RESEARCH ARTICLE

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Challenges Faced by Cancer Patients during the COVID-19 Pandemic, a Vision for the Future: A Qualitative Study

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Abstract

Objective: Cancer is a disease that affects various aspects of patients' lives. The COVID-19 pandemic has presented numerous challenges and difficulties for cancer patients, exacerbating their already vulnerable conditions. Identifying the challenges these patients face can be a practical step toward improving their quality of care in future pandemics. This qualitative study aims to identify the challenges cancer patients encounter during the COVID-19 pandemic. **Method:** This is a qualitative study with a content analysis approach. Participants included 16 cancer patients hospitalized at Tabriz Shahid Ghazi Hospital in 2020. Sampling was conducted purposefully, and interviews were continued until data saturation was achieved. All interviews were recorded and transcribed at the earliest opportunity. The data were analyzed using content analysis based on the Lundman and Graneheim method. **Results:** Data analysis led to the identification of four categories of challenges faced by cancer patients during the pandemic: Mental derangement and fear (fear of premature death, fear of contracting COVID-19, fear of disease recurrence), ineffective nurse-patient communication (personal protective equipment and distant care from nursing stations), economic instability (difficulties in providing for the family's livelihood and increased medical expenses), and reduced access to services (Contracting of infection among doctors and nurses and redirection of resources and services to COVID-19 patients). Participants expressed that these challenges were additional to their pre-existing difficulties and were intensified by the COVID-19 pandemic. **Conclusion:** Team support and interdisciplinary collaboration can be beneficial in addressing mental derangement and severe fears and solving problems comprehensively. Using various methods to facilitate safe and continuous communication between nurses and patients aside from their beds can give patients a greater sense of calmness. Financial facilitations can alleviate pressure on patients, and planning and communication strategies for accessing care and treatment services during a pandemic should be organized in advance.

Keywords: Cancer- COVID-19- pandemic- coronavirus

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Introduction

The COVID-19, first discovered in December 2019 in Wuhan, China, has rapidly spread worldwide [1]. The disease encompasses a range of symptoms, from mild signs to severe pneumonia, acute respiratory distress syndrome, septic shock, and multi-organ failure [2]. The risk of severe symptoms is higher in vulnerable patients who contract the infection [3].

Cancer patients are at higher risk among vulnerable individuals than those without cancer [4], as malignancy and cancer treatments suppress the immune system [5]. Studies have shown that cancer patients who contract COVID-19 experience worse outcomes than non-cancer individuals with COVID-19 [6]. The Chinese Center for Disease Control and Prevention reported that out of 72,314 confirmed COVID-19 cases by February 11, 2020, 107 (0.5%) had cancer, and 6 (5.6%) of them died, indicating a higher mortality rate compared to the overall COVID-19 mortality rate (3.2%) [7]. A study in Italy also demonstrated that, among 355 deceased individuals, 72 (20.3%) had active cancer [6].

In addition to the increased susceptibility and mortality rate in cancer patients with COVID-19, their psychological well-being is adversely affected during this time, leading to anxiety and depression [8]. Among 326 Chinese cancer patients, 282 (86.5%) reported anxiety and fear of COVID-19 and the worsening of their disease, 220 (67.5%) experienced anxiety, and 243 (74.5%) reported depression. A notable characteristic of these individuals was delaying or abandoning their cancer treatment [9]. In contrast, the prevalence of anxiety and depression in

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healthy individuals is 16.5% and 28.8%, respectively [10], and during non-pandemic conditions, anxiety and depression rates in cancer patients range from 10% to 20% [11]. Moreover, it is worth noting that Italian adolescents aged 15 to 21 diagnosed with cancer during the COVID-19 period identified their parents' concern about their condition as the greatest source of psychological pressure [6].

Multiple studies indicate that cancer patients face numerous difficulties and challenges during infectious disease pandemics [12, 13]. A systematic review demonstrated that cancer patients during the COVID-19 pandemic encountered challenges such as hospital closures, resource constraints, delays in screening, national quarantine, financial and social instability, isolation, psychological and emotional problems, and Patients' reluctance to use healthcare services due to the fear of infection [14]. Another review study revealed that cancer patients experienced problems in four dimensions during the COVID-19 pandemic, including reduced screening and initial diagnoses, increased advanced cancer cases, and elevated mortality rates [15]. Additionally, another study reported challenges faced by these patients during the pandemic, such as decreased cancer services and surgeries, delays in radiotherapy and rescheduling, cancellation of in-person visits, disruption in facility provision and supply chain, and lack of personnel availability [16]. Study of Kakunje and etal showed that majority of children with cancer who developed covid-19 had mild symptoms and recovered uneventfully. Chemotherapy should not be delayed in children with active cancer[17].

However, it is essential to note that the challenges and difficulties experienced by these patients vary depending on the healthcare services provided and the cultural context of each community. Limited qualitative research has been conducted in this area, and it appears that studying the challenges faced by cancer patients during the COVID-19 pandemic may reveal new issues. This study suggest strategies to mitigate the problems these patients face in future waves of infectious diseases, such as COVID-19, by identifying the challenges experienced by cancer patients and attracting the attention of policymakers to this issue.

Materials and Methods

Design

This qualitative study employed a conventional content analysis method. Conventional content analysis is used in studies that describe a phenomenon when predefined categories are not present and when theories or texts about the phenomenon are limited [18].

Participants

The research field for this study was Shahid Ghazi Tabatabai Hospital, located in East Azerbaijan province, in the city of Tabriz, northwestern Iran. The sampling was conducted using a purposive method. The inclusion criteria involved individuals hospitalized at Shahid Ghazi Hospital during the COVID-19 pandemic and diagnosed with cancer. Participants were given the freedom to withdraw from the study at any time if they wished to do so. The first three participants were selected based on their rich experiences regarding the challenges and problems they faced during the COVID-19 pandemic and their ability to share their experiences. After analyzing the interviews of these individuals, subsequent participants were selected to contribute to further developing the extracted concepts from previous interviews and addressing the questions that arose during the earlier analyses. In this study, while adhering to the principles of purposive sampling, efforts were made to sample individuals with maximum diversity, including age, gender, and work experience. Ultimately, 16 individuals participated in this study, all with cancer (Table 1).

Data collection

Data collection was conducted through in-depth, semi-structured, face-to-face interviews. The interviews took place at agreed-upon times and locations with the participants' involvement. The interviews were conducted in private rooms at Shahid Ghazi Tabatabai Hospital. The interviews started with a general question asking about the participants' challenges and difficulties during the COVID-19 pandemic based on their experiences. Following inquiries, such as "*What challenges have you faced so far?"* was asked to obtain more information and clarification from the participants' statements. Probing questions, such as *"Could you elaborate more on this?"*, *"Can you provide an example?"* or *"What did you mean by this concept?"* were asked based on the participants' responses. The interviews varied from 35 minutes, and data collection continued until saturation was reached. Two additional interviews were conducted to ensure data saturation. All interviews were audio-recorded and later transcribed.

Data analysis

The data analysis was conducted using a Conventional Content Analysis approach, following the steps proposed by Lundman and Graneheim [18]. Initially, the interviews were handwritten on paper for a general understanding and then digitally typed. The interviews were reviewed multiple times to identify meaningful units and broken down into smaller, meaningful ones. The codes were then repeatedly reviewed to establish subcategories and main categories based on semantic similarity. Finally, the researcher and participants reached a shared understanding of the categories through further re-readings. Additionally, the researcher tried to minimize their preconceptions during the data analysis process. All stages of text coding were managed using MAXQDA software.

To establish the trustworthiness of the data, four criteria of acceptability, credibility, confirmability, and transferability were utilized [19]. Continuous engagement with the research topic and data was maintained to determine the acceptability of the data. The extracted codes were also shared with some participants, and their opinions were considered. An external expert familiar with qualitative research was involved in establishing the credibility of the data, and there was an agreement regarding the process and findings. To ensure the

confirmability of the results, all activities, including the research process and the details of the obtained findings, were accurately documented and reported. Furthermore, to determine the transferability of the data, the obtained results were shared with two nurses who were not part of the study but had similar positions to the study participants, and their agreement was confirmed.

This study was approved by the Research Ethics Committee of Tabriz University of Medical Sciences, Iran (IR.TBZMED.REC.1400.910). All participants were provided with necessary information about the study and voluntary participation, and written informed consent was obtained from all of them for conducting interviews and recording them. They were also assured that the recorded information would remain confidential.

Results

The findings of this study were obtained from interviews with 16 participants, including 7 women and 9 men, all of whom had been diagnosed with cancer during the COVID-19 pandemic. The mean age of the participants was 48.4 ± 3.3 years. The participants had various types of cancer and were hospitalized in different departments of the hospital (Table 1).

From the data analysis, 310 coders and six categories of challenges for cancer patients were identified, including Mental derangement and fear (fear of premature death, fear of contracting COVID-19, fear of disease recurrence), ineffective nurse-patient communication (personal protective equipment and distant care from nursing stations), economic instability (difficulties in providing for the family's livelihood and increased medical expenses), and reduced access to services. (Table 2)

Mental derangement and fear

One of the main themes extracted from the subcategories obtained through participant interviews was mental derangement and fear, which manifested in various forms across three subcategories: fear of premature death, vaccination anxiety, and fear of contracting the disease.

Fear of Premature Death

Most participants expressed concerns that the spread of COVID-19 has increased their fear of dying soon. They feel that their immune system is relatively weak, making them vulnerable to COVID-19, and they believe that if they were to contract the virus, it would lead to their death. Participant number 8, a 28-year-old woman, stated the following regarding this matter: *"Contracting COVID-19 felt like a death sentence to many of us. I would hear stories from relatives and neighbors about someone getting COVID-19 and dying. I consider myself weaker than them and already have an underlying illness, so if I get COVID-19, I believe I will die. In that case, who will take care of my children? It feels like I'm going to explode."*

Participant number 3 stated: *"I thought that I would get better with treatment, but now I think death will come to me sooner rather than later. I go to sleep every night with this thought, thinking that these are the last days of my life."*

Table1. Participant Characteristics

Characteristic	Number (Percentage)
Gender	
Female	7 (43.75%)
Male	9 (56.25%)
Marital Status	
Single	4 (25%)
Married	12 (75%)
Type of Cancer	
Myeloid Leukemia	3 (18.75%)
Lymphoid Leukemia	4 (25%)
Colorectal Cancer	2 (12.5%)
Stomach Cancer	2 (12.5%)
Ovarian Cancer	2 (12.5%)
Breast Cancer	3 (18.75%)
COVID-19 Infection	
Yes	4 (25%)
No	12 (75%)

Non-compliance with standard precautions by acquaintances and fear of infection

Another issue that participants frequently mentioned was their concern and fear of their companions' negligence in using personal protective equipment (PPE). Participant 2 said this: *"Another problem is that when they gather companions to bring boiling water, they don't wear*

Table 2. Main Categories and Subcategories Resulting from Data Analysis

Categories	Subcategories
Mental derangement and fear	Premature death anxiety
	Lack of adherence to standard precautions by others and fear of infection
	Fear of disease recurrence
Ineffective nurse-patient communication	Personal protective equipment
	distant care from nursing stations
Economic instability	Financial difficulties in providing for the family's livelihood
	Increased healthcare expenses
Reduced access to services	Infection among healthcare professionals
	The focus of facilities and services on COVID-19 patients

masks. We become worried that we might get infected. I also worry about my daughter when she goes to fetch boiling water. Previously, I used to go for check-ups 2 to 3 times a year, but since the emergence of COVID-19, I haven't gone for check-ups due to the presence of other individuals who do not adhere to health precautions and do not wear masks."

Regarding the fear of COVID-19 vaccination, Participant number 4, a 51-year-old man, said: *"I heard from my neighbors that many people who got the vaccine developed blood clots and died. I didn't want to get the vaccine at all, but after the second dose, I had a high fever. I was terrified and thought I was dying. Gradually, my condition improved with medication."*

Fear of Disease recurrence

Some participants believed that COVID-19 could cause a recurrence of their existing illnesses. Many patients who had experienced mild to severe symptoms of COVID-19 reported worsening their cancer symptoms, leading them to associate it with COVID-19. Participant number 7, a 25-year-old woman, shared the following experience: *"After contracting COVID-19, I had various severe symptoms that didn't improve, and I realized that my white blood cells, red blood cells, and platelet count had decreased, worsening my overall condition. Damn COVID-19 for making me worse when I was getting better."*

Participant number 5 said: *"Given the current situation, I'm always worried about my illness getting worse. I have no hope for recovery because COVID-19 is always around and could infect me again."*

Barriers to Nurse-Patient Communication

Another significant theme derived from participants' statements was the barriers to nurse-patient communication, which manifested in two subcategories: personal protective equipment (PPE) and distant care from nursing stations.

Personal Protective Equipment (PPE)

Participants identified using PPE as a factor contributing to ineffective communication between patients and nurses. Participant number 6, a 61-year-old man, stated: *"A nurse was wearing three masks, and I was scared and wore two masks. The sound was unclear, and I couldn't understand what they said."*

Participant number 8 stated: "Some of the nurses wore shields and N95 masks, but they didn't have enough explanations for us about our or themselves infections. I was always confused."

Distant care from the nursing station

Participants emphasized that nurses had a minimal presence for care and medication administration due to fear of contamination, both for themselves and patients. They were primarily stationed at nursing stations rather than being present at the patient's bedside. Participant number 9 mentioned: *"Whenever I called for nurses or nursing assistants while needing assistance, it was challenging to find them because they were less accessible and mostly stationed at nursing stations. They were also afraid of either us or themselves getting infected. Once my serum wasn't functioning properly and it was bleeding. It took about an hour for someone to come and fix it."*

Financial Instability

As indicated by the interviews, other significant themes and challenges faced by cancer patients during the COVID-19 pandemic were financial instability and economic conditions. This theme was identified within two subcategories: family livelihood and medical expenses.

Family Livelihood Challenges

Most participating patients expressed that the cost of living had increased and that the COVID-19 pandemic had adversely affected their businesses, causing difficulties in meeting their daily expenses. Participant number 11, a 38-year-old woman, stated: *"My husband owns a men's salon, but since COVID-19, the government has been shutting down everything every day, and people are afraid to come to the salon. His income has significantly decreased. He can't even cover the shop's rent and household expenses. Our problems have multiplied."*

Participant number 2 stated: *"I can't work myself. My older son is the breadwinner of the family. Now, due to COVID-19, the restaurant has no customers and he has been sent on leave. We are having trouble making ends meet."*

Rising Medical Expenses

Another challenge highlighted by most participants was the high cost of medical treatment. Some medications were unavailable, forcing them to use alternative sources or purchase drugs from people who sell scarce medicine. Additionally, they incurred substantial transportation expenses to reach healthcare facilities. Participant number 1 said: *"The doctor prescribed me a foreign medication, but we couldn't find it anywhere. Finally, we found someone who used to work at a pharmacy but now sells rare medications. He sold it to us at a high price."*

Participant number 7 said: *"During the COVID-19 pandemic, the prices of many things increased several times due to the shortage of equipment and medicines. I couldn't afford chemotherapy drugs and had a hard time finding them."*

Reduction in Access to Services

Based on the analysis of interviews and participants' statements during the COVID-19 pandemic, it was found that patients had reduced access to clinics, medical centers, chemotherapy drugs, and healthcare personnel. Receiving services for these patients had become challenging compared to everyday circumstances. Participant number 6 stated: *"Since COVID-19, it has become much harder to get an appointment with a doctor. I feel stressed when we wait in the clinic or hospital because of my condition. I worry that I might receive chemotherapy drugs late or contract the virus from other patients."*

In this regard, two themes emerged: Contracting of infection among doctors and nurses and the focus on

COVID-19 patients.

Contracting of infection among doctors and nurses

According to patients' opinions and interviews, during the COVID-19 pandemic, many doctors and nurses themselves contracted the virus. This led to a staff shortage in various healthcare settings, including clinics and medical centers, reducing access to services compared to normal conditions. Participant number 7 expressed their thoughts on this matter, saying, *"I had a physician whom I visited for monthly check-ups. One day, I heard that he had contracted the virus. I was very upset and didn't know what to do. Later, I sadly learned that he had passed away due to COVID-19. May he rest in peace."*

The Focus of Facilities and Services on COVID-19 Patients

Another challenge faced by these patients during the COVID-19 pandemic was the diversion of attention, resources, and screening toward the diagnosis and treatment of COVID-19. Attention to symptoms and signs related to cancer was diminished, and more energy was focused on combating COVID-19. As a result, access to facilities and medical services related to the primary illness was neglected, and patients did not feel adequately cared for. Patient number 5 expressed their experience: *"When I was in the inpatient ward, most of the focus was on finding COVID-19 cases. Whenever someone coughed, they thought it was COVID-19, and all the attention was on COVID-19 tests. It felt like everyone was only concerned about COVID-19, and we were getting ignored."*

Discussion

This study examined cancer patients' challenges and issues during the COVID-19 pandemic. Based on the perspectives of the participants in this study, cancer patients challenges during the COVID-19 pandemic can be categorized into four main categories: Mental derangement and fear (fear of premature death, fear of contracting COVID-19, fear of disease recurrence); ineffective nurse-patient communication (personal protective equipment and distant care from nursing stations); economic instability (difficulties in sustaining the family's livelihood and increased medical expenses); and reduced access to services.

One of the main findings of this study was the severe distress and anxiety experienced by cancer patients during the COVID-19 pandemic. This distress manifested in individuals as fear of death, infection, and disease recurrence. The study conducted by Bandinelli et al. demonstrated that cancer patients have higher rates of psychological disorders. During the COVID-19 pandemic, mental distress exacerbates due to various fears, including contracting the new virus and the fear of disease progression resulting from deficiencies in clinical care [20]. Furthermore, another study reported a higher mortality rate among cancer patients who contract COVID-19, and older Individuals, who have a history of smoking, have underlying medical conditions, and have active cancer are at higher risk and experience greater fear [21]. In this regard, a study showed that cancer patients contracting COVID-19 face multiple challenges and fear disease recurrence [22]. Therefore, it is crucial to pay attention to the mental derangement and fears of cancer patients during COVID-19, and they should receive support from nurses, interdisciplinary team members, and the patient's family.

Another finding of this study was the ineffective nurse-patient communication during the COVID-19 pandemic among cancer patients, which was identified based on the participants' perspectives, highlighting the personal protective equipment and supervising patients at nursing stations as contributing factors to this ineffective communication. The study by Elsa et al. in Italy demonstrated that the personal protective equipment is one of the barriers to effective nurse-patient communication [23], masks muffled voices, and impacts communication [24]. Another study also showed that non-verbal communication has decreased during the COVID-19 pandemic, and face-to-face and close interactions at the bedside have become challenging [25]. Therefore, it is essential to strengthen more effective communication methods during pandemics to ensure comprehensive patient care.

One of the main findings of this study, categorized as an essential challenge based on cancer patients' perspectives, is economic instability. The participants mentioned increased difficulties due to their financial situation and the economic impact of the COVID-19 pandemic. They expressed that the economic recession has made it challenging for them to sustain their livelihoods. These findings align with the study by Khalil et al., which highlighted the adverse economic conditions, economic recession, and increased unemployment among cancer patients during the COVID-19 pandemic [26]. Another aspect mentioned by the participants was the financial burden of medical expenses due to the scarcity and increased prices of medications, which is also discussed in the study by Thaduri et al. [27]. Therefore, it is necessary to pay attention to and support cancer patients in meeting their financial expenses during the pandemic, including for infectious diseases such as COVID-19.

Another finding of this study was the reduced access to services, including the unavailability of clinics, healthcare facilities, and nurses during the COVID-19 pandemic among cancer patients, as reported by the participants. In this regard, the study by Maluchnik et al. demonstrated a decrease in access to cancer diagnosis and treatment during the COVID-19 pandemic, highlighting the need for remote medical care and necessary counseling [28]. Another study also showed a significant reduction in cancer screening, visits, treatments, and surgeries depending on the type of cancer and the location of service provision [29].

In conclusion, based on the study's findings, it can be concluded that cancer patients experience significant Mental derangement and heightened fear during infectious disease pandemics such as COVID-19. They require support from an interdisciplinary team that addresses their challenges comprehensively. Using various methods to facilitate safe and continuous communication between nurses and patients, particularly in bedside settings, can

provide greater peace of mind for patients. Considering the financial facilities and economic support for these patients during the emergence of another disease can alleviate their financial burden. Planning and providing information on accessing care and treatment services during pandemics should be predetermined to ensure better support for cancer patients.

Author Contribution Statement

All authors contributed equally in this study.

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Ethical Approval

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Competing Interest

All authors have no conflicts of interest

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