

Assessment of Nursing Students' Perception towards Group Learning Methods and its Effectiveness at Military Health Institute

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Abstract

Background: Group learning is an educational approach that emphasizes collaboration among students to enhance the learning experience. This method encourages individuals to work together, share ideas, and solve problems collectively, fostering a sense of understanding and promoting critical thinking. **The study aimed to** assess nursing students' perception towards group learning methods and its effectiveness to enhance adaption of group learning as a new education method at Military Health Institute. **Research design:** A descriptive cross-sectional study design was utilized to carry out this study. **Setting:** This study was conducted at El Galaa Military Health Institute. **Subjects:** A convenience nonprobability sampling consists of 150 females nursing students at El Galaa Military Health Institute was allocated to the current study. **Tools:** A self-administrated questionnaire consists of 2 tools; **Tool I:** Consisted of two parts: **Part 1:** Demographic data & **Part2:** Administrative questionnaires which concerned with students' perception towards group learning methods. **Tool II:** Group learning effectiveness questionnaire. **Results:** show that most participants (74.3%) have a high level of awareness towards group learning, with only a small fraction (3.4%) exhibiting low perception levels. In addition, the findings cleared that most participants (86.7%) have a high level of effectiveness towards group learning, with only a small fraction (3.4%) exhibiting low perception levels. **Conclusion:** Based on the findings of the current study, it can be concluded that most participants have a high level of perception regarding group learning methods and its effectiveness **Recommendation:** Further studies are necessary to carry out on a larger sample and in other setting for findings generalization.

Keywords: Group learning, Learning methods and Student perception

Introduction

Group learning, also known as collaborative learning, is a method that involves learners from diverse backgrounds working together to enhance understanding and develop essential skills. This approach fosters active participation, improves communication, and builds teamwork skills, leading to a more comprehensive learning experience. Group learning spans a wide range, from two students solving a problem to teams working on long-term projects (Agustina, 2022)

One of the primary benefits of group learning is the opportunity for students to engage in peer learning, tackle complex tasks, and build real-world skills. Properly structured group projects can reinforce skills relevant to both group and individual work, including breaking down complex tasks, planning and managing time, and refining understanding

through discussion (Rohm, Stefl, & Ward, 2021).

Interactions and discussions within groups allow students to construct new knowledge, place it within a conceptual framework, and refine their understanding. Moreover, group projects can help students develop skills increasingly important in the professional world, such as delegating responsibilities, sharing diverse perspectives, pooling knowledge, and holding each other accountable (Luft et al. 2022)

However, group learning also presents challenges. Ensuring equal participation can be difficult, with some students potentially dominating discussions while others remain passive. Coordination costs, including scheduling and decision-making, can consume time and energy. Instructors may find it challenging to teach process skills like

communication and conflict resolution (Yousif, & Suleiman, 2025).

To mitigate these challenges, clear guidelines on roles and responsibilities, peer assessment tools, and varied group activities can promote individual accountability. Additionally, instructors can model effective teamwork, enforce clear rules about electronic devices, and adjust timeframes to maintain focus (Ion, Díaz-Vicario & Mercader, 2024)

Recent research emphasizes the importance of creating supportive learning environments and integrating interactive approaches like small-group work to foster caring attributes. Nurse educators should integrate interactive learning methods to enhance students' knowledge, practical skills, and personal attributes through collaborative experiences. (Wong, 2025)

Significance of the study

Among the benefits of group learning method, studies have revealed an increased sense of responsibility for learning or engagement, the development of skills in communication and teamwork, the development of critical thinking for problem solving and decision making; better learning outcomes and the development of central professional competencies in the health area, such as clinical knowledge, general clinical skills, critical thinking, problem solving, continuous learning and responsibility (Da Rocha et al., 2018)

The international literature shows positive results of team learning in undergraduate Nursing teaching with students' satisfaction in team learning and improvement of problem-solving skills, clinical performance, and knowledge. At the postgraduate level, it collaborates for the early acquisition of critical thinking, development of communication skills, teamwork and knowledge of specialized clinical practice (Sakamoto et al., 2020). So it is necessary to evaluate the student's nurse's perception to recognize their assimilation to group learning methods.

Aim of the Study

This study was conducted to assess nursing students' perception toward group learning

methods and its effectiveness to enhance adaption of group learning as a new education method at Military Health Institute

Study Objectives:

- Evaluate nursing students' perception towards group learning methods
- Determine the effectiveness of group learning methods among nursing students.

Study Questions

Q1: what is the level nursing students' perception toward group learning methods?

Q2: what is effectiveness of group learning methods on nursing student achievement?

Subjects and methods

1-Research design

A descriptive cross-sectional study design was utilized to carry out this study. A convenience cross-sectional non-probability study involves collecting data from a readily available sample at a single point in time, without using random selection methods, where units are selected for inclusion in the sample because they are the easiest for the researcher to access (Nikolopoulou, 2023).

2-Study Settings:

This study was conducted at El Galaa Military Health Institute (the institute has two academic years of study with total number of students 150 females' students). It serves as a center for medical education, research, and specialized healthcare services. It consists of two main classrooms that contains a data show with a large lab for clinical training

3-Study Subjects

A convenience nonprobability sample of all nursing students (150 females nursing students 75 of them at the first year of study while the other 75 are from the second year of study) at El Galaa Military Health Institute

Inclusion criteria:

1. First year students to be completed 6 months of the academic year study since they spend the first 3 months in military preparation training.
2. Nursing students who agree to participate in the study.

Exclusion criteria:

- Nursing students who were not willing and disagree with participating in the study.

Methods of Data Collection: Data was collected by the researcher from nursing students using Self-administrated questionnaires consist of 2 tools

First Tool is Consists of Two Parts

1st part: Demographic data that includes nursing students' age, residence and year of study

2nd part: self-administrated questionnaire which concerned with Students' perception towards group learning methods.

- Questionnaire was developed by the researcher after revising current and relevant literature. This questionnaire consists of 5 main parts with 30 items that covers selected team group approaches (group discussion, brain storming, simulation, role play and case study) and concerned with, objective and benefits. with possible responses of 'yes', 'no', or 'unknown'. 'Yes' is assigned a value of 1 point, and 'no' or 'unknown' 0 points; the maximum possible score is 30.

Scoring system:

Each item of the questionnaire was observed, categorized, and scored into either yes =1 or no 'unknown'= **zero** on all items of the questionnaire. These scores were converted into percentage score as poor perception (less than 50%), and average perception (50% - 75%) and more than (75%) good level of perception (Mohammed et al., 2024)

Second Tool: Group Learning Effectiveness Questionnaire:

It was developed by the researcher after revising current and relevant literature review and was examined and reviewed by experts from different management and educational consultation at the academy. This questionnaire consists of 13 questions that covers items related to group learning methods effectiveness and its benefits with possible responses of 'agree', 'disagree', or 'don't know'. 'Agree' is assigned a value of 1 point, and 'disagree' or 'don't know' 0 points; the maximum possible score is 13.

Scoring system:

Each item of the questionnaire was observed, categorized, and scored into either agree =1 or disagree = **zero** on all items of the questionnaire. These scores were converted into percentage score as poor effect (less than 50%), and average effect (50% - 75%) and more than (75%) good level of effect (Mohammed et al., 2024)

Pilot study:

A Pilot study was conducted on 15 nursing students (10% of the sample under study) to test feasibility and applicability of the study tools, obtaining results was used as a guide to reconstruct the change needed in data collection tools. No major modifications were made so the pilot study sample was included in the study.

Ethical considerations:

An official permission to conduct the study was obtained from the Scientific Research Ethics Committee of Military Medical Academy. Participation in the study was voluntary, and subjects were given complete full information about the study and their role before signing the informed consent. The ethical considerations included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was not accessed by any other party without taking permission of the participants. Ethics, values, culture and beliefs were respected.

Statistical Analysis

Data was collected and subjected to statistical analysis. The mean value and the standard deviation (SD) of measured parameters were calculated using the Statistical Package for the Social Sciences (SPSS) statistical program version 27 (IBM Inc., Chicago, Illinois, USA). Comparison between the study groups was performed using an independent samples t-test. P value < 0.05 was considered significant.

Results

150 Nursing students were participated in the study.

Table (1) shows that the mean age of study students was 17.7 years, 50% of them were in the first year and the other 50% were in the second year. In addition, 53.3% of them lived in urban areas

Table (2) reflects the increased mean score of the different studied domains, as represented by a mean score of group discussion 80, brainstorming 83, simulation 87.5, role play mean score was 93.5 and case study 87 with a total mean score of 86, that suggests the positive perception of studied students regarding all learning methods

Figure (1) shows that most participants (74.3%) have a high level of perception, with only a small fraction (3.4%) exhibiting low perception levels. This suggests effective understanding or engagement with the assessed material among the participants.

Figure (2) shows that most participants (86.7%) have a high level of perception effectiveness towards group learning, with only a small fraction (3.4%) exhibiting low perception levels.

Table (3) reflects a consistent improvement across all perception scores from Year 1 to Year 2, with all comparisons showing statistically significant differences. This may reflect enhanced learning methods used or increased student engagement over time.

Table (4) shows that urban participants tend to have higher scores across all categories of perception compared to rural participants, but none of the differences are statistically significant. This suggests that residence does not have a strong impact on the measured scores in this study

Table (1): Socio-demographic Characteristics of Studied Participants (N=150)

Demographic data		N	%
Age	Mean(SD)	17.7 (1.61)	
	Min-Max	15-21	
Year of Study	1 st Year	75	50.0%
	2 nd Year	75	50.0%
Residence	Rural	70	46.7%
	Urban	80	53.3%

Table (2): Mean scores of nursing students perceptions towards group learning methods (n=150)

Teaching approach	Mean (SD)	Min- Max
Group Discussion score	80 (25.30)	0- 100
Brainstorming score	83 (27.22)	0- 100
Simulation score	87.5(22)	7- 100
Role play score	93.5 (14)	28- 100
Case study score	87(24)	20- 100
Total	86 (13)	45- 100

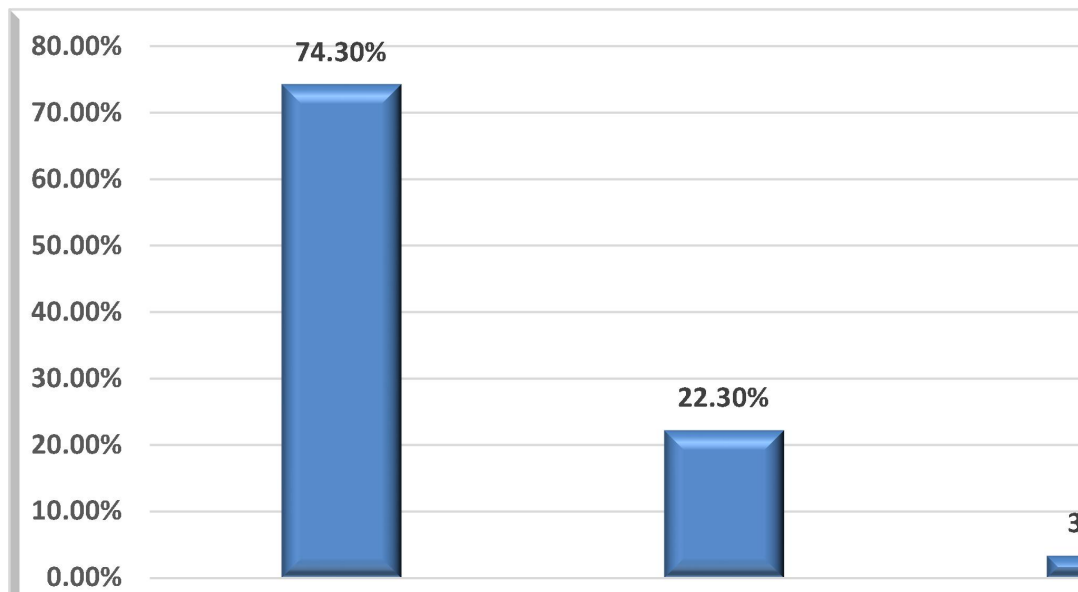


Figure (1): Perception towards Group learning methods level categories among the study group

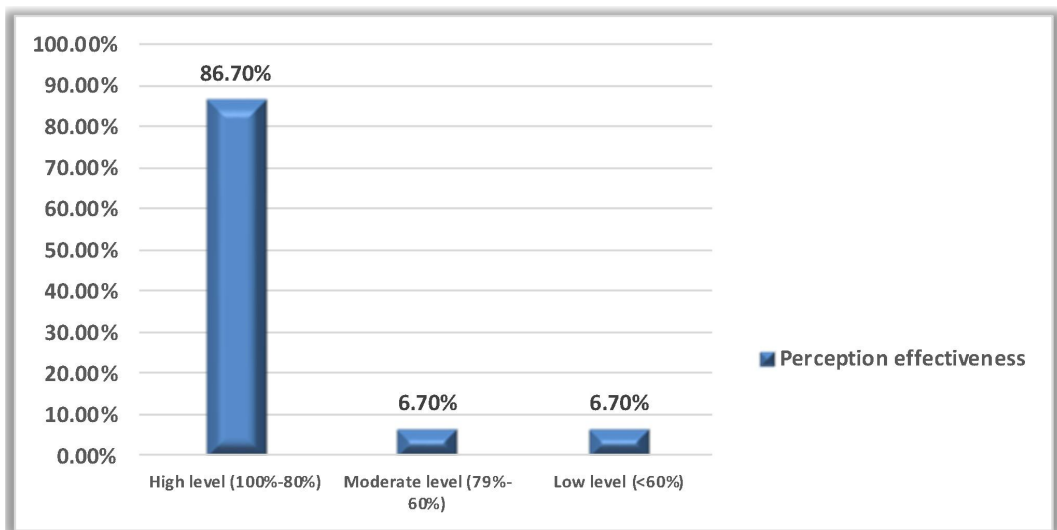


Figure (2): Perception effectiveness towards Group learning methods level categories among the study group

Table 3: Relation between subjects' perception scores and academic year

Teaching approach	year of Study				t-test p- value
	1		2		
	Mean	SD	Mean	SD	
Group Discussion score	66.6	27.5	93.5	12.7	<0.001*
Brain storming score	72.93	31.53	93.20	17.02	<0.001*
Simulation score	78.10	26.68	96.86	9.63	<0.001*
Role play score	90.95	16.12	96.10	10.91	0.024*
Case study score	83	28	92	18	0.031*
Total score	78.26	12.01	94.39	7.92	<0.001*
Perception effectiveness score	88.26	21.83	95.18	15.11	0.026*

*sig P- value

Table 4: Relation between the different perception scores and residency

Teaching approach	Residence				t-test p-value
	Rural		urban		
	Mean	SD	Mean	SD	
Group Discussion score	78.45	26.80	81.56	23.91	0.459
Brainstorming score	87.43	23.82	79.25	29.50	0.066
Simulation score	86.33	23.42	88.48	20.97	0.556
Role play score	95.00	12.66	92.23	14.96	0.222
Case study score	86	26	89	22	0.440
Total score	86.61	12.84	86.08	13.16	0.803
Perception effectiveness score	90.27	21.00	92.98	17.15	0.393

Discussion

Group-based learning is a collaborative instructional strategy where small groups work together to meet shared learning objectives. This method enhances skills applicable to both individual and collective tasks, such as task analysis, time management, and deepening understanding through discussions. However, it can also introduce unpredictability in problem-solving approaches. Challenges like coordination, varying knowledge levels, and time constraints may occur, but instructors can address these by thoughtfully designing tasks, providing clear instructions, and creating a supportive environment **Michaelsen, Knight, & Fink. (2023)** so, this study was conducted to assess nursing students' perception toward group learning methods and its effectiveness at El Galaa Military Health Institute

Regarding demographic data of the studied students, the current study represents that the mean age of studied students was 17.7 year; half of them were in the first year. In addition, more than half of them lived in urban areas. This findings supported by **Yang (2023)** who found that the mean age of the study participants was 19.8 and **Bagg, (2023)** who found that half of studied students had lived in urban areas. From the researcher point of view these demographic factors play a significant role in shaping learning experiences, engagement levels, and ultimately, educational outcomes.

As for nursing students' perception toward group learning, the current study findings show that most participants have a high level of perception, with only a small fraction exhibiting low perception levels. This suggests effective understanding of or engagement with the assessed material among the participants.

Group learning methods have gained significant attention in educational settings, particularly in nursing education. These methods are effective in promoting critical skills and are essential for nursing students. By enhancing analytical capabilities, decision-making skills, and fostering a collaborative spirit, these methods prepare students for the complexities of their future professional practice (**Yeung et al., 2023**)

The present study represents that most of the nursing students agreed that group learning methods promote analytical skills by requiring students to dissect complex issues and enhance decision-making abilities by simulating real-life scenarios. From the researcher point of view, these findings underscore the value of group learning methods in promoting analytical skills and enhancing decision-making abilities, preparing nursing students for the complexities they will face in their professional practice.

These results come in accordance with **Aflah, & Fajar, (2022)** findings proved that the implementation of group learning could promote students' active participation, improve their higher-order thinking, and increase motivation. The activity provides more opportunities to display their thinking, which in turn increases their positive attitude towards learning.

These findings are supported also by **Alberti et al. (2021)** who mentioned that group-based learning appeared to be helpful for students whose academic performance is weak; students mentioned that group learning is effective in developing communication and inter-professional collaboration competencies, as well as self-directed

Hill et al. (2020) also, concluded that compared to individualized learning, cooperation learning is more effective in promoting social

interaction, learner autonomy and learning success

But study by **Boso et al. (2020)** pointed out that, despite the positive impact of cooperative learning on students learning outcomes, related evidence (for example; relationship between cooperative learning and critical thinking) is still lacking in China and in a global context. Critical thinking is considered as one of the core competences of practicing nursing and is prerequisite for safe and high quality nursing care. It needs to be instituted during college year in order to meet various patients' needs in today's dynamic health care environment

In addition, nursing students in the present study agreed that group learning methods allow students to explore situations from multiple viewpoints, fostering understanding of diverse perspectives, enhances students understanding of the material and students feel more confident when discussing topics with peers, in addition, prefer group learning over individual study. This is agreed by **Shin (2021)** who found that group-based learning promotes self-regulation, communication, self-esteem, and responsibility. Findings emphasize the significant advantages of group learning methods in fostering diverse perspectives, enhancing understanding, and building confidence among nursing students

Furthermore, **Shin, (2021)** found that study students were able to elucidate some enjoyable and positive aspects of group work. They enjoyed teamwork, the support and encouragement of their peers, and valued the opportunity to work collaboratively and interact with other students. Through the collaborative aspects of work within their groups, students were able to gain insight into the learning styles and work practices of their peers. Some students felt that this in itself was a learning opportunity.

Regarding relation between students age and effectiveness of the different used learning methods, the current study reflects a consistent improvement across all perception scores from Year 1 to Year 2, with all comparisons showing statistically significant differences. From the researcher perspective the findings imply that age play a role in how effectively students engage with various learning methods. Older or more experienced students might have developed better

study habits, critical thinking skills, and a greater appreciation for collaborative learning

This could be supported by **Brod (2021)** who mentioned that students' age play an important role in the observed improvement in learning performance. In addition, **Dzaiy, & Abdullah, (2024)** explained that active learning strategies offer significant benefits across various age groups and educational settings.

As for residency, the study shows that urban participants tend to have higher scores across all categories of perception compared to rural participants, but none of the differences are statistically significant. This suggests that residence does not have a strong impact on the measured scores in this study. The researcher regarded these results as obstacles and frustrations that students in rural areas may encounter and could impact on their overall perception of active learning strategies. With recent advances in dissemination of information and presence of different Medias so, rural and urban areas are affected by the same manner.

This finding agreed by **Dina, Madidadizadeh, & Arshed, (2025)** whose study found that initial observations suggest that urban participants have higher scores across perceptual categories compared to rural participants as urban environments provide a wide array of multisensory experiences that could benefit cognitive process.

In addition, **Steinberg et al. (2023)** mentioned that urban residents may seem to score higher on perception tests. Urban areas often provide more access to education, healthcare, and cultural experiences, which could refine perceptual skills. Also, urban students show a more favorable view of perceived perception regarding learning strategies. A larger proportion of urban students consider their education to be "Highly Effective".

In general, in study conducted by at a University of Northan Tiwan to assess students' attitude toward cooperative learning indicated that implementing cooperative learning can help nursing educators access different cultures and institutional settings, foster critical thinking, problem solving abilities and team work skills (**Lee et al. 2025**).

Finally, the current study explores the demographic characteristics of nursing students and their perceptions of various group learning methods. The findings underscore the effectiveness of group learning methods in enhancing nursing education while highlighting the influence of demographic factors on student engagement and perceptions.

Conclusion:

Based on the current study's findings, it can be said that Based on the findings of the current study, it can be concluded that most of the nursing students (88.7%) prefer group learning over individual study. Also, 87.3% of them agreed that group learning fosters a sense of community among students. In addition, most of them (86.7%) have a high level of perception effectiveness towards group learning, with only a small fraction (3.4%) exhibiting low perception levels.

Recommendations:

Based on the current study's findings, the researcher recommended that Encourage all students to actively engage in group learning to maximize learning benefits, and that additional research be conducted on a larger sample and in different settings to allow for the generalization of findings.

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