

FACTORS IMPACTING NURSING STUDENTS WORKING with CHILDREN with HEMATOLOGICAL and ONCOLOGICAL MALIGNANCIES DURING THE COVID-19 PANDEMIC

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Abstract

The aim of the present study was to investigate factors related to experiences faced by nursing students as they complete their pediatric clinical rotation during the COVID-19 pandemic. A qualitative research design was used in this descriptive study. Nineteen fourth-year nursing students were included in the sample. Inductive content analysis were used to assess the data for content analysis. The Consolidated Criteria for Reporting Qualitative Research (COREQ) was used to structure and report the study. Content analysis revealed two main themes, two categories of factors impacting nursing students working with children with hematological and oncological malignancies were extracted from the data. The two main themes included factors related challenges of clinical experience and facilitators for clinical experience. Factors related challenges of clinical experience consisted of four categories, including being a pediatric patient, physical problems, communication barrier, and negative feelings. Factors related facilitators for clinical experience consisted of four categories, including child's behavior, student's feeling, atmosphere in the ward, and characteristic of pediatric nurses. The COVID-19 pandemic increased negative feelings and experiences of nursing students in clinics, impacting their ability to cope with particularly challenging situations.

Keywords: Pandemic, Nursing Students, Pediatric Nursing, Clinical Practice.

COVID-19 PANDEMİSİ SIRASINDA HEMATOLOJİK VE ONKOLOJİK HASTALIKLARI OLAN ÇOCUKLARLA ÇALIŞAN HEMŞİRELİK ÖĞRENCİLERİNİ ETKİLEYEN FAKTÖRLER

Özet

Bu çalışmanın amacı, hemşirelik öğrencilerinin COVID-19 pandemisi sırasında pediatrik klinik rotasyonlarını tamamlarken karşılaştıkları deneyimlerle ilgili faktörleri araştırmaktır. Bu betimsel çalışmada nitel araştırma deseni kullanıldı. Örnekleme 19 dördüncü sınıf hemşirelik öğrencisi dahil edildi. İçerik analizi için tümevarımsal içerik analizi kullanıldı. Çalışmayı yapılandırmak ve raporlamak için Konsolide Niteliksel Araştırma Raporlama Kriterleri (COREQ) kullanıldı. İçerik analizi iki ana temayı, hematolojik ve onkolojik hastalıkları olan çocuklarla çalışan hemşirelik öğrencilerini etkileyen faktörlerine ait iki kategoriye ortaya çıkardı. İki ana tema, klinik deneyimin zorluklarıyla ilgili faktörler ve klinik deneyim için kolaylaştırıcıları içeriyordu. Klinik deneyimin zorluklarıyla ilgili faktörler, pediatrik hasta olmak, fiziksel problemler, iletişim engeli ve olumsuz duygular olmak üzere dört kategoriden oluşmaktaydı. Klinik deneyimi kolaylaştırıcılar ilgili faktörler, çocuğun davranışı, öğrencinin duyguları, servisteki atmosfer ve pediatri hemşirelerinin özellikleri dahil olmak üzere dört kategoriden oluşmaktaydı. COVID-19 salgını, kliniklerdeki hemşirelik öğrencilerinin olumsuz duygular ve deneyimlerini artırarak özellikle zorlu durumlarla başa çıkma becerilerini etkiledi.

Keywords: Pandemi, Hemşirelik Öğrencileri, Pediatri Hemşireliği, Klinik Uygulama.

1. INTRODUCTION

The aim of nursing education is to graduate nurses with the appropriate knowledge, skills, attitude, and values to deliver a professional level of care. To achieve this goal, it is widely acknowledged that the clinical practicum is an essential complement to theoretical education (1). In its 2018 standards, the Commission on Collegiate Nursing Education described the clinical practice experience as “planned learning activities in nursing practice that allow students to understand, perform, and refine professional competencies at the appropriate program level” (2). Sometimes, the difficulties experienced by nursing students during the practicum ultimately lead to developing professional knowledge, lifelong learning, critical thinking, and problem-solving skills. One area that is often the most challenging for nursing students is the pediatric rotation. This article explores that challenge, and whether it was exacerbated by the COVID pandemic (3-5).

There are a number of articles in the literature documenting that the pediatric clinical practice experience causes more stress for nursing students than other clinical rotations due to the vulnerability of the population (5). A recent qualitative study by Liang et al. found that the skills acquired by nursing students in Taiwan during their first experiences in pediatric clinical practice were challenging yet achievable (6). In Chen’s study, clinical experiences in the pediatric unit provoked the most concern, and impacted morale (7).

Why pediatric clinical practice is more stressful

As compared to other practicums, the pediatric rotation is considered the most stressful for various reasons (9). These include the types of illness, child’s age and stage of development, their response to hospitalization and care needs according to stage of development, children's perceptions of illness, and the limited communication skills of children. Given these stressful factors, research has shown that some nursing students have ineffective coping skills, difficulties in preparing and administering drugs, and fear of making mistakes and hurting the children (9). In other studies focused on the pediatric rotation, causes of stress for nursing students were linked to dealing with professional staff and families, expecting trust and approval from their instructor, adjusting to communicating with children causing pain to a child, and caring for children with cancer (4, 8,10).

Although there are many studies detailing oncology experiences (4,10), we are not aware of any published research on the experiences of nursing students working with children who have hematological and oncological malignancies in pediatric units during the COVID-19 pandemic. Consequently, this qualitative study was conducted in order to guide nursing instructors in both updating the content of the pediatric nursing curriculum while the pandemic era continues, and identifying the factors related to challenges and facilitators for clinical experience and needs of students to improve their clinical practice during this time.

2. MATERIALS AND METHODS

2.1. Design

The aim of this study was to investigate factors related to the experience of nursing students on pediatric clinical rotation during the COVID-19 pandemic. A qualitative research design was used in this descriptive study. The Consolidated Criteria for Reporting Qualitative Research (COREQ) was used to structure and report the study (10). (See Supplementary File 1).

2.2. Research team

The research team consisted of three professional academic researchers and one register nurse working in pediatrics inpatient clinics who interviewed the participants. Initially one researcher viewed with interviewer about how interview could be done. The texts were analyzed according to inductive content analysis by researchers.

2.3. Settings and participants

The research took place between October 2020 – January 2021, and was conducted in the Gulhane Training and Research Hospital. One hundred forty-five (145) fourth-year nursing students were in their internship, which consists of six rotations, including the Department of Pediatrics. The duration of the Pediatric Hematology and Oncology clinical placements lasted six weeks. Generally, 23 or 24 nursing students participate in each rotation. During the study, 23 nursing students were in the unit, but four students did not want to volunteer. The remaining 19 students were included, allowing for data saturation, and this involved students working all shifts, namely morning and afternoon, four days/week, for a period of six weeks.

Inclusion criteria for the study were defined as: (a) Nursing students who had finished their internship in Pediatric Hematology and Oncology inpatient clinics during the COVID-19 outbreak, (b) Nursing students who agreed to participate in the study. Exclusion criteria for the study were nursing students who did not agree to participate in the study.

2.4. Data collection

The Nursing Students Information Form (NSIF) and Interview Questions Form (IQF) were used in the current study as the outcome measures. The NSIF was used to determine the descriptive characteristics of the nursing students, including age, gender, having a person in his/her family with hematological and oncological malignancies, and having worked in an adult oncology-hematology inpatient clinics earlier. The IQF consisted of two open-ended questions, which were based on the literature (4,6). The qualitative data were gathered via open face-to-face interviews performed by the same interviewer and lasting ~30–45 minutes with 30 minutes being average following the last day of the six week Pediatric Hematology and Oncology inpatient clinic rotation. The interview focused on the interview questions listed in Table 1. The same interviewer digitally recorded participants' interviews in the seminar room of the pediatric service.

Table 1. Interview Questions Form

IQ1. Describe which factors evoked negative responses to your experience in caring for children with hematological and oncological malignancies during the COVID-19 pandemic.

IQ2. Describe which factors evoked positive responses to your experience in caring for children with hematological and oncological malignancies during the COVID-19 pandemic.

2.5. Data analysis

Interviews were recorded digitally and transcribed verbatim. The texts were analyzed according to inductive content analysis, which included: (i) open coding, (ii) creation of categories, and (iii) abstraction (11). In the first step, open coding, researchers took notes, and added headings to the text as they read through it. The written material was read again by the two researchers, independently of each other, and they wrote as many headings as necessary in the margins to describe all aspects of the content. Then, the researchers coded the data, and codes frequencies were calculated.

The second step, creating categories, involved generating a code list in which the codes were compared. The authors discussed which categories included the the same codes, collaborated until they reach a consensus, and generated themes of the students' experiences. The sub categories were derived from reading the raw data.

As for the last step, abstraction, each category was named by using content-characteristic words developed by researchers. Themes of similar events and incidents were grouped together.

2.6. Trustworthiness

The trustworthiness of our study was established in accordance with the paradigm described by Lincoln and Guba, namely determining credibility of the researcher, dependability, transferability and confirmability (13).

- (i) Credibility of the researcher involved inviting three participants to inspect whether or not this study represented their experiences for the review.
- (ii) To establish dependability, the researcher analyzed the data and randomly took one of the interviews, and analyzed and compared the original coding fifteen days later. Then, the researchers took another of the interviews randomly, and invited one peer researcher to evaluate the intercoding reliability between researchers.
- (iii) To ensure transferability, transferability was obtained by description of data-rich.
- (iv) To evaluate confirmability, the researcher reviewed the interviews recorded daily during the process of the research, in an effort to restore neutrality to our data.

Incomplete or inconsistent findings were identified for clarification and further discussion. In addition, by using peer debriefing, data were repeatedly reviewed and discussed by researchers.

2.7. Ethical Considerations

The study protocol was approved by Gulhane Non-Invasive Research Ethics Review Board (Decision No: 2020-512). All the participants were informed about the aim and method of this study by the researcher and gave written informed consent. The study was carried out following the principles of the Declaration of Helsinki.

3. RESULTS

The characteristics of the participants are shown in Table 2. The two main themes derived from the interview questions had already been derived from the research questions. For each of the two main themes, there are eight categories, and 27 subcategories (Table 3).

Table 2. Characteristics of nursing students (n=19)

Age		
Mean (SD), Median (Min.-Max.)	21 (5.7)	21 (20-23)
Gender (n, %)		
Female	15	79
Male	4	21
Having someone with hematological and oncological malignancies in her/his family (n, %)		
Yes	2	10.5
No	17	89.5
Worked in the adult oncology-hematology inpatient clinics in an earlier rotation (n, %)		
Yes	10	52.6
No	9	47.4

Table 3. Factors Related IQ Asked of The Students And Categories, Themes And Subcategories Formed in The Content Analysis

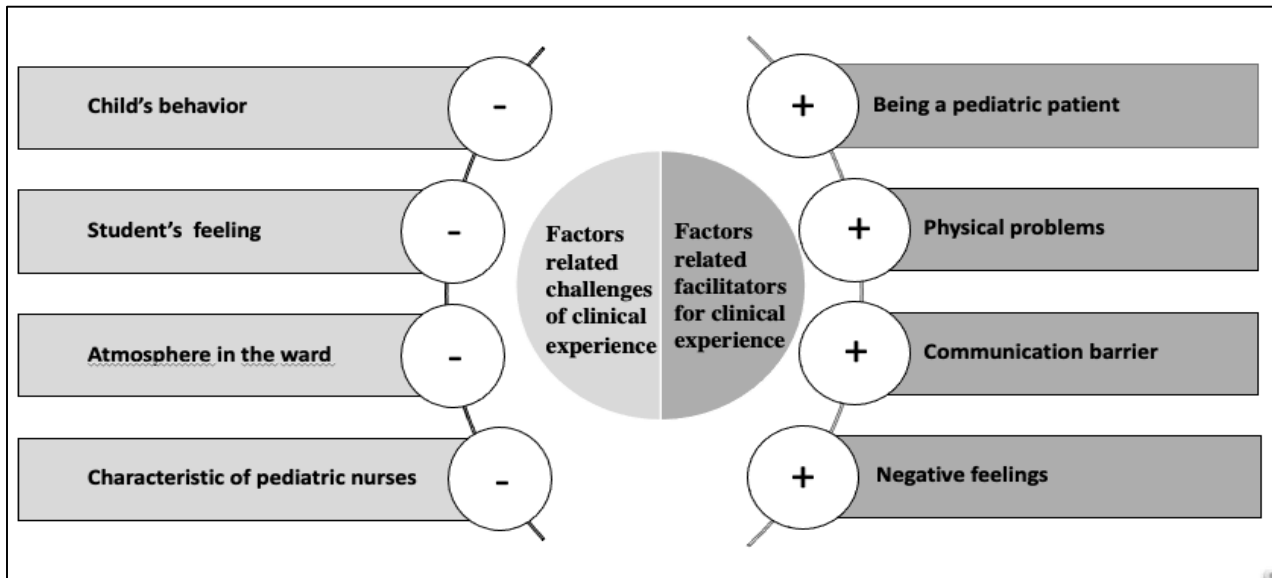
Theme	Categories	Subcategories
T1. Factors related challenges of clinical experience	Being a pediatric patient	Lack of experience Fear Crying Refusal
	Physical problems	Fever Fatigue Pain
	Communication barrier	Foreign language Reluctant to communicate with nursing students about fear of COVID-19 Wearing mask Limited time in the room
	Negative feelings	Sadness Fear Thinking of spreading COVID-19 to the child and families, and loved ones
T2. Factors related facilitators for clinical experience	Child's behavior	Good-humored Friendly Willingness to play with her/him
	Student's feeling	Lucky Feel like a hero Proud to be a nursing student
	Atmosphere in the ward	Good relationship between nursing student and nursing staff Cooperation between NI and nursing staff Feeling a part of the unit
	Characteristic of pediatric nurses	Primary nursing care Positive and encouraging feedback by nurses Mentoring by nurses earning a Masters of Science in Pediatric Nursing Degree Programs

IQ: interview question; NI: nursing instructor; T: theme

First IQ: Which factors evoked negative responses to your experience in caring for children with hematological and oncological malignancies during the pandemic?

Two main themes, “challenges for clinical experience”, “facilitators for clinical practice experience”, were related factors which impacted nursing students (Figure 1).

Figure 1. Research themes and categories



Theme 1. Factors related to challenges of clinical experience

Factors related to the patient/caregiver were mentioned by nursing students as one of the challenges of clinical experience. The four categories are listed in Table 3, and all of them, along with the 14 subcategories were part of the Challenges of Clinical Experience category.

Being a pediatric patient with malignancy

Nursing students expressed difficulties with their lack of experience in caring for children during the pandemic.

One nursing student stated the following:

“The children were afraid of us because we were wearing double masks, using visors and we could spend little time. I was very sorry that the patient always cried every time I entered the room and asked me to leave the room each time.” (NS11)

Physical symptoms

The students expressed how the pediatric patients with cancer were impacted by their physical symptoms. The sub-theme, namely fever, fatigue, and pain, is apparent in the following statements:

“My patient, whom I cared for, was neutropenic and frequently had fever and was fatigued. Even when I asked, ‘how are you’, he could not talk to me.” (NS12)

Communication barrier

High quality communication is important for peace of mind, hopefulness, feeling of acknowledgment and comfort (13-15). Nursing students could experience stress to utilize therapeutic communication skills in practice (16). Two participants reported insufficient communication skills of the child and caregiver, with sub-themes, such as language barriers, and patient’s and caregiver’s fear.

“One of the patients in the inpatient clinic was a 6-year-old Syrian girl with leukemia. I did not understand what she meant because she spoke Arabic. Her mother also spoke little English. (NS4)

The issue of insufficient communication skills was linked mostly to wearing a mask.

“Because body language is very important in communicating with children, talking to them with a smile is not the same as smiling while wearing a mask. My 4-year-old patient was looking at me with fearful eyes every time I entered the room. I felt like a monster.” (NS7)

Negative feelings

This theme involved sadness, fear, thinking of being a contaminant source for children and their families, and one’s own family and friends. The statements from one participant included:

“The two mothers stated that they were very worried because their children were hospitalized during pandemic. They also said they didn't want anyone but their primary nurse to enter the room. They were really right, but we had to be there as nursing students.” (NS2)

Second IQ: Which factors evoked positive responses to your experience in caring for children with hematological and oncological malignancies during the pandemic?

Theme 2. Factors related facilitators for clinical experience

In this category, most of the nursing students stated factors related to child’s behavior, nursing student’s feeling, the atmosphere in the ward, and characteristic of pediatric nurses (Table 3).

Child’s behavior

The students expressed the child’s characteristics sub-themes as good-humored, and friendly, willingness to play with her/him.

“Initially, she didn't want to talk to me, but after a week, she got used to me and I was very happy. Despite her daughter's illness, her mother said she was strong and friendly. She stated that she had a lot of friends before she got sick.” (NS16)

Student’s feeling

The majority of the students expressed feeling lucky, and feeling like a hero. They were proud to be working in the unit.

“I feel lucky to be in the clinic. We will be graduate nurses after one more semester. The effect of the pandemic seems to continue. I will at least have experience when I graduate.” (NS14)

Atmosphere in the ward

The majority of the students experienced good relationships with staff nurses, primary nursing care system, long-term unit placements, and characteristic pediatric nurse provided by the staff nurses.

One participant stated:

“The nurses welcomed us and explained the procedures to me, alongwith the reasons while accompanying them in the nursing care during the busy periods of the clinic. I can say I learned a lot.” (NS5)

Pediatric nurse models

Most of students stated they observed good pediatric nurse models provided by the nursing staff.

One participant stated:

“Most of the nurses were in the Masters of Science in Pediatric Nursing. They were always in contact with our faculty members in Pediatric Nursing and made the link between unit and faculty” (NS18).

4. DISCUSSION

To our knowledge, the present study is the first to describe nursing students' experience in pediatric clinical practice of caring for children with hematological and oncological malignancies during the COVID-19 pandemic. The study explored challenges for clinical practice, including working with children with malignancy, children's feelings, physical symptoms, communication skills of the children or caregiver and nursing students, facilitators of clinical experience.

Nursing students experience challenges working children, but they have additional stresses related to caring for children with cancer (4,8). A survey by Mirlashari et al. refers to one student who mentions, "The first day of my presence in the children cancer unit was the hardest day of my educational period" (3). These results are supported by other studies confirming that most nursing students find being in the pediatric oncology clinic emotionally challenging (3). The present study's finding is largely similar to Mirlashari's study in which nursing students stayed in pediatric oncology unit, but differs in that participants in our study stayed in the clinic for six weeks. However, long placement did not change the feelings of nursing students. As the pandemic continues, sharing challenging experiences may be reduced somewhat via online meetings with clinical teachers and nursing instructors during the pediatric clinical practicum (17).

Illness and hospitalization can create crises for children (8). This is especially true for children who have cancer, and need to be hospitalized. In addition, the pandemic can amplify the psychological health and well-being of children and families (17). Wearing masks, sometimes using visors and spending less time in patient room could be more stressful for children in hematology and oncology units.

The issue of how wearing masks may impact children has been addressed in the literature. In Spitzer's article on the impact of wearing masks in school, three problems that need to be confronted include impaired face recognition and identification, impaired communication, and blocked emotional signaling (18). Forgie stated the fear factor among young children when physicians wear surgical masks and face shields, they determined that mostly children would choose physicians in face shields rather than a surgical mask (19). In another study, participants stated that children were more fearful of mask-wearing clinicians (30). Similarly, students stated that they had negative experience with these same precautions.

The Oncology Nursing Society has recommended to use of personal protective equipment, including a disposable gown, during care, delivery, and administration of hazardous cancer drugs. There should also be protection for the eyes, such as a full face piece air purifying respirators, and double standard exam gloves, or single standard exam gloves for the hands (21). When these preventions are necessary, children who need to be hospitalized should be advised prior to their coming to the hospital that this attire may be worn by health professionals (22).

Physical symptoms of childhood cancer are common problems, and learning to manage them can pose challenges for nursing students. Nursing students experience negative experiences related to the physical symptoms of children (24). In other studies, children reported that they had pain resulting from diagnostic procedures and treatment (24,25). Li et al. mentioned children with cancer reported, "I don't know why I often had fever. I wondered whether they knew how painful it is, the needle is so big!" (23). Similarly, previous study (24), whereby nursing students reported that physical problems (mostly pain) that the children experienced during treatment were impeding factors. It is apparent that students need education about symptom management in children with cancer.

During the pediatric rotation, children's communication skills and dealing with caregivers may cause stress for nursing students (4). One communication barrier may be caused by challenges in relating to foreign patients whose native language differs from the nurse's. In a study by Davies et

al., 47% cited language barriers (24). This is an issue, where Syrians are temporarily protected, and have free access to the full range of healthcare services. In a review, one of the three main challenges experienced by Syrians under temporarily protection is the language barrier as they attempt access to healthcare (25). Our results are consistent with the study of Davies (24), which suggests that pediatric health care providers would benefit from knowing how to access interpretation services at the hospital.

In the pediatric oncology population, restrictions such as social distancing rules, and limited access to the unit may be more stressful for both children and health care providers. Nevertheless, it is suggested that physical isolation, limited outpatient visits, limited time in the room and if possible, phone, digital and video communication and use of appropriate personal protection equipment should be prioritized for all children with cancer who undergo treatment (25). In our current study, because of these restrictions, both the caregiver and nursing students are relying more heavily on digital communication.

Research has illustrated that when nursing students are on rotation in the pediatric oncology unit, they often have negative feelings or experiences (7,9). Similarly, Kostak reported nursing students experienced negative feelings in working with pediatric cancer patients (9). In that same study, one student stated that “I was afraid to hurt the child I was caring for. I was afraid to approach him/her even to get information” (9). The pandemic has added even more stress (28). Given that fear and anxieties are linked to student’s clinical practice performances, it is important that nursing programs consider how to ensure that students are prepared to cope with this challenging environment during the pandemic.

The clinical field is an essential for preparing student nurses for their professional role (3). During the pandemic, some studies focused on enabling positive emotions in nursing students (28,30). Similarly, Chen reported the most important support for nursing students comes from ward nurses in the practicum environment (7). Moreover, the positive feelings of nursing students about their clinical experience were related to making their own decisions to pursue clinical practice.

In this study, there were several limitations. First, since nursing students were sampled from a single hospital setting, the result may not be generalizable. Second, the sample was not homogeneous in terms of gender. In the current study, there were substantially more female students than male students. Hence it would be very interesting to view both female and male nursing students related their experience in a pediatric oncology-hematology unit.

5. CONCLUSIONS

In addition to the normal stresses of pediatric units, the current study showed that the COVID-19 pandemic increased the negative feelings and experiences of nursing students in clinics, and impacted their ability to cope with challenging situations. We understand the issues that students face in learning the best ways to communicate with children who have cancer, as well as their caregivers while sometimes facing language barriers, and having to wear a mask. Thus, we suggest that pediatric nursing education should include approaches to facilitate caring for these children who are hospitalized during the pandemic. Another suggestion for nurse instructors is to include courses on how to communicate with children who have cancer. Communication courses could involve wearing a mask in a simulation laboratory, an approach thought to be useful for decreasing the anxiety of nursing students and communication barriers before clinical practice.

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