ORIGINAL RESEARCH ARTICLE

Effect of Social Adjustment Training on Academic Success and Clinical Competence of Nursing Students: A Quasi-Experimental Study

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Abstract

Background Social adjustment is one of the most important signs of students' mental health and enables them to adapt to university life, improve their academic motivation, and maintain their physical and mental health. Clinical competence and recognition of its related factors, as one of the leading indicators of determining nursing performance, are essential for maintaining standards of nursing care. This study aimed to determine the effectiveness of social adjustment training on academic success and clinical competence in nursing students.

Methods This quasi-experimental, pre-test and post-test study was conducted on senior nursing students at the Islamic Azad University of Urmia in the academic year 2023-2024. The sample consisted of 40 students selected through Census sampling. Data was collected using demographic questionnaires, the Wells Academic Achievement Questionnaire, and Ebadi Clinical Competency Assessment Questionnaire. The nursing students received social adjustment training in six 60-minute group sessions, twice a week. At the end of the training, they completed the questionnaires again. For statistical analysis, SPSS version 23 was used, and descriptive statistics (mean and standard deviation) and the paired t-test were employed.

Results The results showed no significant difference in the average overall academic success scores of nursing students before and after the intervention ($p > 0.05$, $t = 0.015$). However, there was a statistically significant difference in the mean overall clinical competence scores of students before and after the intervention ($p < 0.05$).

Conclusion The social adjustment training program did not significantly affect academic achievement but improved clinical competence among nursing students. Therefore, educational programs aimed at improving the social adjustment of nursing students, such as specialized workshops, simulated scenarios, and role-playing techniques, can comprehensively contribute to the development of their clinical competency. This will enable students to enter the workforce with greater confidence and skill, thereby providing high-quality healthcare services.

Keywords Academic success, Clinical competence, Nursing students, Social adjustment

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1 Introduction

Social adjustment arises from interactions among individuals, groups, and cultural elements, based on a mutual-satisfaction approach.[1] University education is accompanied by a range of stressors, including academic, financial, and social pressures, as well as separation from family.[2] Upon entering university, students are confronted with a new environment that necessitates their adaptation.[3] Consequently, social adjustment is crucial for everyone, particularly for undergraduate students in the university environment.[4]

Social adjustment is considered the most fundamental dimension and a primary indicator of mental health.[5,6] Among the students, nursing students experience greater psychological pressure. This is because they will soon be responsible for patient healthcare, a role that inherently demands a high level of adjustment.[7] Therefore, students must develop their adaptive abilities to achieve social responsibility.[8]

To succeed in various aspects of life, individuals must understand the factors that influence social adjustment. Otherwise, they risk not only academic failure but also future difficulties in their family and professional lives.[9] Low adjustment among medical science students is particularly significant in how they interact with patients, potentially causing substantial harm to their future careers and families.[5] Social adjustment reflects an individual's satisfaction with interactions with others, while social maladjustment can increase occupational stress.[10]

Researchers in education and training assert that academic success not only facilitates future employment and career advancement but also enhances social and cultural capital, elevates living standards, and improves health outcomes.[11] Students' academic success is a crucial indicator for evaluating the educational performance of higher education institutions, including universities.[12] Academic success is defined as educational progress, the achievement of learning objectives, the acquisition of desired skills and competencies, satisfaction, perseverance, and student performance post-university. [13] Academic success and progress can lead to self-actualization, increased self-confidence, enhanced motivation, and greater career success in students' future lives.[14] Conversely, academic failure not only inflicts significant damage on countries' higher education systems but also creates psychological, familial, and social problems for students.[15] The unfamiliar university environment for first-year students, separation from family, loss of interest in their field of study, and a lack of welfare and financial resources can all lead to psychological distress and academic underperformance. [16] Therefore, social adjustment training is essential for students, as it enhances the efficiency of nursing students and promotes academic adjustment.[17] A study by Yengimolki et al. demonstrated a significant positive correlation between social adjustment and academic achievement.[18]

Nursing competence is a quality-of-care issue, and ensuring competence in nurses' actual performance is a legal and ethical obligation towards care recipients.[19] Clinical competence is defined as the ability of a nurse to perform effectively, safely, and fulfill professional responsibilities in the field of practice.[20] Clinical competency in nursing is a nurse's ability to seamlessly integrate knowledge, skills, attitudes, and values across various healthcare settings.[21] This includes a wide range of clinical areas, such as technical and communication skills, clinical reasoning, emotional intelligence, and professional values.[22] As a key measure of performance in nursing, understanding the factors that boost clinical competency is vital for upholding nursing care standards. [23] The clinical training is the most crucial part of nursing education, and the successful acquisition of the necessary competencies during this period is a prerequisite for becoming a successful clinical nurse.[24] Deficiencies or inadequacies in the education of this group will directly impact the quality of health services and, ultimately, the health of the community.[25] Many new graduate nurses face significant challenges and experience considerable psychological stress when they enter the clinical environment.[26] This is despite the fact that most managers expect new nursing graduates to be ready for a wide array of nursing procedures and to possess the skills needed to provide safe care.[27] Due to the nature of their profession, nurses constantly interact with patients, families, physicians, and various levels of hospital management. Therefore, to improve patient health and foster teamwork, they must possess strong social skills and effective communication.[28] Given that students represent critical driving forces for national development, the prevalence of psychological, social, and spiritual disorders within this demographic risks the squandering of both tangible and intangible assets. Therefore, examining the state of social and spiritual health adjustment is essential to empower this vulnerable segment, ultimately leading to positive and influential long-term outcomes for the entire population.[29] Based on the literature review conducted, researchers have explored the relationship between social adjustment and academic success in students.[5,18] However, despite the vital role of nurses in promoting community health and patient care, limited research has investigated the factors influencing the academic success and clinical competency of nursing students.[30,31] Social adjustment, in this context, is one of the most crucial psychological components, significantly impacting individuals' academic and professional performance. Nevertheless, as the provided text indicates, there is a notable research gap regarding the specific impact of

enhancing social adjustment on the academic success and clinical competency of nursing students.

Since social adjustment helps students cope with the challenges of the university environment, as well as educational and clinical pressures, and also strengthens their ability to interact effectively with patients and healthcare teams, addressing this topic seems essential. Therefore, this research aims to fill this research gap by providing substantiated scientific evidence on the effectiveness of social adjustment training on the academic success and clinical competency in nursing students. The findings of this study could pave the way for designing targeted educational and counseling interventions to enhance the academic performance and professional competencies of this vital group within society.

2 Methods

This study was a quasi-experimental study conducted on final-year nursing students at Islamic Azad University, Urmia, during the academic year 2023-2024. The researcher obtained a list of these students' names, including 40 final-year nursing students, from the faculty of education. Given the small population size and the nature of interventional studies, sampling for this study was conducted through a Census, meaning the sample size was equal to the entire study population of 40 students. Except for four people who dropped out due to unwillingness, there was no sample attrition in our study because the sessions were scheduled at a time when all students from both groups were allowed to participate. Inclusion criteria for participation were: final-year nursing students currently in the field internship phase, and providing informed consent. Students who expressed a desire not to participate at any stage of the study were excluded.

This study was conducted in full compliance with the ethical principles of human research and received an ethics code from the relevant university's ethics committee. Before data collection, all participants were comprehensively informed about the research objectives and the process of participation, ensuring their involvement was entirely voluntary and informed. Written informed consent was obtained from all participants, which explicitly guaranteed their right to withdraw at any point, as well as the complete confidentiality of their data and the anonymity of their identity. All collected data were treated as strictly confidential and analyzed in an aggregated, group-based manner to protect individual identities. Finally, participants were acknowledged for their valuable contributions to the study. Data were collected using a three-part questionnaire. This included Demographic Information, covering age, gender, marital

status, and GPA, and Wells' Academic Success Inventory (ASI) (1989). This questionnaire has 39 items rated on a four-point Likert scale (ranging from "strongly agree" to "strongly disagree"), with each item scored 1-4. It covers areas such as general academic skills, teacher efficiency, career decision-making, extrinsic motivation, trust, personal adjustment, self-regulation, socialization, intrinsic motivation, and lack of anxiety. The total score can range from 39 to 156. The reliability of this questionnaire was reported as 0.76 using Cronbach's alpha in a study by Adib-Hajbaghery et al.[32] In our study, Cronbach's alpha was 0.77.

The Clinical Competency Assessment Questionnaire for Nursing Students by Ebadi et al. comprises 44 items, rated on a five-point Likert scale from "always" to "never." The domains covered by this instrument include: care management (17 questions), practical competence (eight questions), individual management (11 questions), patient-centeredness (four questions), and scholarship (four questions). The questionnaire's reliability was calculated by Ebadi et al. using a Cronbach's alpha coefficient of 0.95.[33] In the present study, the Cronbach's alpha coefficient was 0.94.

Initially, the researcher obtained a list of all final-year nursing students (those in their nursing internship phase) from the faculty's education department. Subsequently, all students completed the Demographic Information Questionnaire, the Academic Success Questionnaire, and the Clinical Competency Assessment Questionnaire. Following this, students participated in group educational sessions. These sessions consisted of six 60-minute sessions, held twice a week with a two-day interval between sessions. The training was delivered via lectures using a video projector in small groups of six or seven students. Students' questions were addressed during these lectures. At the conclusion of the educational intervention, students completed the questionnaires again (Figure 1).
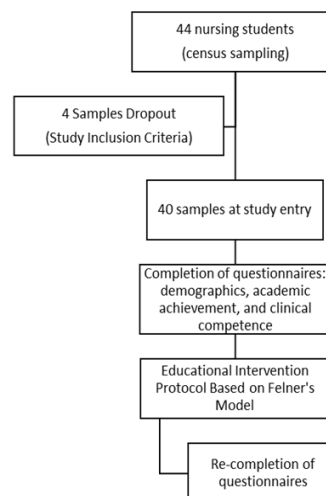

Figure 1 Flowchart of intervention implementation

The content of the educational interventions focused on social competence, based on Felner's Model, as referenced in the study by Bayrami et al.[34,35] The specific activities and the educational intervention protocol are detailed in Table 1.

The findings indicate that 21 participants (52.5%) were female nursing students, while 19 (47.5%) were male nursing students. The majority of students were in the 21 to 25 age group, and 36 individuals (90%) were single (Table 2).

Table 1 Educational intervention protocol based on Felner's Model

Ses-sions	Felner's model dimensionS	Contents of the sessions	Activities	Form of delivery
1	Cognitive dimension	Defining the importance of academic success and social skills. It will cover group rules and provide guidance on identifying dysfunctional thoughts and replacing them with positive ones.	This session will begin with an introduction to the group and a detailed explanation of group rules. We'll then delve into communication skills, social adjustment, and their overall importance.	
2	Cognitive dimension	Explanation of problem-solving skills and their steps.	It defines problem-solving skills and their processes, sharing colleagues' experiences of difficulties in communication skills and social adaptation, and solving them through problem-solving steps.	
3	Cognitive dimension	Explanation of decision-making skills and their steps.	Information processing and acquisition skills, decision-making skills, and summarizing topics related to the cognitive field.	Lecture
4	Behavioral dimensions	I am highlighting the three stages of inter-personal communication skills, emphasizing negotiation and conversation etiquette and listing common conversation mistakes.	Conversation skills, different social-helping behaviors, self-righteous behavior, skill areas, and summary of topics related to the behavioral area.	
5	Emotional dimensions	Asking for help, teaching the behavior of asking for help and its methods, and introducing strategies to deal with stress and relaxation techniques.	Emotion regulation skills, practical communication skills (such as creating positive emotions), feelings related to self-worth mental health (satisfaction with life), the definition of stress and its types, the introduction of coping strategies, relaxation techniques training classification of topics related to the emotional field.	
6	Motivational field	Teaching the skills of controlling negative emotions and creating motivation through the source of success in performance, verbal persuasion.	Motivational skills, including a sense of optimism or hope, moral development, and the concept of sufficiency and control of the processes of formation and maintenance of self-esteem, standards, and goals, value structure, the entirely related concept of possible self, and a summary of the topic related to the motivational field, final summary and answers to the questions of the participants.	

For data analysis, SPSS version 26 was used. Descriptive statistics, including mean (standard deviation) and frequency (percentage), were employed to characterize the demographic features of the participants. The Shapiro-Wilk test was used to assess the normality of the data distribution, and Pearson's correlation test was used to examine the correlation between the data. The comparison of students' academic success and clinical competency scores before and after the intervention was conducted using a paired-samples t-test.

3 Results

Table 2 Demographic characteristics of nursing students

VariableS	Group	Frequency	Percent
Gender	Male	19	47.5
	Female	21	52.5
Marital status	Single	36	90.0
	Married	4	10.0
Semester GPA*	Mean	17.73	
	SD	1.16	

*GPA: Grade Point Average

The Pearson correlation test showed that academic success was significantly correlated only with the previous semester's GPA (p = 0.038); in other words, students who had a higher GPA in the previous semester also achieved higher academic success. Academic success showed no significant correlation with other demographic variables (p > 0.05). Also, the clinical competence variable did not have a significant correlation with any of the demographic variables (Table 3).

Table 3 Correlation test results

Variables		Pearson Correlation Coefficient	P-value
Academic success	Gender	0.126	0.439
	Age	-0.054	0.739
	Marital status	-0.096	0.556
	Semester GPA	0.329	0.038
Clinical competency	Gender	-0.148	0.362
	Age	0.039	0.811
	Marital status	-0.205	0.204
	Semester GPA	-0.082	0.617

Results revealed a significant difference (p < 0.05) in the mean academic success scores only in the "lack of anxiety" domain when comparing scores before and after the social skills training. Although scores in other academic success domains—general academic skills, career decision-making, trust, and intrinsic motivation—increased after the educational intervention, this difference was not statistically significant (p > 0.05) (Table 4).

Table 4 Comparison of academic success scores of final year nursing students before and after intervention

Academic success	Group	Mean ± SD	T- statistics	P-value
General academic skills	Pre test	(3.41) 20.90	-0.99	0.328
	Post test	(3.26) 21.40		
Teacher efficiency	Pre test	(2.05) 8.37	0.408	0.686
	Post test	(2.53) 8.22		
Career decision making	Pre test	(1.80) 8.92	-0.771	0.446
	Post test	(1.64) 9.15		
Extrinsic Motivation	Pre test	12.87 (2.07)	0.218	0.828
	Post test	12.77 (2.29)		

	Group	Mean ± SD	T-statistics	P-value
Trust	Pre test	15.50 (1.99)	-1.29	0.203
	Post test	16.10 (2.02)		
Personal adjustment	Pre test	2.32 (0.69)	0.177	0.806
	Post test	2.30 (0.75)		
Self-regulation	Pre test	7.70 (1.47)	0.318	0.752
	Post test	7.62 (1.67)		
Socialization	Pre test	10.02 (1.91)	1.802	0.079
	Post test	9.35 (2.58)		
Intrinsic motivation	Pre test	14.15 (2.11)	-1.087	0.284
	Post test	14.62 (2.21)		
Lack of anxiety	Pre test	7.97 (2.08)	2.106	**0.042**
	Post test	7.27 (2.17)		

Furthermore, the results demonstrated a significant difference in the mean clinical competency scores within the "scholarship" and "individual management" domains before and after the social skills training. However, no significant difference was observed in the "care management," "practical competence," and "patient-centeredness" domains of clinical competency (Table 5).

Table 5 Comparison of clinical competency scores of final year nursing students before and after intervention

Clinical competency	Group	Mean ± SD	T- statistics	P-value
Care management	Pre test	(6.54) 73.32	-1.697	0.098
	Post test	(6.78) 74.85		
Individual management	Pre test	(5.66) 46.70	-2.112	0.041
	Post test	(4.77) 48.07		
Practical competence	Pre test	(3.10) 36.10	-0.364	0.718
	Post test	(3.52) 36.30		
Patient-centered	Pre test	18.55 (1.48)	-0.912	0.367
	Post test	18.77 (1.25)		
Scholarship	Pre test	15.12 (2.98)	-2.597	0.013
	Post test	16.15 (2.58)		

4 Discussion

This study was conducted with the aim of determining the effect of social adjustment on the academic success and clinical competency of nursing students. The findings indicate that social adjustment enhancement programs had a significant impact on reducing anxiety related to academic success among nursing students. However, these programs were not effective in other areas of academic success for these students. The findings also revealed that implementing these programs had a significant impact on the individual management and scholarship/research domains of clinical competency, but not on other domains of clinical competency. For instance, in the study by Shabestari et al., which examined social adjustment and academic achievement in dental students, no significant relationships were found among the components of adjustment, responsibility, and academic achievement. [5] Similarly, Sharifi-Sarasiabi et al.'s study found no significant relationship between overall adjustment scores and their dimensions with academic achievement, which aligns with the current research findings. [36] Arani et al.'s study also found no significant relationship between social adjustment and academic achievement among students. [29] Conversely, Tamannaeifar et al.'s research presented a different outcome, revealing a significant relationship between academic performance and adjustment. [37] Sujana et al.'s study also demonstrated a significant relationship between social adjustment and academic success. [38] Furthermore, Aghajari et al.'s findings, which showed that life skills training improved academic achievement in nursing students, [39] are inconsistent with the present study. The study suggests that final-year nursing students, having developed adjustment skills over four years, may not significantly benefit from social adjustment enhancement programs in terms of academic success. These programs may be more effective for first-year students facing greater challenges in adapting to the university environment. Furthermore, the findings indicate that social adjustment alone does not ensure academic success, as factors such as academic readiness, cognitive abilities, intrinsic motivation, and practical skills likely play a more critical role. [40] Thus, a singular focus on social adjustment may not substantially improve academic performance, underscoring the need for a broader consideration of academic and professional factors.

Ghafari et al.'s study showed a significant difference in clinical competency scores and their dimensions (care management, practical competence, individual management, patient-centeredness), except for the scholarship/research dimension, when comparing the beginning and end of the academic semester. [41] In Brazil, Leal et al. conducted 13 workshops for nursing students at a public higher education institution. They concluded that the training enhanced students' management knowledge and increased their management competency. [42] It is worth noting that improving social skills helps regulate emotions and feelings, which play a crucial role in maintaining healthy relationships. It also strengthens the ability to express and control emotions, fostering the capacity to cope with the emotions and feelings of others. [43] Another study has also stated that individuals who receive social competence training improve their emotional skills and learn to align with societal goals and respect others, thus functioning effectively in society. This is a significant indicator of social adaptation. [44]

Ebadi et al.'s study showed that as nursing master's students progress through their studies, their clinical competency in the scholarship/research domain also expands, and the importance of applying scientific and research knowledge in the clinical setting becomes clearer to them. [33] Consistent with the present research, Sedaghat et al. found that using a portfolio had a positive effect on increasing students' clinical competency compared to conventional methods. [45]

In the university setting, nursing students facing stressful workplace conditions benefit from seeking assistance from experienced ward nurses, instructors, and peers from other medical disciplines, fostering improved social interactions and adaptation. The study highlights that implementing social adaptation programs can enhance communication and adaptation skills, supporting better performance in interdisciplinary work teams and model-based nursing in clinical settings. Despite potential sample attrition due to the number of training sessions, no attrition occurred because sessions were scheduled to accommodate all participants from both groups. A key limitation of this study was its reliance on self-reported questionnaire responses, which may be prone to biases or affected by participant fatigue, potentially compromising data accuracy and reliability. Future research should involve larger sample sizes to improve generalizability and explore the effects of social adjustment training on outcomes such as attrition rates, academic motivation, and stress reduction among nursing students. It is recommended that adaptation skills programs be integrated into undergraduate nursing curricula, with implementation steps taught within the nursing process framework. Additionally, hospitals and medical centers should offer workshops on social adaptation skills for nurses and nursing students.

5 Conclusion

The results indicate that while the social adjustment enhancement program didn't impact nursing students' academic success, it was effective in improving their clinical competency. This suggests that such programs

can help boost the clinical abilities of nursing students. Social adjustment not only enhances interpersonal relationships but also strengthens students' management skills, decision-making capabilities, and teamwork. These improvements directly and positively influence the quality of care provided to patients. Therefore, nursing education programs should emphasize the development of social and communication skills to ensure students can perform effectively in complex and high-pressure clinical environments.

Declarations

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Artificial Intelligence Disclosure
The authors confirm that no artificial intelligence (AI) tools were used in the preparation of this manuscript.

Authors' Contributions
Esfandiar Baljani, Monireh Rezaei Moradali, and Mohammad Nouri contributed to the conception and design of the study. Data acquisition, analysis, and interpretation were carried out by Monireh Rezaei Moradali and Mohammad Nouri. The manuscript was drafted by Mohammad Nouri, while Esfandiar Baljani and Monireh Rezaei Moradali provided critical revisions for important intellectual content. Study supervision was conducted by Esfandiar Baljani.

Availability of Data and Materials
The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Conflict of Interest
The authors declare that there are no conflicts of interest.

Consent for Publication
Not applicable.

Ethical Considerations
Ethical approval was granted by the Ethics Committee of Islamic Azad University, Urmia, under the Code of Ethics IR.IAU.URMIA.REC.1403.006.

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