic data	No. (65)	%
Age (years)		
<23	41	63.1
≥23	24	36.9
Median (IQR)	22.0 (22.0 – 23.0)	
Sex		
Male	11	16.9
Female	54	83.1
Marital status		
Single	58	89.2
Married	7	10.8
GPA		
C	5	7.7
C+	8	12.3
B-	16	24.6
B	21	32.3
B+	15	23.1
Previous work experience in private hospitals?		
Yes	43	66.2
No	22	33.8
How many years of experience in private hospital/s? (years) (n=43)		
<5	38	88.4
≥5	5	11.6
Median (IQR)	2.0 (1.0 – 3.0)	
Type of unit (in private hospital)? (n=43)		
ICU	23	53.5
NICU	8	18.6
ER	4	9.3
Ward	3	7
PICU	2	4.6
OR	3	7
Received any previous training programs?		
Yes	6	9.2
No	59	90.8

IQR: Inter quartile range **ICU:** Intensive Care Unit **NICU:** Neonate Intensive Care Unit **ER:** Emergency Room
PICU: Pediatric Intensive Care Unit **OR:** Operating Room

Table (2): Levels of Self-Efficacy among Nursing students (N=65)

Perceived Self-Efficacy scale	No.	%	p
Low (< 20)	4	6.2	0.039*
Moderate (20 - 30)	40	61.5	
High (> 30)	21	32.3	
Overall (Mean ± SD.)	30.80 ± 3.71		0.005*
Mean% ± SD.	69.33 ± 12.38		

Low Perceived SE (< 20) Moderate Perceived SE (20 - 30) High Perceived SE (> 30)

Table (3): Relation between mean difference of overall Perceived SE and demographic data

Demographic data	Perceived Self-Efficacy
	Mean ± SD.
Age (years)	
<23	68.05 ± 13.78
≥23	71.53 ± 9.38
t (p)	1.095 (0.278)
Sex	
Male	66.97 ± 10.38
Female	69.82 ± 12.78
t (p)	0.692 (0.491)
Marital status	
Single	69.54 ± 12.37
Married	67.62 ± 13.29
t (p)	0.385 (0.701)
GPA	
C	55.33 ± 9.01
C+	59.58 ± 16.85
B-	73.12 ± 8.21
B	68.89 ± 12.40
B+	75.78 ± 7.61
F (p)	5.406* (0.001*)
Type of unit (in private hospital)?	
Not working	73.18 ± 10.10
ICU	67.10 ± 11.07
NICU	70.42 ± 18.81
ER	67.50 ± 5.0
Ward	57.78 ± 18.95
PICU	56.67 ± 9.43
OR	77.78 ± 10.18
F (p)	1.609 (0.161)
Years of experience in private hospital/s? (years) (N=43)	
<5	67.37 ± 13.27
≥5	82.67 ± 4.35
t (p)	2.536* (0.015*)
Received any previous training programs?	
Yes	68.02 ± 12.18
No	82.22 ± 4.55
t (p)	2.819* (0.006*)

SD: Standard deviation F: F for One way ANOVA test *: Statistically significant at $p \leq 0.05$

Reference

- Abdal, M., Alavi, N., & Adib-Hajbaghery, M. (2015). Clinical self-efficacy in senior nursing students: A mixed-methods study. *Nursing and midwifery studies*, 4(3). pp e29143
- Abd Elhamed, S., Morsy, S., & Mohamed, A. (2019). Relationship between Head Nurses' Self-efficacy and Job Performance. *Assiut Scientific Nursing Journal*, 7(19), pp 17-25
- Abd - Elrahman, A., Eid, N., & Safaan, S. (2021). Study of nursing interns' needs through their practical competency self - evaluation. *Menoufia Nursing Journal*, 6(1), pp73-90
- Abou-Elala, R. (2012). The relationship between self-efficacy and job related stressors as perceived by nursing staff in the critical care units. Unpublished master thesis. Faculty of Nursing - Alexandria University.
- Alavi N. (2014). Self-efficacy in nursing students. *Nurs Midwifery Stud. Dec*;3(4) :e25881. doi: 10.17795/nmsjournal25881. Epub 2014 Dec 29. PMID: 25741520; PMCID: PMC4348730
- Alizadeh, I., Salari, A., Ahmadnia, Z., & Moaddab, F. (2020). An Investigation into Self-efficacy, Clinical Decision-making and the Level of Relationship between them among Nurses in Guilan Province. *Journal of Guilan University of Medical Sciences*, 29(114), pp38-49.
- Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management*, 38(1), pp 9-44
- Bellmann, B., Lin, T., Greissinger, K., Rottner, L., Rillig, A., & Zimmerling, S. (2020). The Beneficial Effects of Cardiac Rehabilitation. *Cardiology and Therapy*, 9(1), 35–44. <https://doi.org/10.1007/s40119-020-00164-9>
- Chan, Z. (2013). A systematic review of critical thinking in nursing education. *Nurse education today*, 33(3), pp 236-240
- Caruso, R., Pittella, F., Zaghini, F., Fida, R., & Sili, A. (2016). Development and validation of the nursing profession self-efficacy scale. *International nursing review*, 63(3), pp 455-464.
- Defriyanto, D., & Sugiharta, I. (2020). Correlation of Self-Efficacy with Decision Making Continuing Studies in College Students at Islamic Based Universities. *KONSELI: Jurnal Bimbingan dan Konseling (E-Journal)*, 7(1), pp7-12
- Elsayed, M., Ghazi, G. & Abdelaal, H. (2019). Cognitive Failure, Perceived Stress and Self-Efficacy among Graduate Nursing Students, Alexandria University, Egypt. *Environment*, researchgate.net 11, pp 13. Faculty of Nursing, Alexandria University The 15th International Scientific Nursing Conference 5th - 6th August 2019.
- El-Sayed, M., Mousa, M., & Abd-Elhamid, E. (2021). Academic Motivation, Academic Self-Efficacy and Perceived Social Support among Undergraduate Nursing Students, Alexandria University, Egypt. *Assiut Scientific Nursing Journal*, 9(24.0), pp 76-86
- Ghazy, A. & El Shahat, H. (2021). Effectiveness of internship program as perceived by intern nurses and its relation to their professional role at technical nursing institutes. *Port Said Scientific Journal of Nursing*, 8(1), pp 255-274.
- Heidari Gorji, A., Shafizad, M., Soleimani, A., Darabinia, M., & Goudarzian, A. (2018). Path analysis of self-efficacy, critical thinking skills and emotional intelligence for mental health of medical students. *Iranian Journal of Psychiatry and Behavioral Sciences*, 12(4). pp1-6
- Hussain, S., Khan, A., & Bidar, C. (2022). Self-efficacy of teachers: a review of the literature. *Multi-Disciplinary Research Journal*, 1(50); pp 110 - 116
- Ismail, N. (2019). Analysis of Soft Skills on Self-Efficacy in Matriculation College Students through Hermeneutic Method. *JoMOR*, 1, pp 23-30

- Jutavitaya, J., Intarakamhang, U., & Prasertsin, U. (2017). The Effect of Group Counseling Program for Developing Self-Efficacy to Adversity Quotient in Real Time Company. The Asian Conference on Psychology & the Behavioral Sciences 2017 Official Conference Proceedings. The International Academic Forum. Available at: www.iafor.org.
- Khalil, A., & Abou Hashish, E. (2022). Exploring how reflective practice training affects nurse interns' critical thinking disposition and communication skills. *Nursing Management*, 29(2).
- Kotb, F. & Nagib, R. (2018). An Investigation of the Relationship between Transformational Leadership and Self Efficacy of the First LineManagers of Minia University Hospital. *IOSR Journal of Nursing and Health Science*, 7(1), pp 83-94.
- Masoudi-Alavi, N. (2014). Self-efficacy in nursing students. *Nurs Midwifery Stud*, 3(4), pp e25881.
- Mostafa, G., Aly, R., EL-Gazar, H. (2014). Relationship between Emotional Intelligence of Head Nurses and Empowerment of Staff Nurses. *Port Said Scientific Journal of Nursing*, 1(1), pp 64-77.
- Perry, D., Paulsen, T., & Retallick, M. (2018). Differences in critical thinking ability according to college entry pathway. *NACTA Journal*, 62(2), pp 115-121.
- Salanova, M., Lorente, L., & Martínez, I. (2012). The dark and bright sides of self-efficacy in predicting learning, innovative and risky performances. *The Spanish journal of psychology*, 15(3), pp 1123-1132.