



Family-Centered Care from the Point of View of Undergraduate Nursing Students Studying in Selected Public Universities: A Cross-Sectional Study

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Abstract

Background: The concept of family-centered care (FCC) is central to the care model and is an essential core principle of pediatric nursing.

Objectives: This study aimed to assess undergraduate nursing students' perceptions of FCC in selected government universities and examine differences in nursing students' perceptions of FCC based on gender and academic level.

Methods: A cross-sectional design was used, involving 124 eligible students. Data were collected using a validated Family-Centered Care Questionnaire (FCCQ), which had a Cronbach's alpha score of 0.90. Statistical package for social sciences (SPSS) version 25 was employed for data analysis, specifically for calculating means, standard deviations (SDs), frequencies, percentages, and conducting independent *t*-tests.

Results: The overall mean score of perceptions was 3.35 ± 0.76 . The "Family is the constant" dimension had the highest score (3.45 ± 0.91), while the "Developmental needs" dimension had the lowest score (3.26 ± 0.95). There was a significant difference in perceptions of FCC between male and female students ($t = -5.291, P < 0.001$) and between third- and fourth-year students ($t = 7.345, P < 0.001$).

Conclusions: It can be concluded that undergraduate nursing students had modest perceptions of FCC, and there was a significant difference in these perceptions based on gender and academic level. This study provides valuable insight into FCC, which can inform policy design and interventions in nursing education in Jordan. An educational program is recommended to improve undergraduate nursing students' perceptions of FCC.

Keywords: Family-Centered Care, Perceptions, Student's Perception, Nursing Students

1. Background

In the latter half of the 20th century, family-centered care (FCC) emerged in response to the growing recognition of the crucial role families play in caring for and maintaining the health of sick children (1). Research on the concept of FCC has significantly expanded across various fields, including nursing, education, and health policy (2-4). Considerable debate has also arisen in the literature regarding its definition, philosophy, core values, advantages, and challenges. For example, the Institute for Patient and FCC (5) defines FCC as a mutually beneficial relationship between healthcare professionals, patients, and families in the planning,

delivery, and assessment of care. In the context of palliative care, Gilmer et al. (6) defines FCC as the seamless continuation of efforts to meet the needs of patients, families, and the community in relation to terminal illnesses, facilitated through interdisciplinary collaboration. Terp et al. (7) emphasize communication as a crucial philosophy of FCC, as it shapes the transfer of information among parents, children, and healthcare professionals. Additionally, studies have shown that when healthcare providers adhere to FCC principles, parents report greater satisfaction with the care they receive (8, 9).

The core idea of FCC is that family members and healthcare professionals should work collaboratively to

meet the patient's medical needs (10). A patient's family provides significant psychological and emotional support, as well as stability, during the healing process (11). Moreover, family members are often involved in the care process, working alongside healthcare providers (12). Johnson and Abraham (13) highlighted that healthcare professionals emphasize the importance of therapeutic relationships, family interaction, and collaboration as essential aspects of patient recovery. Ultimately, the recognition that families play a critical role in all aspects of their patients' health, development, and learning is a common theme across professional discourse.

There is a growing body of literature that recognizes the importance of FCC (11, 14, 15). For example, Kokorelias et al. (11) noted that incorporating FCC helps expedite meeting patients' needs. Coyne (14) reported that patients with family members involved in their treatment tend to heal more quickly than those without family involvement. Additionally, Clay and Parsh (15) found that integrating FCC reduces the risk of medical errors and improves the overall quality of care and well-being of patients.

In Jordan, family and religious norms play a significant role in shaping the healthcare system. Family involvement in patient care strongly influences the planning and delivery of healthcare services among Jordanian patients (3, 16). The close emotional bonds between parents and their children are reinforced by Jordanian family traditions, norms, and religious values (3). As a result, parents are often willing and able to take on the role of primary caregiver in providing patient care. The collaborative care shared between family members and healthcare providers in Jordan further exemplifies the influence of family norms in the healthcare system (16). Consequently, a patient's family can assist with treatment while the patient is hospitalized. Moreover, implementing FCC within Jordanian families can offer significant benefits to patients, their families, nursing staff, and future nursing practitioners, making care more efficient and effective.

Today's pediatric nursing curricula emphasize healthcare delivery while integrating family-related knowledge, recognizing family members as crucial to the patient's recovery (17). Curriculum development should not only focus on understanding the patient as an individual but also involve family members in the patient's health crises, developmental stages, and overall healthcare journey (18). However, the educational preparation of nursing students requires revisions to clearly define FCC in academic settings and enhance its implementation in clinical practice.

Our study contributes valuable insights into the field by promoting knowledge about FCC and the importance of incorporating it into nursing curricula. It is essential that nursing schools integrate FCC into their programs to raise awareness and educate students about its significance. Previous studies in this field have often focused on the perceptions of female nursing students, neglecting the views of male students. Therefore, future research should assess the perceptions of both genders toward FCC and explore differences in perceptions based on demographic factors, such as gender and academic level.

Despite the recognized importance of FCC, there is a scarcity of research, particularly local surveys, addressing this topic. In Jordan, there is a general lack of studies investigating undergraduate nursing students' perspectives on FCC, especially regarding gender-based and academic-level differences. This highlights the need for comprehensive investigations into the perception levels of both male and female undergraduate nursing students, as well as a deeper understanding of how gender and academic level (3rd vs. 4th year) influence perceptions of FCC. This study aims to fill these research gaps and provide valuable data to inform future efforts in nursing education and practice.

2. Objectives

The present study has two primary objectives: (1) to assess the perception levels of undergraduate nursing students regarding FCC; (2) to examine the differences in undergraduate nursing students' perceptions of FCC based on gender and academic level.

3. Methods

3.1. Design

A cross-sectional research design was applied to all undergraduate nursing students who had completed a pediatric health nursing course at the Faculty of Nursing at Mutah University.

3.2. Sample Size

The sample size was calculated using G*Power 3.1.9.4 software, with a medium effect size of 0.3, α error probability of 0.05, and Power (1- β error probability) of 0.90. This resulted in a total sample size of 109 participants. A total of 124 eligible students (third- and fourth-year undergraduate nursing students enrolled in the Faculty of Nursing at Mutah University) were selected as the study sample using a convenience sampling approach.

3.3. Study Criteria

The inclusion criteria for participants were as follows: (1) being a Jordanian citizen, (2) being a third- or fourth-year nursing student, and (3) having completed a pediatric health nursing course. Students in their first and second years, students who refused to participate in the study, and students who had previously participated in similar research were excluded from the study.

3.4. Study Instruments

The study utilized self-generated codes for the English version of the questionnaires, which consisted of two sections. The first section was the socio-demographic questionnaire, a self-report instrument designed to collect general information about the students, including age, gender, religious status, and academic level. The second section contained the Family-Centered Care Questionnaire (FCCQ), a self-reported tool that assesses perceptions toward FCC (19). The FCCQ comprises 45 questions representing nine components of FCC. Each item on the FCCQ offers five response choices, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). A higher mean score reflects a more positive perception of FCC. Bruce and Ritchie's (19) study indicated that the Content Validity Index (CVI) of the tool was strong, with a score of 0.80. Additionally, the tool demonstrated high reliability, with a Cronbach's alpha coefficient of 0.90, making it valid and reliable for use in the present study.

3.5. Data Collection Procedure

At baseline, all undergraduate nursing students (3rd and 4th academic levels) were invited to participate in this study. The authors obtained a list of enrolled students from the university's admissions and registration unit. Before data collection, the first author invited prospective participants via E-mail and the university's educational platform. All authors were involved in distributing and collecting the completed questionnaires. A comprehensive explanation of the study, including its purpose, benefits, duration, procedure, confidentiality, and participants' rights, was provided to all participants. Each participant received an information sheet and had the opportunity to ask any questions related to the study. Written informed consent was obtained from every participant.

Each participant was provided with a packet containing the structured socio-demographic questionnaire and the FCC questionnaire, both in English. For data analysis purposes and to ensure

confidentiality, each packet was assigned a unique code number. Participants were given 20 to 30 minutes to complete the questionnaires.

3.6. Ethical Consideration

This study was approved by the Ethical Committee of the Faculty of Nursing at Mutah University (Reference: SREC-10-2021). It was conducted in accordance with the ethical principles for research involving human subjects, derived from the Nuremberg Code and the Declaration of Helsinki. At the outset, we adhered to the following ethical principles: (1) autonomy, ensuring participants had the freedom to choose whether to participate in the study; (2) beneficence, ensuring that harm was avoided, wellness was promoted, and participants were free from harm; and (3) justice, maintaining participants' right to privacy and confidentiality.

Participants were informed about the study's purpose and nature, their voluntary participation, their right to withdraw at any time, how confidentiality would be maintained, and how the study findings would be published. Data were coded, and all questionnaires were securely stored in a locked file cabinet. Informed consent was obtained from all participants prior to their involvement in the study.

3.7. Statistical Analysis

The collected data were analyzed using the statistical package for social sciences (SPSS) version 25. All authors conducted screening and checks for errors, missing data, and response inconsistencies. Descriptive statistics, including mean, standard deviation (SD), frequencies, and percentages, were utilized to describe the socio-demographic profiles of the participants. Continuous variables were presented using mean and SD, while categorical variables were expressed as frequencies and percentages.

To explore differences in perception scores for FCC based on gender and academic level, an independent *t*-test was employed. Additionally, the normality of the data was assessed using skewness and kurtosis values. In this study, skewness and kurtosis values between -2 and +2 were considered to indicate that the assumption of normality was not violated.

4. Results

4.1. Socio-demographic Profiles of Participants

A total of 124 undergraduate nursing students participated in the study. Table 1 presents the socio-

demographic characteristics of the participants. The mean \pm SD of the participants' age was 21 ± 0.87 years, with an age range of 20 to 25 years. Among the participants, 28.2% were male, and 71.8% were female. In terms of religion and educational level, 99.2% of the participants were Muslims, and 67.7% were in their third year of study.

Table 1. Socio-demographic Profile of Participants (n = 124)^a

Socio-demographic Profile	Values
Age	21 \pm 0.87 (20 - 25)
Gender	
Male	35(28.2)
Female	89(71.8)
Religion	
Islam	123(99.2)
Christian	1(0.8)
Educational level	
3rd year	84(67.7)
4th year	40(32.3)

^a Values are expressed as mean \pm SD (range) or No. (%).

4.2. Undergraduate Students' Perceptions of Family-Centered Care Participants

Mean scores for the overall perceptions of FCC and its domains are detailed in Table 2. The total mean score for overall perceptions of FCC was (M = 3.35, SD = 0.76). Among the domains, "Family is the constant" had the highest mean score (M = 3.45, SD = 0.91), while "Developmental needs" had the lowest mean score (M = 3.26, SD = 0.95) in terms of perceptions of FCC.

Table 2. Perceptions of Family-Centered Care (n = 124)

FCC Domains	Mean \pm SD
Family is the constant	3.45 \pm 0.91
Parent/professional collaboration	3.29 \pm 0.86
Recognition family individuality	3.37 \pm 0.92
Sharing information	3.33 \pm 0.94
Developmental needs	3.26 \pm 0.95
Parent-to-parent support	3.35 \pm 0.86
Emotional/financial support	3.34 \pm 0.93
Design of healthcare system	3.34 \pm 0.86
Emotional support for staff	3.40 \pm 0.93
Overall mean	3.35 \pm 0.77

Abbreviations: FCC, family-centered care; n, number of participants; SD, standard deviation.

4.3. Differences in Nursing Students' Perceptions of Family-Centered in Terms of Gender and Academic Level

As shown in Table 3, the independent sample *t*-test revealed a significant difference between male and female students in the overall mean scores of perceptions toward FCC ($t = -5.291$, $P < 0.001$), as well as between students in the 3rd and 4th academic years ($t = 7.345$, $P < 0.001$). Additionally, differences in perceptions regarding all domains of FCC based on gender (male vs. female) and academic level (3rd vs. 4th year) were also statistically significant ($P < 0.001$).

5. Discussion

To the author's knowledge, this is the first study providing data on undergraduate nursing students' perceptions of FCC at a government university in Jordan. The objectives of this research were to assess the level of perception toward FCC among undergraduate nursing students and to examine the differences in perceptions based on gender and academic level.

In this cross-sectional study, the domain "family is the constant" received the highest score. This finding is consistent with the study by Alabdulaziz and Cruz, which also showed that "family is the constant" was rated the highest by participating students (9). This result could be attributed to cultural norms and concerns regarding the future care of family members, which significantly influence Jordanian nursing students' perceptions of this domain. In Arabic cultures, the role of the family in patient care is considered crucial and directly impacts the planning and delivery of healthcare services (20). Arabic society views the family as an essential component in maintaining a healthy and well-balanced community (21). A previous study found that parents and children in Arabic-speaking nations share a strong, trustworthy relationship, and suggested that the deep emotional attachment may be rooted in the cultural and religious elements of Arabic society (20).

In this study, the domain of "Developmental Needs" received the lowest rating among the Jordanian undergraduate nursing students. Several factors may explain these results. First, insufficient supervision from clinical instructors is one of the challenges faced by undergraduate nursing students. Second, the absence of a dedicated space or a comfortable setting where parents can gather and share their experiences privately and securely may also contribute. Lastly, undergraduate nursing students may not have had enough time to encourage parents to discuss their concerns with others who have similar experiences, which is a crucial aspect

Table 3. Differences in Nursing Students' Perceptions of Family-Centered Care in Terms of Gender and Academic Level (n = 124)

FCC Domains	Gender		Academic Level	
	t-Value	P-Value ^a	t-Value	P-Value ^a
Family is the constant	-5.699	0.001	6.015	0.001
Parent/professional collaboration	-5.497	0.001	5.532	0.001
Recognition family individuality	-4.271	0.001	6.413	0.001
Sharing information	-3.395	0.001	5.739	0.001
Developmental needs	-3.697	0.001	4.988	0.001
Parent-to-parent support	-5.466	0.001	5.498	0.001
Emotional/financial support	-4.351	0.00	5.337	0.001
Design of healthcare system	-4.937	0.001	5.705	0.001
Emotional support for staff	-4.558	0.001	5.931	0.001
Overall domains	-5.291	0.001	7.345	0.001

Abbreviations: FCC, family-centered care; n, number of participants; t, independent sample test.

^a P < 0.001.

of FCC. This result aligns with a previous study conducted in Saudi Arabia by Alabdulaziz and Cruz, where Saudi Arabian female nursing students similarly rated the "Developmental Needs" domain as the lowest (9). Fitzgerald and Ward (22) also found similar results in their research.

In the present study, a significant difference was observed between gender and the overall perception of FCC domains. One possible explanation for why female Jordanian nursing students rated FCC domains more positively than male students is that the majority of participants in the current study were female. This may be influenced by the fact that the proportion of female staff in Jordan is higher than that of male staff, with a gender ratio of approximately 60/40 (23), which reflects the proportion of graduating male and female nurses in Jordan. Regarding the differences in perceptions of FCC by academic level, this study revealed that 4th-year undergraduate nursing students had more positive perceptions of FCC compared to 3rd-year students. These findings are consistent with a previous study (24) that found graduate nursing students had a more positive attitude toward involving families in nursing care than undergraduate students.

In contrast to the results of this study, Alabdulaziz and Cruz in Saudi Arabia found that 3rd-year nursing students had more positive perceptions of FCC compared to 4th-year students (9). This discrepancy could be attributed to the fact that 4th-year Jordanian undergraduate nursing students have more opportunities for family interaction during patient care and have completed nearly all their theoretical and clinical courses. This greater exposure may enhance their skills in performing nursing procedures and

addressing FCC in clinical practice. Additionally, 4th-year students may feel less anxious and more confident in caring for patients and families, as they are more familiar with various aspects of nursing care and have gained more experience in dealing with families during their clinical training courses.

5.1. Limitations

This study has several limitations. Firstly, the cross-sectional design restricts the ability to establish causal relationships. Secondly, the use of self-administered questionnaires may increase the likelihood of reporting biases, such as social desirability bias. Lastly, the sample was limited to 3rd- and 4th-year nursing students from a single governmental university in the southern region of Jordan. Therefore, the findings may not be generalizable to other contexts or regions within Jordan.

5.2. Conclusions

The current study aimed to explore undergraduate nursing students' perceptions of FCC at Mutah University in the southern region of Jordan and examine how gender and academic level influenced these perceptions. The findings revealed that Jordanian nursing students had a modest perception of FCC. They identified "family is the constant," "emotional support for staff," and "recognition of family individuality" as the most important FCC domains in pediatric clinical settings. Conversely, the "developmental needs" domain was perceived as the least important, largely due to various challenges. The study also found that gender and academic level significantly impacted students'

perceptions of FCC, whereas age did not have a notable effect. The results suggest that undergraduate nursing students need to transition from a care prescriber role to a more participatory role, working collaboratively with families in patient care.

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Footnotes

Authors' Contribution: Conception and design: H. O.; acquisition, analysis and interpretation of data: A. S. and H. O.; drafting the article: H. O. and H. O.; revising it critically for important intellectual content: H. O., A. S., and H. O.; approved final version of the manuscript: All authors.

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Data Availability: Data supporting the findings and conclusions are available upon request from the corresponding author.

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