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# THE LIVED EXPERIENCE OF PATIENTS WITH HEMATOLOGICAL CANCER AFTER TREATMENT: AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS

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## ABSTRACT

The research aimed to investigate the effect of haematological cancer and its treatment on patient's different aspects of life. The lived experiences were examined using an Interpretative Phenomenological Analysis (IPA). The purposive sampling strategy was used and 6 participants were selected from Pakistan. An open-ended semi-structured interview protocol was developed after a literature review and focus group discussion. It covered topics like diagnosis, treatment, coping mechanisms, support systems, and life post-treatment of the patients. Participants were assigned pseudonyms to maintain their anonymity in the data analysis and reporting. Data were collected through the Social Media app. Voice recordings of the interviews were transcribed, converting spoken words into written text. NVivo 12 software was used for Interpretative Phenomenological Analysis. The textual data were imported into the N Vivo software. Using NVivo 12's coding feature, the researcher initiated identifying and generating initial codes. An inductive approach was followed, enabling the emergence of themes and patterns directly from the participants' accounts. Graphic representation of the data was done through word trees, word clouds and graphics. Five superordinate themes were identified: Reactions towards disease, challenges during disease, social support, coping mechanisms and personal growth after treatment. Several sub-themes emerged from the narratives of the participants which highlighted the emotional, physical and social sufferings they encountered during their journey from the diagnosis to the treatment of cancer. Implications for the clinicians and caregivers were discussed.

**Key words**: Lived Experience, Hematological Cancer, Interpretative Phenomenological Analysis IPA, Challenges, Social support, Health professionals

## INTRODUCTION

Hematological cancer is defined as a broad group of diseases that affects the blood and bone marrow (Allart-Vorelli et al., 2015). Every year, 250,000 people are diagnosed with leukaemia (Rodriguez-A, et, al., 2007). Blood cancer is divided into three types: leukaemia, lymphoma, and myeloma, which primarily affect the growth, functioning, and production of white blood cells, red blood cells and platelets. Fast-growing blood cancer is referred to as acute and slow-growing referred to as chronic cancer (Jagadale et al., 2022; Rodriguez-Abreu, et, al., 2007). Available treatment modalities for Hodgkin lymphoma encompass chemotherapy, radiation therapy, and stem cell transplantation. The outlook varies depending on variables such as the cancer's stage, the patient's age and general well-being, and the attributes of the cancerous cells (Mayo Clinic, n.d.; Lymphoma Research Foundation, n.d.).

### Treatment of Hematological Cancer

The treatment of blood cancer is extensive and long-term. Improvement in survival rates has been noted in several countries such as Austria, Europe, and the United States (Treatment for haematological cancer, 2020). Stem cell transplant is found to be effective in treating abnormal growth of blood cells, is a complex medical procedure that demands meticulous patient selection, donor compatibility assessment, and vigilant management of potential complications, including infections and graft-versus-host disease. These stem cells can either originate from a compatible donor or the patient's own body (National Marrow Donor Program, 2022). Once introduced, these new stem cells migrate to the bone marrow and commence the production of fresh blood cells (The American Society of Hematology, 2019). D'Souza et al. (2019) discovered that allogeneic hematopoietic cell transplantation was linked to enhanced survival rates in patients younger than 65 years old who were diagnosed with acute myeloid leukaemia.

Radiation therapy, (American Cancer Society, 2022), is a therapeutic approach involving the use of high-energy radiation to eliminate cancer cells. Chemotherapy may be employed as the primary treatment in conjunction with other therapeutic modalities like radiation therapy and surgery (Redfern, 2020). Nevertheless, chemotherapy does possess certain limitations, notably the potential to harm healthy, rapidly dividing cells, including those in the bone marrow, hair follicles, and digestive tract (Dixit et al., 2023; The American Society of Clinical Oncology, 2021).

Immunotherapy, a form of treatment, leverages the body's innate immune system to combat cancer. Diverse immunotherapies are employed, including monoclonal antibodies, immune checkpoint inhibitors, CAR T-cell therapy, and vaccines (National Cancer Institute, 2021). CyberKnife robotic radiosurgery is painless and non-surgical, with very few side effects and improved patient outcomes (Stanford Health Care, 2022). Wong et al. (2014) demonstrated good rates of tumor control and overall survival in patients who underwent CyberKnife treatment.

## Physiological Effects of Hematological Cancer

The treatments for cancer may cause side effects that vary from individual to individual. The biopsychosocial model is a holistic framework for understanding health and illness (Engel, 1977). In terms of physical side effects, conditions such as Graft-versus-host disease can occur when donated cells or bone marrow start attacking the patient's body (Naughton & Weaver, 2014). These treatments can also affect gastrointestinal functioning, lowering the quality of life and resulting in significant morbidity (O'Brien et al., 2003) and other physical symptoms like fatigue, pain, insomnia, and dyspnea (Hall et al., 2013).

Pain is a major physical symptom experienced by haematological cancer patients. In the case of haematological malignancies, approximately 80% of patients reported experiencing pain at some point during their illness(Rodriguez-Abreu, Bordoni, & Zucca, 2007). Chemotherapy-induced peripheral neuropathy was identified as a common reason for pain among patients of hematological malignancies (Kim et al., 2020; Van Hecke et al. 2020)

Abiri and Vafa (2020) elucidate that iron deficiency anaemia, with an incidence rate of up to 60%. It was found that bleeding and bruising were among the most presenting symptoms in diligent with acute myeloid leukemia. Cytotoxic therapy also damages the upper and lower airways of the lungs and affects the bladder and vagina, leading to conditions such as Candida infection (Obrien et al., 2003).

Malnutrition, loss of fluids, changes in electrolytes, absorption issues, and hypoproteinemia associated with protein-losing enteropathy (Obrien et al., 2003) experience fever during chemotherapy (Allart-Vorelli et al., 2015). O'Gorman et al. (2019) found that up to 50% of patients were malnourished at the period of diagnosis. Patients with haematological cancer experience fertility issues, lower quality of life and psychological distress (Lohmann et al. 2023). Impaired fertility stands out as a commonly encountered consequence of cancer treatment, affecting an estimated 80% of survivors, (Mahey et al. 2020). Kim et al. (2020), reported the efficacy of ovarian tissue cryopreservation in safeguarding fertility in female patients afflicted with haematological malignancies. Considering the impact on one's sense of masculinity or femininity and self-image, body image could play a significant role in cancer patients (Allart-Vorelli et al., 2015).

There has been increasing awareness of sleep issues in solid cancer patients (Castelli et al., 2022). Cancer-related fatigue can importantly impact a diligent quality of life (QOL) and ability to accomplish daily activities (Al Maqbali, 2021). Cognitive deficits were noticed after chemotherapy (Allart-Vorelli et al., 2015). The extent of these issues can vary from minor to severe and may persist for the period following treatment (Kotb et al., 2019). A 12-week exercise program resulted in a significant reduction in fatigue, as well as improvements in physical function and quality of life (Koll et al. 2020). Thrombocytopenia is a condition in which patients experience bruising and bleeding due to a lower level of platelets in the blood (Kuter, 2022). Freites-Martinez et al. (2019) reported hair-related abnormalities such as chemotherapy-induced alopecia, affecting the scalp, eyebrows, and eyelashes, can result in adverse psychological consequences.

## Psychological Effects of Hematological Cancer

There are numerous mental health issues that cancer patients may encounter such as anxiety and depression (Kilbourn, 2019). Cancer patients reported higher levels of anxiety and depression compared to healthy controls (Abedi et al., 2019). Subjects who underwent bone marrow transplantation experienced symptoms of PTSD (El-Jawahri et al., 2014). Quality of life is compromised among patients with haematological cancer (Allart-Vorelli et al., 2015). Cancer survivors who reported high levels of social support had better QoL outcomes, including lower levels of depression and anxiety (Hegarty et al., 2021). Lambert et al., (2021) revealed that cancer patients who get exercise interventions had significant improvements in physical functioning, fatigue, and overall QoL compared to those who did not receive exercise interventions. It was found that shock was a common emotional response among patients diagnosed with cancer, with nearly half of the participants reporting feeling shocked after their diagnosis. Patients experience more anxiety, mood disturbances, and depression in lymphoma patients and after chemotherapy and bone marrow transplant (Allart-Vorelli et al., 2015). Willik et al. (2020) found that up to 34% of patients with haematological cancer experienced symptoms of depression. A review of various types of cancer suggests that moderate to high fear of cancer recurrence is reported by 22% to 87% of survivors, while high or clinical levels of FCR are reported by 0% to 15% (Tauber et al., 2019).

Patients often experience stress, and the levels among haematological cancer patients can be elevated, especially during treatment (Tang et al., 2021). In a study of 181 adult patients undergoing chemotherapy, it was found that stress levels significantly increased after the second cycle of treatment, with women reporting higher levels of stress than men (Tang et al., 2021). Fatigue impacts the patient's normal functioning (Corbett et al., 2019). 32% of patients reported experiencing loneliness, which was associated with lower levels of social support and poorer quality of life (Lagergren et al., 2020). Social support has the potential to boost individuals' self-esteem and offer assistance in dealing with stressful situations (Long et al., 2021). The social support theory (1981), underscores the significance of support networks in influencing an individual's health and well-being.

## Literature Review

According to the (WHO,) cancer ranks as the second most prevalent cause of mortality on a global scale. In the year 2020, approximately 10 million deaths, accounting for one in every six deaths, were attributed to cancer worldwide. The risk of depression remained high even in survivors 12-26 years after diagnosis, These findings underline the importance of necessary psychosocial support (Kuba et al., 2019).

It was observed that both physical activity and quality of life were lower in haematological cancer patients compared to healthy individuals (Xia, Li et al., 2019).

Raphael et al. indicated that 24.6% of female participants aged 18-39 expressed a need for psychological help. Overall, 58.3% of the participants preferred psychological support, and 39.3% felt the need for assistance from a haematologist, (Raphael et al., 2021). Individuals with high levels of fear of recurrence had a five times higher likelihood of experiencing distress (Raphael & Gott, 2020).

The results revealed that 2% of the survivors reported that expenses had hindered their cancer treatment, 64% experienced financial and social impacts associated with their cancer diagnosis, 44% reported taking time off from work, and 21% reported difficulty in paying bills. (Paul et al., 2013). Pulgar, et, al., examined Psychosocial predictors, including social support, depression, coping strategies, and optimism and found that age and time since diagnosis was associated with a decrease in overall quality of life. Education level and having a partner were related to less pain and better mental health. Among the negative psychosocial variables, depression was associated with lower general health and social functioning. Coping strategies were linked to physical and emotional roles, while disease-related stress was associated with pain and negative emotions related to illness. (Pulgar, Alcalá, & Reyes del Paso, 2015).

## Rational of the study

Despite substantial research on the medical aspects of hematological cancers and their treatments, there remains a notable gap in qualitative research focusing on patients' subjective experiences post-treatment. This study endeavours to fill this void in the literature, contributing to a deeper understanding of the patient journey. Present research tried to explore the lived experiences of these patients who have undergone treatment for haematological cancer. Through interpretative phenomenological analysis, this study places patients' voices and perspectives at the forefront.

Research may help in developing strategies for improving their quality of life, including effective symptom management and supportive care interventions.

## Research Question

1. How do individuals who have undergone treatment for haematological cancer describe their lived experiences?
2. What are the psychosocial challenges and emotional dimensions experienced by haematological cancer survivors?
3. What physical and functional limitations do hematological cancer survivors encounter and how do these limitations affect their daily lives?
4. What strategies and coping mechanisms do hematological cancer survivors employ to manage the challenge?

## Method

The research design for this study was an Interpretative Phenomenological Analysis (IPA) which served as the qualitative research methodology to investigate the lived experiences of hematological cancer survivors following their treatment. IPA, highlights the subjective and intricate aspects of their experiences.The research employed purposive sampling that involves selecting participants based on specific criteria that are relevant to the research question (Smith & Osborn, 2008). The sample size consisted of six hematological cancer survivors. The inclusion criteria for the participants was to be cancer-free for at least six months. The age range was 18 to 65 years, representing a broad age group of hematological cancer survivor. Participants were recruited for the study through social media from various regions across Pakistan.

The creation of a semi-structured questionnaire, for exploring the lived experience of hematological cancer, was done after an extensive review of existing literature. A final set of 10 questions was established covering topics like diagnosis, treatment, coping mechanisms, support systems, and life post-treatment and given to the patients. After obtaining informed consent, assuring anonymity and building rapport with the participants, interviews were conducted via voice calls using platforms such as WhatsApp. Voice recordings of the interviews were transcribed, converting spoken words into written text.

NVivo 12, a qualitative data analysis software was used for Interpretative Phenomenological Analysis, which works with interview transcripts, survey responses, audio and video recordings, and textual documents. Users can code, categorize, and tag data, facilitating the identification of themes, patterns, and insights within the information. It also offers advanced features like text search, word frequency analysis, and visualization tools to enhance data exploration.

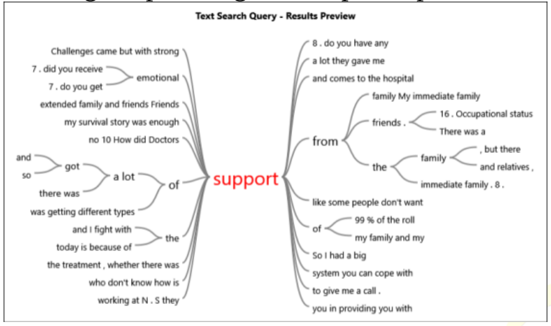
The textual data were imported into the N Vivo software. Using NVivo 12's coding feature, the researcher initiated generated initial codes. An inductive approach was followed, enabling the emergence of themes and patterns directly from the participants' accounts. NVivo's functionalities enabled the organization and clustering of codes into initial themes. The software's drag-and-drop feature facilitated the arrangement and rearrangement of codes and themes, enabling a fluid exploration of the data's nuances.

**Clustering and Superordinate Themes**. Through N Vivo's node system, the themes were clustered based on similarities and connections. This step aided in understanding the relationships between themes and paved the way for the identification of superordinate themes.

The dynamic visualizations available in N Vivo, such as mind maps or concept maps, were utilized to visually capture the interconnectedness of these emerging themes.

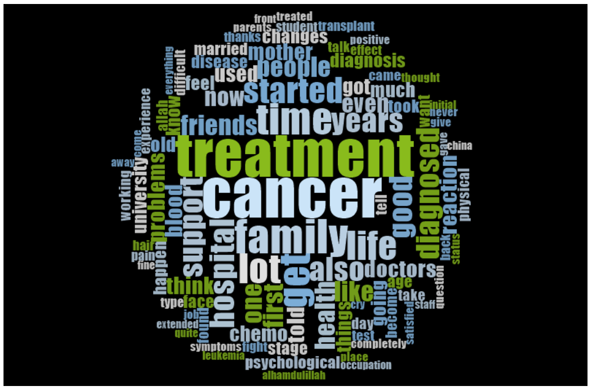
**Extracting and Organizing Quotations.** N Vivo's capacity to link themes to specific quotations facilitated the extraction and organization of relevant textual excerpts.

**Visualizations:** N Vivo's visualization features enhanced the analysis process. Graphs, charts, and word clouds were generated to visualize patterns and trends within the data. Graphs allowed for the depiction of connections between themes and their prevalence among participants. Word clouds visually highlighted the frequency of specific terms or concepts. Additionally, NVivo's word tree tool enabled the researcher to explore relationships between words and their co-occurrence in the data, offering deeper insights into participants' narratives.



**Interpretation and Reporting:**

The memo feature in NVivo 12 played a pivotal role in recording the researcher's interpretations and insights as they related to the emerging themes. These memos were instrumental in shaping the researcher's overarching interpretation of the findings. As the analysis concluded, NVivo 12 provided a structured foundation for compiling the final report, which showcased the rich interplay between themes and was substantiated by participants' quotations.



**Results**

The individuals within the age bracket of 22 to 35 were mostly females, as indicated in Table 1.

**Table 1.**

Demographic Characteristics of the Participants.

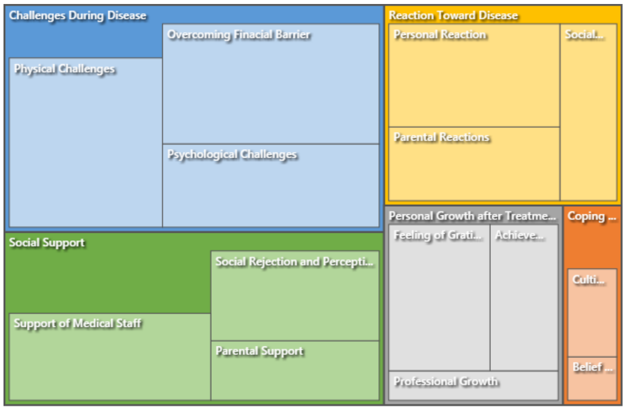
| ID | Gender | Age | Cancer Type | Education | Occupation |
|---|---|---|---|---|---|
| 1 | Male | 35 | Acute Lymphocytic Leukemia | Masters | Working |
| 2 | Female | 23 | Acute Myeloid Leukemia | Undergraduate | Student |
| 3 | Female | 31 | Acute Lymphoblastic Leukemia | Bachelor's | Working |
| 4 | Female | 25 | Hodgkin Lymphoma | Undergraduate | Student |
| 5 | Female | 30 | Acute Lymphoblastic Leukemia | Graduation | Working in IT Company |
| 6 | Female | 22 | Non-Hodgkin Lymphoma | Undergraduate | Student |

**Table 2.**
Overview of the Main Themes and Subthemes Extracted from the Data

| **Superordinate Theme** | **Emerged Themes** | **Explanation** |
|---|---|---|
| 1. Reactions towards Disease | 1.1 Personal Reaction | Positive approach, no fear, sense of relief. |
| | 1.2 Parental Reaction | In denial, shock, worried. |
| | 1.3 Societal Reaction | Mixed response, societal support. |
| 2. Challenges during Disease | 2.1 Overcoming Financial Barrier | Spending savings, selling property, support from welfare organizations, free cancer hospitals. |
| | 2.2 Physical Problems | Weight loss, weakness, weakened bones, hair loss, brain fog, low endurance, back pain, low immunity, low metabolism, ulcers in mouth, facial hair. |
| | 2.3 Psychological Problems | Depression, crying, anger issues, flashbacks, fear. |
| 3. Social Support | 3.1 Social Rejection and Perception | Misconceptions about cancer, disappointment from society, friends leaving. |
| | 3.2 Parental Support | Very supportive, fighting cancer together. |
| | 3.3 Support of Medical Staff | Very supportive. |
| 4. Coping Mechanism | 4.1 Cultivating Resilience and Willpower | Preparing oneself for the fight, increasing willpower, supportive parents. |
| | 4.2 Belief in Spirituality | Firm belief in fate and faith in Allah. |
| 5. Personal Growth after Treatment | 5.1 Achievements | Reaching milestones like a US scholarship, TEDX talks, fashion shoots, education, driving, swimming, enjoying life, joining organizations, arranging seminars, counseling parents. |
| | 5.2 Professional Growth | Returning to work, pursuing education, managing multiple jobs. |
| | 5.3 Feeling of Gratitude | Completing treatment, overcoming financial problems. |

Table 2 is showing five superordinate themes and fifteen emerged themes as a result of meticulous analysis and immersion into the narratives shared by cancer survivors. The diversity of their experiences, emotions, and insights led to the emergence of distinct themes that collectively captured the multifaceted nature of their medical trajectories. The number of superordinate themes and emerged themes directly reflected the richness and complexity of the data. Each theme serves as a window into a particular aspect of the participants' lives, shedding light on their responses, challenges, coping mechanisms, and growth.

The emergence of these themes underscores the significance of the participants' voices in shaping the research findings. The resulting themes provided a structured framework that not only summarized the narratives but also invited readers to connect with the authentic experiences of cancer survivors, fostering empathy and insights into the intricate tapestry of their journeys. Below is the diagram of the themes.



## 1.Superordinate Theme: Reaction toward Disease

The superordinate theme "Reaction toward Disease" showed that how participants reacted to their diagnosis emotionally and cognitively. Participants' narratives shed light on the complex interplay of fear, uncertainty, acceptance, and determination that shaped their personal reactions to the disease. This theme seeks to capture the essence of their emotional journey and how their initial responses set the tone for their subsequent experiences and coping mechanisms.

Emerged Theme 1.1**.** *Personal Reaction***.** This indicated the emotional and psychological responses that participants experienced upon receiving a diagnosis of cancer. All the participant were positive and their hope and resilience remained high. اور ".
میرا یہ تھا کہ میں شروع سے ہئ کافی پوزٹواپروچ کا تھا زندگی
اور موت کا بیلف تھا کے یہ اللہ کے ہاتھ میں ہے بیمار ہو یا کچھ
بھی ہو ایک دن واپس جانا ہئ ہے

ID1

:ID4 said that

"لیکن بیماری سے ڈر نہیں لگا کہ بستر پر لگ جائیں گے وہ چیز
نہیں تھی الحمدللہ "

In this research the approach of positivity aligns with previous research indicating that hope remains strong throughout the disease trajectory (Felder, 2004)

### Emerged Theme 1.2: Parental Reaction

The narratives from participants in the study reveal the emotional impact and initial shock that parents experienced upon learning about their child's diagnosis. Parents shared their apprehensions about the cause of the illness, with one father stating, "My family and I were really worried because we thought cancer didn't have a cure". Below are the statements of different patients about their parent's reactions.

اور "سو میرے والدین نے میرے ساتھ ڈائریکٹ ڈسکس نہیں کیا
تھا لیکن ان کے فیشل ایکسپریشن ، مدر اور فادر کے دیکھتا تھا
کافی ٹینس پوزیشن میں تھے

ID1

"امی وغیرہ کی اسپیٹینس بہت کم تھی ایک شوک سا تھا "

ID3

Other researchers gave similar expressions of the parents as Williams et al. (2023) reported that parents shared worries about the cause of the illness and the belief that cancer might be incurable. Over time, though, many parents gradually accepted the diagnosis after multiple tests and consultations.

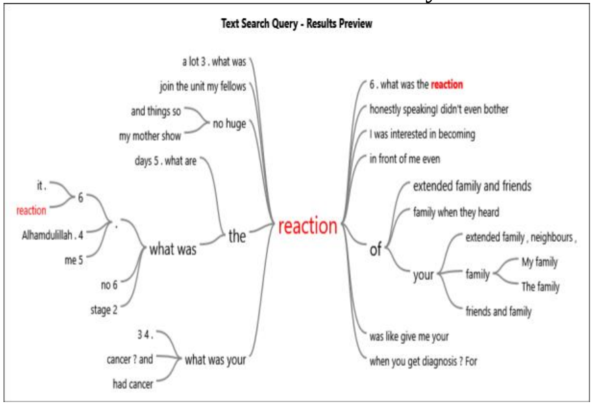
### Emerged Theme 1.3: Societal Reaction

Societal reactions to the disease were mixed, as few thought it contagious, and others commented that they should not waste money on the treatment of the patient because the ultimate result is death. However, one participant said that "some of my cousins supported me, one started doing meditation with me, my friends didn't leave me alone, they used to come over my place and sit and talk to me, not about my disease". They came to celebrate my birthday with me, being very supportive people.

Literature shows the impact of society on patient's mental health as Long et al. (2021), saw the impact of social support on the quality of life of cancer patients and revealed a positive correlation between the level of social support and the utilization of positive coping strategies.

**Figure 1**

The Reactions of Friends and Family



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## 2. Superordinate Theme: Challenges during Disease

The journey of the participants from diagnosis of cancer to treatment encompassed the hurdles and difficulties that emerged as "Challenges during

Disease": a superordinate theme. It included physical, psychological, and practical obstacles that impacted their daily lives. Participants' narratives revealed how these challenges shaped their coping strategies, decisions, and interactions with their environment. By exploring the range of difficulties participants faced, the emerging themes offer insights into the resilience and determination required to overcome adversity.

### Emerged Theme 2.1. Overcoming Financial Challenges

This theme refers to participants' efforts and strategies to address financial challenges arising from their medical condition. The responses in the narratives describe diverse financial challenges faced by participants. ID1 and ID2 recounted shifting financial priorities due to treatment expenses, with ID1 sharing how a family business's savings were redirected and ID2 discussing property sales. ID3 highlighted how a welfare society assisted.

"اور فائننشل تو ایشو تھا کہ فادر کا جو چھ
چھوٹا سا بزنس تھا جو سیونگز تھی گھر بنانے کے لیے جو پیسے
اکٹھے کیے ہوئے تھے میرے ٹریٹمنٹ پر سپینڈ کر دیے"
ID1

" فائننسز کی طرف الحمدللہ کوئی مسئلہ نہیں ہوا انڈس ہاسپٹل
بالکل فری تھا"
ID6

Literature shows the diverse strategies patients used for fundraising for the treatment. Gage-Bouchard et al. (2017) illuminated how cancer patients increasingly turn to social media platforms for fundraising.

### Emerged Theme 2.2: Physical Challenges

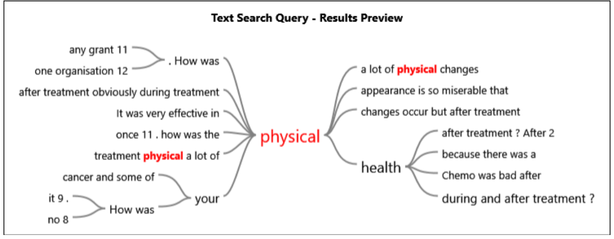
The emerging theme of "Physical Problems" pertains to the physical health issues and symptoms experienced by participants as a result of their medical condition.

The accounts shared by ID4 and ID5 further underscore the relevance of physical challenges and changes in body condition, such as weight gain and hair loss, during treatment.

Research findings from Lucia et al. (2021) highlight a significant association between lower levels of physical activity and increased levels of fatigue, anxiety, and depression in patients with hematological cancer. Similarly, Aslam et al. (2014) reported various side effects, including headache fatigue, weakness, hair loss, nausea, vomiting, diarrhea, abdominal cramps, mouth sores memory impairment and numbness.

**Figure 2**

Physical Reactions

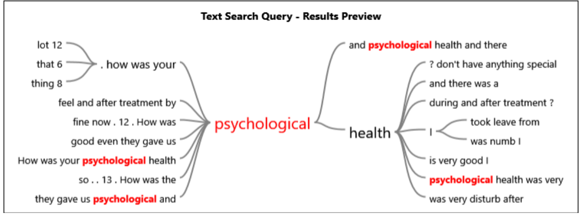


### Emerged Theme 2.3: Psychological Challenges

Psychological Problems reported by ID2 werethat I was numb by a lot of information and when " chemo started, I had hair loss, it was very difficult .to look at myself and I was very depressed. Furthermore, the experience shared by ID2 and ID4 resonates with the study conducted by Clinton-McHarg et al. (2014), which emphasized the prevalence of anxiety and depression among hematological cancer patients attending treatment centers. These narratives collectively underscore the psychological impact of physical changes such as hair loss on the well-being of cancer patients, reinforcing the importance of addressing psychological health alongside medical treatment. Raphael and Gott, (2020) reported high levels of fear of recurrence and had a five times higher likelihood of distress.

**Figure 3**

Psychological Reactions



## 3. Superordinate Theme: Social Support

The superordinate theme "Social Support" encompassed the network of interactions and relationships that individuals with a medical condition engaged in and received various forms of assistance and emotional connection. The emerging themes were social rejection, parental support and support from medical staff, which captured the pivotal role of social connections in buffering the emotional toll of the medical journey. It underscored the power of shared experiences, empathetic listening, and gestures of care in alleviating feelings of isolation.

**Figure 4**

Social Problems

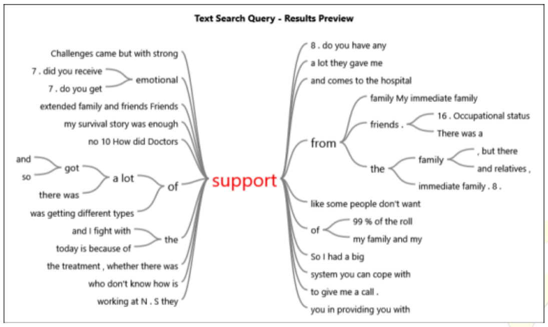


Figure 4 shows the different types of support they got from family and society.

### Emerged Theme 3.1: Social Rejection and Perception

This theme refers to negative attitudes, stigma, or misconceptions from their social environment. One participant said that the relatives thought that it was contagious disease so they broke the utensils, patient used at their homes. Another Participant ID3 discussed challenges in obtaining school admission due to his condition. Concerns about societal perceptions were evident, with some disappointment expressed by society and friends. However, some respondents received support from friends and extended family. McGrath also (2000), reported a lack of support and absence of assistance from family and friends.

### Emerged Theme 3.2: Parental Support

Most participants, like those with ID1, ID3, and ID5, relied on family for emotional and practical assistance during treatment. The strong role of the family in providing both emotional and practical support resonates with the study's emphasis on the significance of personal connections for survivorship. Raphael, et, al., (2019) mentioned the support from personal connections, refrained from seeking extra psychosocial support, relying on existing friends and family assistance. In Pakistan, most people have strong emotional bindings with family which is why whenever they face difficult circumstances, they find their family stands by.

### Emerged Theme 3.3: Support of Medical Staff

The most critical and sensitive support was considered that of doctors. However, the narratives of the patients reflected that the healthcare professionals, including doctors, nurses, and medical caregivers, gave extra care to the participants which reflects the empathy and compassion of health sector in Pakistan. Participant ID1 highlights a supportive environment with a rating of 10/10 for the hospital staff's emotional guidance. Participants having ID2 and ID3, expressed contentment with their treatment experiences, praising the hospital staff and nurses for their care. Participant ID4 commended the healthcare team's role in optimizing their treatment, while ID5 shared positive experiences with doctors despite language barriers. Raphael, et.al., (2019) also highlighted the support from health professionals and organizations.

## 4. Superordinate Theme: Coping Mechanism

This theme explores the mechanisms participants develop to cope with cancer. These coping strategies encompass a range of psychological, emotional, and behavioural approaches that participants employ to manage stress, uncertainty, and discomfort.

The emerged themes like resilience, and spirituality highlight the remarkable human capacity to cultivate inner strength in the face of adversity. By sharing their coping mechanisms, participants offer insights into the techniques they harness to regain a sense of control, maintain their emotional well-being, and navigate the rollercoaster of emotions. From fostering self-empowerment and cultivating optimism to seeking solace in spirituality.

### Emerged Theme 4.1: Cultivating Resilience and WillPower

This inner strength empowered them to maintain a positive attitude. Several participants attributed their recovery and progress to the power of positive

thinking. For example, one participant (ID2) reflected on how they embraced the idea of resilience and inner strength, recognizing that challenges are temporary and can be overcome. Similarly, another participant (ID5) highlighted the significance of a supportive system and how a positive attitude can aid in navigating the healthcare journey. Furthermore, a participant (ID6) expressed a determination to fight not only for themselves but also for others in a similar situation, aligning with the theme of drawing strength from within and feeling a connection with others facing similar challenges. Raphael, et al., (2019) also talked about the "Inner Strength" a theme that emerged from their study. " میں نے ڈیسائیڈ کیا صرف اپنی مدر کے لیے مجھے
فائٹ کرنا ہے ڈزنٹ میٹر ٹ ہیپن لیکن لڑنا ہے کیونکہ اس ہاسپٹل
میں اور بھی کتنے بچے ہیں جو لڑ رہے ہیں تو میں کیوں
ID 6"نہیں

**Emerged Theme 4.2: Belief in Spirituality**

ID3 had the belief that life and death are in the hands of Allah (God). Participants kept on thinking positively and remained in the process of finding purpose and meaning in life.

In the study conducted by Ferrell et al., (2017) spirituality emerged as a significant coping mechanism and a way to find meaning in the cancer experience. This spirituality played a crucial role in enhancing the quality of life and contributing to the process of finding meaning amidst the challenges posed by cancer.

## 5. Superordinate Theme: Personal Growth after Treatment

This theme was about the profound changes that unfolded in the participants' lives as they emerged from the process of medical treatment. It explored how the journey through illness and recovery catalyzes personal growth, development, and transformation. Participants' narratives illuminated the multifaceted dimensions of growth, encompassing achievements, renewed perspectives, and spiritual connections that have deepened as a result of their experiences. It shed light on how individuals reevaluated their life's purpose, set new goals, and cultivated a heightened appreciation for life's blessings. Through sharing their stories of personal growth, participants offered insights into the enduring impact of their medical journey on their sense of self, aspirations, and connections to higher spiritual powers.

**Emerged Theme 5.1: Achievements**

Participants like ID1, ID2, ID3, and ID6 actively pursued various educational and training programs, attended seminars, and were involved with organizations working for cancer. The positive impact of survivor identity on psychological well-being aligns with the narratives from participants like ID1, ID3, and ID6 who emphasized personal growth, pursuing interests, and feeling empowered post-treatment. They were focused on accomplishments and personal goals such as one participant took admission in the university of USA. The others joined different organizations for volunteer work and remained in contact with their hospital. Park, et, al., (2009) revealed that participants were more likely to engage in cancer-related activities, such as discussing prevention and wearing cancer-related items.

**Emerged Theme 5.2: Professional Growth**

The theme that emerged from their narratives was related to advancements, achievements, and renewed dedication individuals experienced in their careers after undergoing medical treatment. Raque-Bogdan et al. (2015) identified four distinct domains related to the careers of young cancer survivors: (a) facing challenges related to work, (b) employing coping strategies to address cancer-related work challenges, (c) reassessing career development in the aftermath of cancer survival, and (d) understanding the elements contributing to career and life satisfaction post-cancer survival. ا" چیزیں
خود بخود نارمل ہو گئی تھی پھر میری جاب سٹارٹ ہو گئی میری
جاب بھی اسی جگہ تھی
جہاں میرا ٹریٹمنٹ ہوا تھا"
ID1
" 2018 میں میں نے دوبارہ یونیورسٹی سٹارٹ کر لی کیونکہ میں
گھر میں فارغ رہنا نہیں چاہتی تھی اور انشاءاللہ اس سال میں
گریجویٹ ہو جاؤں گی"
ID2
ID3 "انشاءاللہ میں اس سال گریجویٹ ہو جاؤں گی"
ا" لیکن میں رکی نہیں میں نے کالج سے ہی جوکس سٹارٹ کر
دی میں نے اپنا پہلا خون اپنے پیسوں سے لیا یونیورسٹی میری
ایوننگ تھی اس لیے فرسٹ ٹائم جاب کرتی تھی اور سیکنڈ ٹائم
یونیورسٹی کبھی بھی بیماری کو ہرڈل نہیں بننے دیا
ID4
" میں نے کمپلیٹلی ریکور ہو کر دوبارہ کام سٹارٹ کیا ....... اب
میں نے نئی کمپنی میں جاب سٹارٹ کی ہے وہاں ورک فرام ہوم
کی بھی فیسلٹی ہے تو کافی فلیکسیبلٹی مل جاتی ہے" ID 5

The narratives of participants highlighted the transition to a sense of normalcy after facing challenges, mirroring the domain of "facing challenges related to work and cancer survival" (ID1). The decision to restart university studies after treatment corresponds to the domain of "reassessing career development in the aftermath of cancer survival" (ID2).

- The determination, not to be deterred by illness and to pursue education and employment echoes the coping strategies within the domain of "employing coping strategies to address cancer-related work challenges" (ID4).
- The accounts of returning to work after complete recovery and starting anew in a flexible work environment align with the domain of "understanding the elements contributing to career and life satisfaction post-cancer survival" (ID6).

These personal narratives provide real-world examples of the multifaceted impact of cancer survival on career trajectories and how survivors navigate challenges and pursue meaningful paths forward.

**Emerged Theme 5.3: Feeling of Gratitude**

The participants had a profound sense of appreciation and thankfulness toward God after treatment. One participant expressed gratitude for the uninterrupted continuation of their treatment over three years (ID4). Another participant found solace in thanking Allah for overcoming concerns related to cost (ID5). The idea of finding ease within challenges and perceiving illness as an opportunity for growth and new perspectives resonates with the study's emphasis on spiritual needs and gratitude.

The study by Taylor (2003) focused on spiritual needs, including gratitude, among patients with cancer and their family caregivers. Gratitude was highlighted as one of the identified aspects within their exploration of religiosity, illness distress, and treatment outcomes.

## Discussion

The current study shed light on the profound impacts of haematological cancer, the challenges they face, the strategies they employ to cope, and the transformative process of personal growth that occurs after treatment. The identified themes that emerged from the study were: personal reactions to the disease, the challenges that arise during the illness, the influential role of social support, the coping mechanisms adopted, and the subsequent personal development that transpires after undergoing treatment.

The first theme, labelled "Reaction toward Disease," illuminated the varied emotional and psychological responses exhibited by patients on the diagnosis of haematological cancer. The sub-themes of personal, parental, and societal reactions elucidate the intricate interplay between one's self-perception, its impact on family dynamics, and the broader societal context. This resonates with the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which posits that individuals appraise and respond to stressors based on their perceptions and the support they receive from their social environment. Patients' reactions reflect their primary appraisal of the cancer diagnosis, while parental and societal reactions highlight the secondary appraisal influenced by social support systems.

The following theme, "Challenges during Disease," uncovered the array of obstacles that patients confronted throughout their journey with haematological cancer. These challenges consisted of financial constraints, physical hurdles, and psychological tribulations, providing a vivid portrayal of the diverse factors that influence a patient's overall well-being. This aligns with the biopsychosocial model (Engel, 1977), which emphasizes the interplay of biological, psychological, and social factors in health and illness. The challenges outlined within this theme underscore the intricate connections between these domains, where financial struggles, physical problems, and psychological distress converge to shape the patient experience.

The third superordinate theme, "Social Support," consisted of sub-themes such as social exclusion and perception, support from parents, and assistance from medical professionals shed light on the crucial roles played by various sources of support in alleviating the difficulties posed by the disease. It emphasized the importance of social support, including support from parents and medical professionals, which can act as a buffer against the psychological distress and challenges faced by patients, ultimately influencing their coping mechanisms.

The fourth superordinate theme, "Coping Mechanism," encapsulates the strategies that patients employ to navigate the emotional and psychological complexities of living with haematological cancer. Sub-themes included the cultivation of resilience and determination, as well as a belief in spirituality, offered a nuanced understanding of how patients fortify their emotional and psychological resilience. Resilience-building and spirituality can be seen as adaptive coping mechanisms that individuals utilized to regain a sense of control and meaning in the face of adversity.

Finally, the superordinate theme "Personal Growth after Treatment" illuminated the transformative journey experienced by patients following treatment. Sub-themes related to accomplishments, professional advancement, and feelings of gratitude unveil the remarkable post-treatment evolution of individuals, showcasing their resilience, determination, and capacity for personal development. While the journey through haematological cancer is undoubtedly stressful, the emergence of personal growth and gratitude suggests that individuals may find ways to mitigate the negative effects of allostatic load and, in some cases, experience post-traumatic growth.

The subtheme "Support of Medical Staff" sheds light that the facilities as well as the attitudes of healthcare professionals are excellent in Pakistan. The medical professionals are empathetic, compassionate and caring towards the patients. In terms of contributing to the field, our study provided a nuanced lens through which to examine the post-treatment phase of hematological cancer survivors. While previous research predominantly concentrated on medical aspects, our findings focused the holistic experiences of patients and stress upon the need for a patient-centered approach in healthcare.

## Conclusion

In conclusion, this study has provided a comprehensive exploration of the lived experiences of patients with haematological cancer after treatment, addressing a series of critical research questions. The emerged themes encompass a wide range of emotional, physical, and social dimensions, reflecting the complexity of the survivorship journey.

The findings have demonstrated a spectrum of reactions, from positive approaches characterized by resilience and fearlessness to more challenging emotional responses, such as denial, shock, and worry. Furthermore, The study illuminated the profound impact of the disease on patients' psychological well-being, including experiences of depression, anger issues, and fear. These findings underscore the need for comprehensive psychosocial support throughout the treatment and survivorship phases to address these emotional challenges effectively.

Additionally, the study examined the physical and functional limitations faced such as weight loss to hair loss, as well as reduced endurance and low immunity. These limitations underscore the importance of a multidisciplinary approach to survivorship care, including physical rehabilitation and symptom management.

Lastly, the research explored the strategies and coping mechanisms to manage the challenges they face. The study revealed the cultivation of resilience and willpower, as well as a strong belief in spirituality, as key coping mechanisms. In summary, this study contributes significantly to our understanding of the haematological cancer survivorship experience, shedding light on the multifaceted nature of the journey.

## Limitations and Suggestions

The study relied on participants' retrospective accounts of their experiences, which could introduce recall bias or selective memory. A longitudinal approach would have provided insights into how these experiences evolve and change over time, offering a more dynamic understanding. The reliance on semi-structured interviews as the sole data collection method might have limited the scope of data gathered.

Here are some potential areas for future research that could build upon our study:

Conduct longitudinal studies to gain insights into the persistence and evolution of personal growth.

Design and implement interventions aimed at cultivating resilience among hematological cancer survivors, promoting better psychosocial outcomes.

Examine the impact of specialized training for healthcare providers in offering emotional support to patients other than cancer.

## Implications

These insights have important implications for healthcare providers, policymakers, and the broader community in tailoring more holistic, patient-centered approaches. Ultimately, this research provides a foundation for future efforts to enhance the support and quality of life for cancer survivors on their path to recovery**.**

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