INVESTIGATING THE PROBLEMS FACED BY CANCER PATIENTS AND THE MANAGEMENT OF THESE PROBLEMS: A COMPREHENSIVE ANALYSIS OF PREDICTIONS AND TRENDS FOR THE HEALTHCARE INDUSTRY

by

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DISSERTATION
Presented to the Swiss School of Business and Management Geneva
In Partial Fulfillment
Of the Requirements
For the Degree

DOCTOR OF BUSINESS ADMINISTRATION

SWISS SCHOOL OF BUSINESS AND MANAGEMENT GENEVA

October, 2025

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DEDICATION

To the constant pillars of support who have been there for me during this scholarly expedition.

This thesis, which serves as a symbol of my scholarly pursuits, is not only a result of the extensive research and innumerable sleepless nights of steadfast commitment that it represents but also of the continuous encouragement and invaluable counsel that I have had the good fortune to receive from every single one of you.

Sincerely, my cherished parents, Mr. Prakash Y. Salgaonkar and Mrs. Pratiksha P. Salgaonkar and the entire family, whose unwavering confidence in my abilities and altruistic self-sacrifices have served as the bedrock of my determination. You have cultivated within me the virtues of perseverance and integrity, while your ceaseless support and affection have nourished my aspirations. I dedicate my book to my grandma, Mrs. Pushpalata Rajaram Mungekar and Mrs. Pratiksha Prakash Salgaonkar for making me who I am now. I wish to thank my brother, Mr. Vaibhav P Salgaonkar and aunt, Mrs./ Dr./ Adv. Vidya S Raul for motivating me for this certification.

Indebted to my distinguished mentors, Dr. med. Amira Simcox, Academic Dean) and Dr. Ramakant Deshpande (-Chairman , Senior Consultant Oncologist, ACI Cumballa Hill Hospital) and the entire Asian Cancer Institute Cumballa Hill Hospital family, whose profound scholarly perspectives, persistent mentorship, and discerning counsel have played a pivotal role in molding this scholarly opus. Your mentorship and sagacity have shed light on my trajectory, converting intricate obstacles into occasions for growth and directing my intellectual expedition towards its culmination. I wish to thank Dr. Sanjay Upadhye (Director- ACI Cumballa Hill Hospital, Member Secretary of the Institutional Ethics Committee of Asian Institute of Oncology Pvt. Ltd.)for the constant support throughout my thesis.

In gratitude to my colleagues and acquaintances for the varied viewpoints and camaraderie that you have contributed. During periods of adversity and pressure, your companionship and assistance have served as a wellspring of resilience and motivation, innumerably enhancing my academic journey.

Whether profound or subtle, the essence of every contribution reverberates profoundly within the pages of this thesis. With profound appreciation and profound regard, I dedicate this work to each individual present. This accomplishment is a testament to our collective endeavors, commitment, and steadfast conviction in the quest for knowledge and is not solely my own.

You have all contributed to not only this voyage, but also to my development as a person and scholar. Your impact transcends the boundaries of this scholarly endeavor and infuses the very essence of my persona and ambitions.

Dedicated to:

1. Mrs. Pushpalata Rajaram Mungekar

In memory of the heavenly place to my grandmother Mrs. Pushpalata Rajaram. Mungekar

2. Mrs. Pratiksha Prakash Salgaonkar

Special thanks to my mother Mrs. Pratiksha P. Salgaonkar for being always at my back and supporting me throughout the darks and bright sides of the entire thesis. The lady behind my sleepless nights but still ready to make coffee for me even during nighttime.

ACKNOWLEDGEMENTS

In this voyage of intellectual exploration and discovery that will culminate in the completion of this thesis, I am filled with profound thanks and appreciation for all who have played critical roles in its realization.

At the outset, I want to express my profound gratitude to my supervisor, Dr. Mia. Her extensive knowledge, patient advice, and unwavering support have formed the foundation of this research adventure. Dr. Mia's invaluable ideas and wisdom have influenced not only this academic undertaking but also my development as a researcher. Their support during difficult times and jubilation during triumphs have had a great impact.

I'm also really grateful to my peers and colleagues. Your intelligent feedback, fascinating discussions, and unfailing friendship have all helped to refine this argument. The collaborative environment we shared inspired and motivated us, making the difficult research process gratifying.

This is a revolution not only for the entire healthcare industry but also for the growth and inspiration of my internal clinical research scientist.

I must also show my gratitude to the numerous scholars and authors in our field. Your groundbreaking work provided a solid foundation for my research. Your contributions to the subject not only influenced my research but also broadened my understanding.

Last but not least, my heartfelt thanks go to my family. Your unfailing conviction in my abilities and ongoing encouragement have been pillars of strength throughout this journey. In times of adversity, your belief in me spurred me ahead, and in times of triumph, your excitement enhanced mine. Your steadfast support has been invaluable, and this thesis reflects that enduring love and belief.

This thesis is more than just a reflection of my efforts; it is a mosaic made up of everyone's support, guidance, and faith. I owe every one of you a debt of appreciation that my acknowledgement can only begin to cover. Thank you for being a part of my path and helping me achieve this critical academic milestone.

ABSTRACT

INVESTIGATING THE PROBLEMS FACED BY CANCER PATIENTS AND THE MANAGEMENT OF THESE PROBLEMS: A COMPREHENSIVE ANALYSIS OF PREDICTIONS AND TRENDS FOR THE HEALTHCARE INDUSTRY

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2025

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Cancer remains a major global issue, affecting millions and putting enormous strain on healthcare systems. Despite advances in understanding the molecular and cellular causes of cancer, tackling its complexity and heterogeneity will require continued research. Aside from physical health, cancer patients confront a variety of issues, including psychological discomfort, dietary changes, financial difficulties, family mayhems, and limited access to healthcare resources. These challenges frequently increase the difficulties experienced by patients and their families, lowering their overall quality of life.

The purpose of this study is to analyze the multiple challenges that cancer patients experience, as well as to assess the efficacy of current therapeutic options. A mixed- methods approach will be used to conduct quantitative surveys and qualitative interviews with adult cancer patients from various demographic backgrounds. The Biopsychosocial Model of Health serves as the foundation for the research, which looks at variables such as psychological stress, nutritional demands, financial difficulties, and healthcare access. The anticipated outcomes include identifying major obstacles and evaluating the efficacy of present care options. The findings aim to contribute to better patient care systems by providing practical recommendations to improve cancer patients' quality of life and treatment outcomes while addressing important gaps in our overall understanding of their requirements.

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CHAPTER I:

INTRODUCTION

1.1 Background

Cancer has emerged as one of the most pressing global health challenges of the 21st century. Despite major advances in diagnostic and treatment modalities, it remains among the leading causes of morbidity and mortality worldwide (IARC, 2020). In India, the burden of cancer is particularly alarming, with over 1.4 million new cases reported annually and projections estimating this number to rise beyond 1.5 million by 2025 (Ramamoorthy et al., 2024). According to the Indian Council of Medical Research (2020), Kerala currently records the highest incidence of crude cancer cases, making it the cancer capital of India.

The prevalence of cancer in India is compounded by demographic, lifestyle, and environmental factors. For example, breast cancer is the most common malignancy among women, while lung cancer dominates among men (Krishnan & Chaturvedi, 2022). The median age of cancer diagnosis in India is younger compared to developed countries, and a significant proportion of cases are detected at advanced stages. This contributes to premature mortality, reduced productivity, and substantial economic losses (Express Healthcare, 2025).

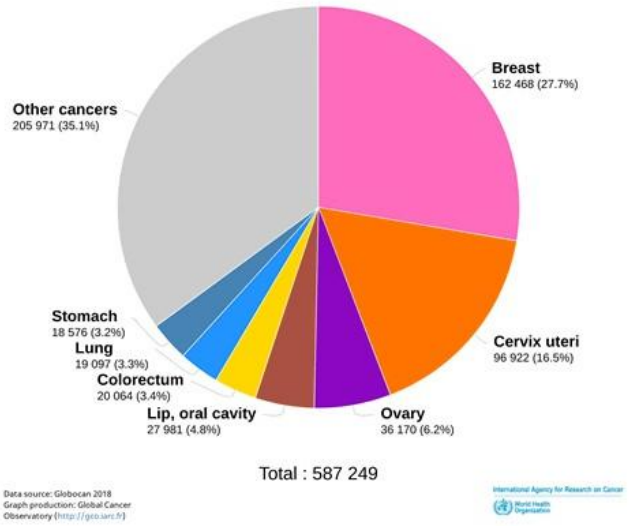

Figure 1: Estimated number of new cases in 2018, India
Source: Merouani (2019)

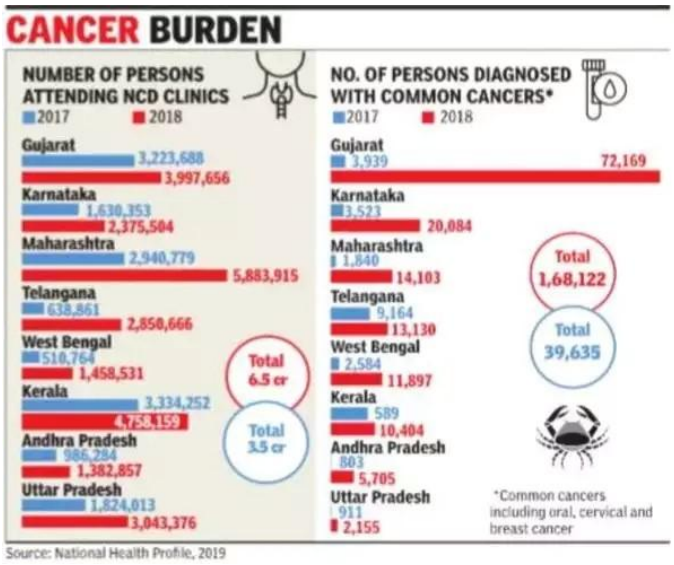

Figure 2:Cancer Burden In India
Source: National Health Profile, 2019

1.2 The Cancer Complications

Cancer is not one illness, but rather a diverse collection of conditions that are distinguished by the following characteristics: genetic instability, uncontrolled cell growth, and the propensity to invade and metastasize (Ferguson et al., 2015; Tang, 2025; Zhang et al., 2024). There is a great deal of variety in clinical presentation based on the location of the tumor, the molecular subtype, the stage of the disease at the time of diagnosis, and the response to treatment (Bhat et al., 2024). This variation is a result of the biological complexity of the disease. The shift toward precision oncology is highlighted by the fact that individuals display unique genetic profiles that have an impact on their prognosis and sensitivity to treatment, even when they are all classified as belonging to the same histological type (Zhuang et al., 2025). Early detection continues to be inconsistent, and late presentation continues to result in unfavorable outcomes in a variety of contexts, despite breakthroughs in imaging, biomarker discovery, and targeted therapy (Scott et al., 2024).

Cancer is not only a biological phenomenon; it is also a social, behavioral, and systemic problem that needs to be addressed. The members of multidisciplinary teams must work together in order to plan treatment routes, which frequently include surgery, chemotherapy, radiation, immunotherapy, and supportive care (Kolsteren et al., 2022). The intensity and length of treatment generate cumulative costs that manifest as symptom clusters (for example, pain, exhaustion, neuropathy, and mucositis), functional deterioration, and mental health consequences, which include, but are not limited to, sadness, anxiety, and a dread of recurrence (Ochoa et al., 2020). These consequences resonate throughout families and businesses, resulting in a decrease in productivity, stress for caregivers, and the necessity for long-term survivability (Ugalde et al., 2019; Teteh et al., 2023). As a result, cancer control that is effective requires solutions that are integrated and that connect molecular medicine with psychosocial support, rehabilitation, and the building of the health system (Scott et al., 2024; Kolsteren et al., 2022).

1.3 The Multi-Dimensional Challenges

Besides the medical aspects of the disease, cancer patients and the people who care for them have to deal with a complex web of interrelated challenges. As a result of these challenges, which cut across clinical, emotional, economic, structural, and cultural domains, a complex burden is formed that has an impact on treatment adherence, recovery, and quality of life. According to Engel (1977) and Holland and Weiss (2010), the interaction of these components demonstrates that cancer is not merely a medical sickness but also a biopsychosocial experience that calls for holistic approaches to treatment.

In many cases, the physical toll that an illness and its treatment take on the body is the aspect of pain that is most readily apparent. Patients frequently experience a variety of symptoms, including but not limited to fatigue, headaches, discomfort, gastrointestinal difficulties, hair loss, neuropathies, and changes in their skin (Cleeland et al., 1994; Mustian et al., 2017). These negative effects can make it more difficult to adhere to a treatment plan and can also interfere with tasks that are performed on a daily basis. In addition, the presence of many illnesses at the same time, such as diabetes, hypertension, and coronary artery disease, increases the chance of complications and unfavorable outcomes (Sarfati, Koczwara, & Jackson, 2016). This is especially true in older people. For the purpose of preserving the health of patients and ensuring that they receive consistent treatment, multidisciplinary medical teamwork and coordinated symptom management are absolutely necessary.

There is equal significance to the emotional and psychological elements of cancer. According to Bury (1982), this process was referred to as "biographical disruption." Upon receiving a diagnosis, individuals commonly experience a range of emotions, including shock, denial, stigma, and existential anxiety. These responses disrupt the individual's sense of identity and continuity. If these sentiments are not addressed, they have the potential to evolve into emotional states such as anxiety, depression, or a loss of morale. According to Grassi et al. (2018) and Northouse et al. (2010), carers who experience long-term emotional stress are also at risk for experiencing burnout and compassion fatigue. The psychological needs of patients and carers are typically ignored, despite the fact that this frequently occurs. According to Carlson et al. (2010), the incorporation of psycho-oncology treatments, social support programs, and counselling for patients can significantly improve the overall treatment outcomes as well as the emotional resilience of the patients.

An additional important burden that is connected with cancer is its economic component, which is frequently referred to as "financial toxicity." Direct expenditures such as diagnostics, surgery, radiation therapy, and systemic therapy are included in the costs of medical care, as are indirect costs such as travel, accommodation, missed pay, and caregiving (Zafar & Abernethy, 2013). It is possible for high out-of-pocket expenses to lead to debt, poverty, and restricted access to continuous treatment in healthcare systems where these prices are prevalent. According to Altice, Banegas & Tucker-Seeley (2017), there is a clear correlation between financial issues and treatment delays, interruptions, and decreased follow-up adherence. It is possible that this economic hardship, which can also aggravate emotional suffering, would culminate in a vicious cycle of financial and psychological vulnerabilities that reinforce one another (Fenn et al., 2014). In order to ease these pressures, it is vital to have social insurance systems, systematic financial advising, and legislation that are designed to protect individuals from high medical bills that are out of their financial means.

Structural problems in healthcare systems are another factor that makes effective cancer management more difficult to achieve. Patients frequently face a variety of challenges, including unequal access to palliative or specialty care, delayed diagnoses, backlogs of referrals, shortages of hospital beds, and a lack of availability of pharmaceuticals (World Health Organization, 2021). The continuity of care is frequently disturbed as a result of fragmented care pathways, poor data systems, and inadequate provider coordination, which ultimately leads to incomplete follow-up or delayed treatment (Knaul et al., 2018). With such fragmented systems, patients may have feelings of being lost or abandoned, which can be damaging to their faith in the medical system. For this reason, it is absolutely necessary to enhance the collaboration among professionals from different fields, the referral procedures, and the information systems in order to deliver timely and equitable cancer care.

These challenges are made even more difficult by the presence of informational and cultural barriers. Stigma, misinformation, and low levels of cancer literacy are the factors that lead to delayed presentation and early treatment abandonment, as stated by Filteau, et al. (2012). Patients may be prevented from receiving treatment due to a variety of factors, including fear, misunderstandings regarding the prognosis, or cultural taboos around cancer. Additionally, limitations that are associated with language, education, and technology make it difficult to obtain reliable information and inhibit meaningful participation in decision-making (Kickbusch, et al., 2013). The presence of these components highlights the importance of

employing communication strategies that are sensitive to cultural norms and educational programs that cultivate trust and provide patients the opportunity to take an active role in their own care. Taking into account the social, emotional, financial, and physical elements of cancer treatment, a comprehensive and patient-centered strategy that takes into account all of these areas is required in order to manage this intricate web of problems. The implementation of comprehensive models that incorporate financial counselling, navigation services, mental health support, symptom control, and accelerated treatment paths is something that health systems ought to do. According to the Institute of Medicine (2013) and Alfano et al. (2019), these models ought to be founded on quantitative quality indicators and continuous evaluation throughout the process. The person-centered care vision of the World Health Organization, which places an emphasis on inclusion, equity, and dignity, is supported by these integrated frameworks (WHO, 2021). It is ultimately the transition from a disconnected biology model to a coordinated continuum of evidence-based, compassionate treatment that respects the human and physical components of recovery that will finally lead to improvements in cancer care.

1.4 Globalization and Cancer

The prevalence of cancer, the methods in which individuals are exposed to risk factors, and the accessibility of therapy in various regions of the world have all been significantly impacted by globalization. Both the causes of cancer and its treatment have changed due to global processes. The social, economic, and political systems that are intertwined have led to these transformations. Globalization has facilitated the quick dissemination of medical information, inventions, and technology developments, but it has also resulted in an increase in health outcomes inequities. The ecosystem that emerges as a result reflects the complex interrelationships between global trade, industrialization, cultural changes, and health system structure (Beaglehole and Bonita, 2011; Marmot, 2020).

The changes in lifestyle brought about by globalization are among the most obvious ways that it has changed the incidence of cancer. Urbanization and the global food industry's operations have changed dietary habits and physical activity levels among communities. In addition to the rise in the number of people living increasingly sedentary lifestyles, there has been a notable increase in the intake of ultra-

processed foods, saturated fats, and refined sugars (Popkin 2015; Monteiro et al. 2018). The number of cancers linked to obesity has increased, including those of the breast, colon, pancreas, and endometrium, in part because of these changes. Additionally, the aggressive international marketing of alcohol and tobacco products has targeted vulnerable demographic groups and growing markets, leading to the development of malignancies in the mouth, liver, esophagus, and lungs that could have been prevented (WHO, 2020). Additionally, the environmental component of globalization adds another level of risk. Increased cancer morbidity and mortality have been attributed to air pollution, pesticide exposure, and industrial pollutants connected to uncontrolled industrialization (Ginsburg et al., 2017). Together, these components show how global market integration can lead to significant negative health effects in addition to economic opportunities.

The evolution of cancer outcomes has also been influenced by the global spread of knowledge and the development of medical technology. On the one hand, thanks to global research networks and digital platforms, innovations like improved screening tools, precision diagnostics, and customized medications are now being shared more quickly than ever before (De Souza et al., 2020). However, disparities in cancer treatment are maintained as a result of the unequal distribution of these findings. Atun et al. (2015) claim that high-income countries are more likely to adopt and use novel treatments sooner, leading to higher survival rates. However, low- and intermediate-income nations usually have to wait years for these technologies to become available. This imbalance exacerbates the already existent discrepancy in cancer rates worldwide and is a reflection of broader systemic imbalances in research funding, technological transfer, and health system capability.

Global trade and intellectual property laws also have an impact on the cost and availability of important cancer medications. International agreements like the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which protects pharmaceutical patents, offer incentives for innovation. However, the introduction of more affordable generic drugs may be delayed as a result of these same regulations (‘t Hoen, 2016). Consequently, the cost of new cancer treatments is sometimes unaffordable, which limits access in low-resource environments. Due to limited procurement capability, legal complications, and trade constraints, many low-income nations have trouble implementing these systems (Moon et al., 2011; Wirtz et al., 2017). This is true even though the TRIPS Agreement has provisions for parallel imports and mandatory licensing that are meant to safeguard public health. Global governance that gives equal weight

to commercial interests and health equity is urgently needed because of the inherent contradiction between promoting innovation and guaranteeing that everyone has equal access.

The effects of globalization also extend to labor markets and social safety nets, which may have indirect but important effects on cancer outcomes. Labonté and Schrecker (2007) state that in many areas, job security and social safety nets have been undermined due to economic volatility, outsourcing, and informal labor markets. A cancer diagnosis can cause financial devastation very fast, plunging households into long-term poverty (Knaul et al., 2018). This is particularly true in nations lacking sufficient universal health coverage policies. The socioeconomic effects continue to affect families and communities that span several generations, rather than just one individual. Additionally, inadequate sick-leave rules, job insecurity, and limited disability benefits exacerbate the vulnerability of cancer patients (Jamison et al., 2018). This is particularly true when there are limited financial resources. As a result, the consequences of globalization are deeply embedded in the social determinants of health rather than being limited to the field of epidemiology.

To counteract these complex effects, well-balanced policy responses are essential; in particular, measures that safeguard both innovation and fair access. Governments and international organizations can take steps to ensure the affordability of essential medicines by expanding national essential medicines lists, improving pooled procurement processes, and making appropriate use of the flexibilities granted by the Trade Related Intellectual Property Rights (TRIPS) (WHO, 2022). At the same time, in order to reduce the global cancer burden, investments must be made in cancer prevention and early detection, as well as the integration of primary care into cancer control strategies. Restricting hazardous commercial factors like alcohol, tobacco, and unhealthy diets should be the main goal of public health initiatives, while also promoting environmental control and health literacy. Essentially, the challenge lies not only in treating cancer but also in tackling the international organizations that sustain the inequalities it creates.

1.5 The Objective of the Study

In order to accomplish the goal of creating a comprehensive picture of the cancer burden from the perspectives of patients and the carers who assist them, the purpose of this study is to map and investigate the system-level impediments that exist in India towards cancer care. Cancer is not only an illness in India; it is also a complicated problem that is influenced by socioeconomic constraints, psychological pressures,

and structural injustices. The primary purpose of this study is to shed light on the manner in which these connected factors affect patient outcomes and to suggest reforms to the healthcare system that are both practicable and centered on the patient.

Specifically, the following objectives are intended to be achieved through the course of the research project:

1. To recognize and assess the different challenges that cancer patients confront during the course of their disease, including those that are medical, psychological, social, and economic in nature, and to research the ways in which these challenges interact with one another while they are undergoing treatment. According to Grassi et al. (2018) and Zafar and Abernethy (2013), patients and carers typically experience psychological discomfort, social isolation, and financial difficulty in addition to physical symptoms such as pain, tiredness, and functional impairment. This burden is compounded by the fact that these symptoms frequently occur simultaneously. By investigating the ways in which these two domains are intertwined, the purpose of this study is to investigate the full spectrum of patient experiences that occur within the context of India's sociocultural and healthcare environment.

2. To conduct an analysis of the institutional and structural limitations that exist within the Indian healthcare system due to the fact that they prohibit cancer treatment that is fast, continuing, and affordable. Inadequate hospital bed capacity, delayed referrals, a lack of required drugs, disconnected treatment pathways, and restricted access to survivorship and rehabilitation services are some of the issues that have been identified as contributing to this problem (Pramesh et al., 2014; Mallath et al., 2014). These kinds of limitations frequently result in delays in diagnosis, the discontinuation of care, and unequal access disparities between different socioeconomic groups. The purpose of this evaluation is to identify areas of the system that are inefficient and to provide strategies for delivering care that is coordinated, transdisciplinary, and easily accessible.

3. To investigate the demands and challenges that arise after treatment has been completed, in particular, with regard to reintegration into social and professional life, long-term toxicity management, survivability, and fear of recurrence. Additionally, the purpose of the study is to gain an understanding of the financial

and emotional repercussions that carers, who typically feel anxiety, burnout, and a reduction in their quality of life (Northouse et al., 2012; Pandey et al., 2016), are subjected to. It is essential to address these post-treatment difficulties in order to ensure a recovery that is long-lasting and general health and wellness.

4. To develop proposals that are both evidence-based and realistic for improving the performance of the system and those treatments that are centered on the patient. According to the Institute of Medicine (2013) and the World Health Organization (2021), these suggestions will be based on measurable performance indicators that have the ability to drive resource allocation and quality improvement initiatives. These metrics include treatment adherence, continuity of care, patient happiness, and financial protection. The goal is to develop changes that are not only possible to implement but also encourage equity, efficacy, and compassion in cancer care. These reforms should also be locally viable and in line with the best practices that are used globally.

The principal hypothesis of this research is that there is a favorable correlation between psychological resilience, treatment adherence, and functional outcomes in healthcare systems that place a high priority on patient-centered management. Strong coordination, effective communication, integrated psychosocial aid, and robust financial protection mechanisms are some of the features that are associated with such systems. It is more accurate to say that clinical outcomes and quality of life are significantly improved when cancer care is concentrated on the patient rather than the sickness (Holland & Weiss, 2010; Carlson et al., 2010).

1.6 Significance of the Study

The current study will contribute towards academic, practical, and systemic levels. All three levels are interrelated. In the context of India, each of these levels advances our understanding and management of cancer overall.

1. Academic significance

By combining clinical psychology, medical sociology, and health services research, this study advances a multidisciplinary model. The aim of this study is to understand cancer as a lived human experience that is

intricately entwined with families, communities, and healthcare systems, in addition to being a biological disease. The study fills a long-standing gap in context-specific knowledge by employing this holistic lens, which goes beyond discrete clinical or epidemiological data. It accomplishes this by blending first-hand patient narratives that detail the financial, social, psychological, and physical issues that patients encounter with system diagnostics, which include factors like healthcare infrastructure and institutional capability. This integrated approach enhances scholarly discourse in the domains of public health policy, psychosocial oncology, and health systems research by fostering a more nuanced understanding of the interplay between individual experiences and systemic barriers (Engel, 1977; Holland & Weiss, 2010; Marmot, 2020).

2. Practical significance

Within the realm of practical implementation, the study's conclusions directly impact healthcare practice and policy making. It will provide the groundwork for the creation and improvement of patient-centered care models, such as survivorship clinics that attend to long-term needs that go beyond treatment completion, psycho-oncology programs, patient navigation systems, and rehabilitation services. Improvements in referral mapping, bed management, medication availability, and the application of consistent treatment protocols to guarantee continuity and timeliness are more ways that the findings can help the operational side of healthcare. The study also highlights the need of financial protection systems and suggests a comprehensive assessment for financial risk, personalized counselling, and more connections between patients and insurance or social entitlement programs. In order to support value-based care and continuous improvement, the study emphasizes the use of quantifiable quality and performance indicators, including return-to-work statistics, adherence rates, symptom burden, functional outcomes, and the timeliness of treatment (Institute of Medicine, 2013; WHO, 2021).

3. The care system's efficiency

Administrators, policymakers, and healthcare executives can use this study to prioritize high-impact projects in situations where funding is scarce. This study is being carried out at the systemic level. It accomplishes this by laying out useful evaluation techniques and actionable metrics, which facilitates more efficient and effective distribution of scarce resources to initiatives that offer the greatest benefits in terms

of efficiency, equity, and patient outcomes. This is consistent with the broader global health agenda, which emphasizes the need for people-centered, evidence-based, and resilient healthcare systems that can address the socioeconomic and medical determinants of cancer care (Knaul et al., 2018; Atun et al., 2015).

In conclusion, cancer remains one of the most significant global public health issues. India bears a disproportionate amount of this burden because of its high incidence rates, early onset age, late-stage detection, and persistent system-level limitations. Beyond the boundaries of the therapeutic environment, patients face a complicated network of social, psychological, physical, and financial challenges. This is on top of the disease's molecular intricacy. Even while modern science has made great strides in understanding the molecular foundation and treatment methods of cancer, there are still a lot of gaps in how the systemic and experiential components of cancer are addressed. These characteristics characterize how cancer patients manage their disease in everyday situations.

The aim of this research is to fill that important gap by using a multidisciplinary and patient-centered approach. This method combines the perspectives of medical sociology, clinical psychology, and healthcare administration to create knowledge that could guide patient-centered initiatives, improve service delivery, and influence important legislative changes. The ultimate goal is to contribute to the development of a humane, equitable, and sustainable cancer care strategy. In addition to improving clinical outcomes, this paradigm should raise everyone's standard of living—patients, carers, and families.

CHAPTER II:

REVIEW OF LITERATURE

2.1 Introduction

A cancer diagnosis is a medical emergency and a big change in the lives of the sufferer and their family. The World Health Organization (WHO) released a report in 2021 that said there are more than 19 million new cases of cancer every year. As a result, cancer is the most common cause of death and illness in the world. The focus of oncology care has changed from just clinical outcomes to include the mental, emotional, and social health of both patients and their caregivers. As a result of better ways to find and treat cancer early, the survival statistics of cancer patients are always getting superior. One of the hardest parts of treating cancer is dealing with persistent stress, emotional pain, and significant changes to daily life. There is a wide range of psychological responses to cancer, such as emotional shock, denial, worry, melancholy, and existential dread. These responses are not fully autonomous; instead, they are shaped by various circumstances, including the severity of the illness, the patient's demographics, the accessibility of support systems, and the cultural background of the individual afflicted with the disease. The emotional burden that caregivers endure is substantial (Northouse et al., 2010). Caregivers may have to deal with new and challenging responsibilities without receiving sufficient training or support. The burden, distress, and fatigue they endure may be equivalent to or perhaps exceed those experienced by the patient. This chapter trying to provide a panoptic overview of the problems that patients and caregivers face by examining the psychological aspects of cancer in the literature and designing on findings from myriad disciplines. In this section, we will speak about how common anxiety and depression are, what causes them, how people deal with the worry of them coming back, how suffering changes during cancer, and how much work informal caregivers have to do. This chapter aims to examine modern techniques that have been proven to mitigate psychological distress. Cognitive behavioral therapy (CBT), mindfulness-based stress reduction (MBSR), and psychoeducational programs exemplify treatments under this category. The outcome of this study is an examination of the cultural and spiritual influences that affect individuals' experiences and coping mechanisms regarding illnesses such as cancer.

This literature review aims to elucidate the current body of knowledge, identify research gaps, and underscore the necessity of integrating psychological care within standard oncology therapies. The examination includes a holistic approach to cancer treatment that focuses on human resilience, support systems, and the need for personalized, comprehensive remedies. This strategy gives equal weight to patients and caregivers.

2.2 Cancer and Its Psychosocial Impact

Cancer is a broad word that includes more than 100 diseases that are marked by the uncontrolled growth and spread of abnormal cells. It is still one of the leading causes of death and sickness in the world, killing about 10 million people each year (World Health Organization [WHO], 2021). Even though there have been improvements in early detection, diagnosis, and treatment that have made it easier for people to live longer, cancer still has a terrible effect on people's mental and social health. It is pivotal to remember that cancer has an impact on people's minds and lives that goes beyond only the physical side of the disease. When a patient gets a diagnosis, they have to deal with a lot of challenging feelings right away, like fear, uncertainty, and grief. During therapy, remission, or palliative care, these emotional responses may persist or intensify significantly. As a person is diagnosed with cancer, they often undergo a significant disruption in their life, encompassing alterations to their identity, roles, relationships, and future ambitions (Bury, 1982).

The National Comprehensive Cancer Network (NCCN) characterizes psychosocial distress in cancer sufferers as a multifaceted condition that includes psychological, emotional, social, spiritual, and functional dimensions (NCCN, 2023). Psychological distress may manifest as depression, anxiety, panic attacks, or post-traumatic stress, while mood swings, rage, and feelings of despair may characterize emotional distress. Holland et al. (2013) assert that detrimental social conditions, including stigma, social isolation, and the alteration of familial roles, exacerbate the burden of disease. The course of the disease also influences the type and intensity of the suffering. Janelsins et al. (2014) say that patients who are getting strong treatments like chemotherapy or radiation therapy often say that their treatment makes them more tired, makes it harder for them to think clearly (frequently called "chemo brain"), and makes them feel emotionally drained.

Survivors may continue to grapple with enduring consequences, including fear of recurrence, body image problems, and challenges in re-entering the workforce or resuming everyday social interactions (Ganz et al., 2004; Stanton et al., 2006). These are only a few of the challenges that survivors could have. A significant number of patients do not receive sufficient psychological assistance, despite ample research highlighting its relevance. Mitchell et al. (2011) and Carlson et al. (2010) found that up to 35% of persons with cancer suffer from clinically severe psychological distress. Yet only a small number of these patients get formal mental health care. There are several problems with the healthcare system, such as stigma, a shortage of qualified workers, healthcare providers not diagnosing patients correctly, and gaps in the way therapy is delivered. There are also apparent disparities in psychosocial upshots across different sociodemographic groups. Patients with lower incomes, those belonging to minority groups, and individuals with limited access to medical treatment are more prone to experiencing distress and receiving inadequate help (Surbone, 2004; Lathan et al., 2016). This underscores the significance of measures centered on equity and the socioeconomic determinants of health. There is a growing agreement that a key aspect of high-quality cancer care is that it includes psychosocial therapy as part of standard oncology practice. Jacobsen and Wagner (2012) and the Institute of Medicine (2008) are two groups that support routine distress screening, early intervention, and interdisciplinary collaboration. In short, cancer is not just a disease that affects the body; it also affects the mind, the soul, and society as a whole. It is essential to know the psychosocial factors of care well to give it in a thorough and caring way. In the following sections of this chapter, we will examine the particular psychological, emotional, and existential challenges encountered by patients and caregivers throughout the entire cancer continuum.

2.3 Psychological Difficulties Encountered by Patients

After being told they have cancer, patients may go through a plenty of different emotional and mental reactions. This may be a very life-changing event. Costa and Mercieca-Bebber (2016) assert that intense emotions like fear, anxiety, disbelief, and rage often mark the initial shock of a cancer diagnosis. To reduce long-term suffering, immediate psychological therapy is frequently essential.

As patients advance in treatment and near the phase of survivorship, the emotional load often persists or intensifies. Survivors may endure psychological repercussions, including sadness, anxiety, post-traumatic stress symptoms, and existential discomfort. This is remarkably accurate when they are trying to manage the anxiety of recurrence or the physical alterations which is in short result from treatment (Stein et al., 2008). Post-treatment, not all patients experience a decrease in their psychological distress; in fact, many report that the period following active treatment is the most emotionally challenging time for them. Beckjord et al. (2012) assert that the "re-entry phase" often lacks the structured support characteristic of therapeutic therapy, hence increasing the likelihood of social isolation and failed psychological requirements. The interplay between ageing and survival may exacerbate cognitive and emotional challenges (Deimling et al., 2006). This can mean that older adult survivors may confront big problems. It's not uncommon for patients to have serious emotional and existential worries when they are getting palliative or end-of-life care, for example. These difficulties could encompass a fear of mortality, a sense of purposelessness, and anxiety for family and friends. Gao et al. (2010) and Burney (2019) assert that integrated psychosocial oncology services are essential, as psychological distress remains widespread and is significantly neglected during this stage of cancer therapy.

2.3.1 Depression and Depressive Symptoms

Mitchell et al. (2011) and Pirl (2004) estimate that 15% to 25% of cancer patients will suffer from depression. The type of cancer, the stage of the malignancy, and the phase of treatment the patient is going through all affect this range. Depression is one of the most widespread mental problems that people with cancer have. Anxiety is another prevalent illness. There are two types of depression: clinical and reactive. Clinical depression meets the diagnostic criteria for major depressive disorder, while reactive depression happens when someone finds out they have the condition and has to deal with it. People think that both kinds of depression are sorts of depression. Depression is linked to several symptoms, such as persistent feelings of sadness and hopelessness, a lack of interest, fatigue, and difficulty concentrating. Pinquart and Duberstein (2010) assert that untreated depression can complicate medication adherence, exacerbate physical symptoms, and adversely affect survival results. If depression is not treated, all of these things can happen.

2.3.2 Anxiety and Fear of Recurrence

Anxiety, a common psychological disorder that often coexists with depression, is another frequently seen concern. It can be general or particular to cancer-related stressors, like the side effects of treatment, not knowing what will happen next, or being afraid that the cancer will recur after treatment. These are all things that can cause stress in people with cancer. Fear of cancer recurrence, also referred to as FCR, is a prevalent and painful issue among cancer survivors. Simard et al. (2013) found that as many as seventy percent of survivors said they had some level of FCR when they were interviewed. Having a lot of anxiety can make many parts of your life worse, such as your ability to sleep well, your cognitive performance, and your overall quality of life.

2.3.3 Body Image and Identity Disturbance

A lot of the time, cancer treatments affect the way the body looks and works, which can make it hard for people to see their own body in a different way. This disruption is particularly palpable in individuals' undergoing procedures such as mastectomy, chemotherapy-induced baldness, surgical scarring, and ostomy creation. These treatments, along with similar ones, could have a significant effect on how a person sees themselves, their self-esteem, and their sexual function (Esplen et al., 2021; Hawighorst-Knapstein et al., 2004). Younger patients and those with tumors affecting reproductive or visibly prominent body regions, such as the breast, head and neck, or gynecologic malignancies, are most vulnerable to the condition. These individuals often experience heightened distress due to alterations in femininity, masculinity, or attractiveness, which may contribute to social disengagement, feelings of guilt, and clinical depression (Mohammadi & Khan, 2023; Covrig et al., 2021). A longitudinal study of breast cancer survivors underscores that alterations in body image and sexual self-concept during the initial year post-diagnosis are indicative of long-term psychological well-being and social functioning, occasionally spanning a six-year trajectory (Lam et al., 2016). Pendley and Dahlquist (1997) assert that these modifications underscore the significance of early psychosocial interventions and body image rehabilitation in cancer care environments to mitigate the enduring emotional consequences faced by cancer patients.

2.3.4 Cognitive Impairment (“Chemo Brain”)

A group of cognitive impairments that many cancer patients say they have before and after treatment is called "chemo brain," which is also known as chemotherapy-induced cognitive impairment (CICI). People typically use this phrase to talk about. Forgetfulness, trouble paying attention, slower processing speed, and problems with executive functioning. These provocations encompass issues with planning and multitasking (Hermelink, 2015; Schagen et al., 2006). Common signs include forgetting things. Some patients continue to experience long-term cognitive dysfunction that may persist for years, even though these deficiencies are typically transient and resolve within a few months for most individuals. Argyriou et al. (2011) and Huehnchen and van Kampen (2020) assert that these deficiencies can significantly disrupt daily activities and professional responsibilities, resulting in emotional distress, diminished self-efficacy, and a decline in quality of life. The prefrontal cortex and hippocampus are brain regions associated with memory and executive function (Li & Caeyenberghs, 2018; Kaiser et al., 2016). Neuroimaging and longitudinal studies indicate that chemotherapy may induce structural and functional changes in essential brain regions, especially within the prefrontal cortex. It is important to note that even mild cognitive impairments can have a disproportionately negative effect on patients who are involved in activities that demand a high level of cognitive capacity, such as schoolwork or a profession that requires significant mental effort (Moore, 2014). In cancer contexts, routine cognitive assessments are frequently overlooked, despite the prevalence of chemotherapy-induced cognitive impairment. Evens and Eschiti (2009) assert that enhancing awareness and including neuropsychological screening into survivorship care plans are critical measures for identifying and addressing this ostensibly minor side effect of cancer treatment.

2.3.5 Existential and Spiritual Distress

Patients dealing with cancer often have to deal with deep questions about their beliefs, the purpose of life, and their death. These problems usually get worse as the disease progresses and the patient's health worsens. Breitbart et al. (2018) describe this condition, commonly referred to as existential distress, as characterized by a persistent sense of hopelessness, a lack of purpose, and, in some cases, a desire for death induced by urgency. Evidence suggests that existential suffering is not only common among patients with terminal illnesses but is also closely linked to psychological disorders such as anxiety and depression (Lee et al.,

2019). Meaning-centered treatments (MCIs), exemplified by the meaning-centered psychotherapy (MCP) developed by Breitbart and his colleagues, have emerged as practical approaches for reducing this form of pain. Breitbart et al. (2015) and Aiello-Puchol and García-Alandete (2025) assert that these interventions employ existential psychology, spiritual philosophy, and logotherapy to aid patients in rediscovering sources of purpose, dignity, and identity, even in the face of terminal illness. Recent meta-analyses and randomized controlled trials have demonstrated that these interventions significantly alleviate existential distress, enhance emotional well-being, and improve quality of life among patients with advanced cancer (Wang et al., 2025; Shen et al., 2025). These data indicate a significant decrease in the number of patients experiencing existential distress. It is important to note that these interventions also have repercussions for carers, who frequently come up against their existential challenges while assisting loved ones who are coping with terminal disease. It is feasible to provide patients with a framework for spiritual reflection, identity reconstruction, and a fresh sense of purpose during the challenges associated with their illness by incorporating philosophically founded and meaning-based frameworks into palliative and psycho-oncology care approaches.

2.3.6 Stigma and Isolation

Cancer is still a disease that is looked down upon in many social and cultural settings. People often feel scared and ashamed when they think about it, and they also hold on to certain notions. In some communities, it is highly common for a diagnosis to be linked to personal failure, contagion, or even moral judgment. This stigma is prevalent among these groups. Surbone (2004) and other studies assert that the existence of such stigma correlates with a cascade of adverse effects, including diminished social disclosure, weakened social support, and prolonged psychological distress. Research indicates that stigma constitutes a substantial barrier that hinders individuals from seeking treatment and participating in open communication, leading to emotional and social withdrawal among patients. Stigma significantly impacted the relationship between mindfulness and psychological suffering in Chinese lung cancer patients, with diminished perceived support exacerbating discomfort (Lei et al., 2021). This was evidenced by the identification of stigma as a substantial mediator of the connection. Similarly, childhood cancer survivors reported that societal stigma diminished their willingness to reveal their cancer history and led to feelings of shame, thereby limiting their access to supporting networks (Kim & Yi, 2014). This, in turn, made them even more unhappy.

Stigma can cause people to feel alone, whether it's physically (for example, withdrawing from communal life), emotionally (for example, feeling that no one understands them), or socially (for example, friends or relatives leaving them). Lee et al.'s 2020 study and Mitchell et al.'s 2017 study found that this isolation is linked to a lower quality of life, less effective coping mechanisms, and a longer time for psychosocial adjustment. Rose et al. (2021) executed a comprehensive investigation demonstrating that stigma could forecast psychological distress six months post-diagnosis of lung cancer. This shows how stigma can affect people's mental health for a long time. To battle this stigma, we need to educate the general public, make sure that therapies are responsive to cultural norms, and include psychosocial support in cancer care. By promoting open conversation and creating conservative spaces for disclosure, feelings of isolation can be diminished, allowing patients to pursue the social and emotional support essential for their overall health.

2.3.7 Suicidal Ideation and Intense Distress

Suicidal ideation and actions are significant concerns among individuals diagnosed with cancer, notwithstanding their relative infrequency. Several factors, such as unmanaged physical pain, severe depression, a perceived loss of autonomy, and insufficient social or emotional support, markedly elevate the probability of individuals encountering this risk. Nonetheless, studies indicate that even in the pre stages of treatment, specific individuals may experience thoughts of suicide or self-harm. Consequently, early psychological examination is imperative (Fang et al., 2018; Senf et al., 2022).

Walker et al. (2015) and subsequent reviews have underscored that the suicide risk among cancer patients is significantly underestimated and sometimes overlooked in conventional oncology environments. This is because people living with cancer are less likely to commit suicide than people with other mental illnesses. Another element that exacerbates the severity of this danger is the widespread presence of demoralization, hopelessness, and existential despair. A comprehensive study (Kolva et al., 2019) found that suicidal thoughts related to cancer are often connected to unaddressed psychological suffering. This outcome underscores the imperative to include suicide risk assessment in conventional cancer practice. It is still essential to have crisis intervention services and evidence-based screening and referral systems for mental health. Research by Leung et al. (2017) and Meijer et al. (2013) indicates that regular screening with

validated instruments enhances the identification of at-risk patients and improves outcomes when integrated into comprehensive treatment.

Granek et al. (2019) report that oncology healthcare workers identify structural impediments, time constraints, and insufficient training as common barriers hindering their successful engagement in suicidality prevention. People with cancer suffer a lot of complicated and deeply layered psychological problems. Their experiences are shaped by a complex mix of their health, mental toughness, cultural standards, and their environment. To address these challenges and make sure that cancer care is truly comprehensive, a thorough, evidence-based plan for screening and psychological intervention must be put into place.

2.4 Distress of an Emotional and Existential Nature

Cancer patients exhibit a diverse array of emotional and behavioral responses, which evolve with the course of their illness. In the beginning, these reactions could be astonishment, fear, and denial. However, later on, they could include anxiety, despair, anger, acceptance, or even actions that help them grow. These psychological patterns are shaped by a constellation of individual and contextual factors, encompassing personality traits, prior mental health history, coping style, social support, cancer type and stage, prognosis, and cultural or religious frameworks (Dunkel-Schetter et al., 1992; Kasparian et al., 2009). It is essential to recognize that numerous factors affect these elements. Research indicates that the extent to which patients can adapt and adjust is significantly affected by the social and emotional support they receive, especially during the initial phases of diagnosis. Namkoong et al. (2013) found that breast cancer patients who expressed their feelings and got support, especially from online forums, were better able to deal with their illness and felt less stressed. Patients who participated in emotional expression also indicated that they received assistance. Thomsen and Rydahl-Hansen (2010) assert that family dynamics and perceived social connectedness significantly influence resilience and emotional outcomes during treatment and survivorship.

Park and Gaffey (2007) also say that making changes to your behavior, including living a healthier lifestyle or doing mindfulness or meaning-centered activities, can help you be more adaptable and improve your quality of life after cancer. On the other hand, the ways that people cope with things are very different, and the process of emotional adaptation doesn't always follow a straight line. Mehrabi et al. (2015) assert that some patients may undergo a transition between different coping strategies contingent upon the evolution of their ailment or their specific circumstances. It is essential to possess a comprehensive awareness of these dynamic patterns of psychological response to create interventions that are both person-centered and context-sensitive. Grassi et al. (2007) assert that adaptive coping can be fostered through treatments that use patients' strengths, offer personalized emotional support, and tackle mutable factors such as communication, social networks, and spiritual well-being.

2.4.1 Shock, Denial, and Disbelief

People who have been told they have cancer often experience a lot of different psychological reactions. The most common ones are shock, denial, and disbelief about the diagnosis. When the illness is asymptomatic or only mildly symptomatic, individuals are unprepared for the severity of the diagnosis, leading to a more pronounced initial phase of emotional anguish. Patients often struggle to understand what's going on after they suddenly discover that they have a life-threatening illness. This can lead to numbness, avoidance, and delayed emotional processing (Barraclough, 1999; Wells, 2001). Denial can pose challenges when it obstructs the acceptance of the diagnosis or the initiation of therapy. However, it can occasionally be adaptive in the short run by serving as a psychological buffer. Numerous studies, including those by Watson et al. (1984) and Rabinowitz and Peirson (2006), have shown that prolonged denial can contribute to delays in medical decision-making, reduced adherence to treatment protocols, and adverse psychological outcomes. In his prior study, Kreitler (1999) emphasized denial as a dual-faceted phenomenon: it may give emotional solace while simultaneously hindering prompt participation in care (Kreitler, 1999). These data support Kreitler's conclusions. Denial, conversely, is not a monolithic phenomenon; it manifests in several forms, including the evasion of information, the attenuation of symptoms, or the outright repudiation of the diagnosis. Doctors need to know a lot about these details because they need to find a good balance between respecting a patient's coping style and encouraging them to get care as soon as possible (Zimmermann, 2004; McCaughan & McKenna, 2007). Healthcare team members need to be trained to spot and deal with

denial positively to achieve the best results. Patients can transition from denial to acceptance and active participation in therapy through communication strategies that foster empathy, gradual information dissemination, and continuous psychological support.

2.4.2 Anger and Frustration

People often feel angry after being told they have cancer, especially if they think the disease is unjust, random, or unpredicted. People may feel this way when they feel like they have lost something, are powerless, or have been wronged. This feeling could be aimed at themselves, their healthcare providers, their family, or their friends. Thomas et al. (2000) assert that individuals experiencing anger may display specific behaviors, such as irritability, emotional detachment, confrontational conduct, or passive opposition to treatment protocols. Anger that isn't dealt with or is directed at the wrong person can hurt relationships with other people and make it harder to control your emotions. Initial anger may function as a coping method to regain a sense of control; however, persistent anger might have the contrary consequence.

Moreover, Cardena et al. (2000) assert that unresolved emotions might exert pressure on relationships and hinder patients' ability to engage successfully with their support network and the healthcare professionals delivering their care. Julkunen et al. (2009) and Barinková and Mesároová (2013) discovered that those who struggle to regulate or cope with anger had a worse mood, a worse quality of life, and less fun in their relationships. Their personality traits and coping strategies influence patients' expression and regulation of anger. Research by Cardenal et al. (2012) indicates that traits such as conscientiousness and emotion-focused coping can forecast enhanced emotional outcomes in states of anger and distress. Participating in therapeutic interventions aimed at anger expression, such as emotion-focused therapy, mindfulness training, or couples-based support, may be beneficial for improving emotional regulation and mitigating long-term psychosocial consequences. Philip and Kissane (2011) assert that these techniques help patients identify and reframe their emotional responses positively, so improving their psychological well-being and the dynamics of their relationships in the process.

2.4.3 Guilt and Self-Blame

People living with Cancer sometimes feel ashamed and blame themselves, especially those who have lung cancer and smoke or liver cancer and drink alcohol. These feelings sometimes come from the assumption that one's disease is a result of bad decisions or moral failing. Patients may perceive their diagnosis not merely as a medical disease but as a retribution for previous actions, which exacerbates emotional anguish, guilt, and stigma (Mitchell et al., 2017). This internalized stigma can diminish help-seeking behavior and obstruct emotional expression. A qualitative study of cancer patients in Sweden revealed that, despite being educated about lifestyle risk factors, numerous participants internalized feelings of guilt and shame, articulating sentiments such as “I feel ashamed that I still got cancer,” even after attempting to engage in healthy behaviors (Grauman et al., 2024). This tendency is not exclusive to Western contexts; analogous findings were noted in Nigerian hospitals, where patients perceived cancer as a consequence of moral or spiritual deficiencies, dominating to hesitance in disclosing their diagnosis and pursuing treatment (Adegboyega et al., 2019). Moreover, individuals from marginalized groups may encounter intersecting stigmas arising from their illness and societal prejudices, exacerbating emotional distress and complicating coping mechanisms (Shafiq & Parveen, 2023). Else-Quest et al. (2009) earlier contended that shame and guilt diminish receptiveness to social support and psychological care—assertions now validated by more recent findings. Franklin et al. (2018) discovered that patients feeling guilt or self-blame frequently hesitated to utilize support services due to fears of judgement or reinforcing unfavorable stereotypes (Franklin et al., 2018). Ultimately, combating internalized stigma and fostering nonjudgmental, supportive care environments are crucial for alleviating psychological discomfort and enhancing involvement with cancer care. Narrative methodologies, stigma-reduction strategies, and psychosocial counselling can assist in reconstructing sickness narratives and reinstating patients' self-esteem.

2.4.4 Loss and Grief

When someone finds out they have cancer, they often feel a deep sense of loss that affects many parts of their lives, including their physical health, their independence, their social responsibilities, and their long-term objectives. Anticipatory mourning is a type of grief that patients might feel even in the early stages of their condition. It happens when they feel like they have lost their old self. Chen et al. (2012) say that this

early sadness is caused by accepting change, ambiguity, and a broken identity. This initial mourning is not inherently linked to the conclusion of life. Anticipatory mourning can begin as soon as a person gets a diagnosis, and it can get stronger at important times, as when they switch from curative to palliative care, when the disease comes back, or when their capacity to function decreases. Hudson et al. (2011) point out that this kind of mourning happens in cycles and often comes back at important points in the illness's progression. Hottensen (2010) says that patients generally talk about how sad they are not only because their loved one is going to die soon, but also because they are losing their independence, closeness, and sense of self. Women diagnosed with cancer specifically report experiencing various pre-grieving emotions associated with fears of abandonment, alterations in body image, and shifts in their relationships. Jovičić-Bata et al. (2025) conducted a study that underscores the significance of public health models integrating anticipatory grief screening to improve the provision of psychological support (Jovičić-Bata et al., 2025). The emotional health of family carers can impact patients' ability to adapt and the standard of care they receive. Family carers often undergo anticipatory grief concurrently. Coelho et al. (2021) assert that the experiences of grief endured by families evolve concurrently with the advancement of the patient's illness, especially during hospice enrolment or terminal decline (Coelho et al., 2021). If anticipatory grief is not recognized, it may increase the risk of psychological distress, hopelessness, and potentially clinical depression. A study by Mystakidou et al. in 2009 found strong associations between preparedness for grieving and symptoms of anxiety and depression in patients with advanced stages of the disease. The most important thing to do is to recognize and deal with anticipatory grief as a real part of the cancer experience. Psychosocial therapies, including grief counselling, legacy work, and meaning-centered treatment, can be beneficial for patients and their families because they provide them with the machines they need to deal with loss while still being able to engage actively in life and care.

2.4.5 Changes in Behavior and Ways of Coping

The diagnosis of cancer frequently elicits varied behavioral responses as individuals strive to manage the psychological distress and ambiguity linked to the condition. Individual coping techniques, available support systems, and perceived control over the illness's progression significantly impact behavioral reactions. Many patients adopt proactive and adaptive coping strategies, which are generally linked to greater mental and physical health. This entails acquiring knowledge about the ailment and treatment

alternatives, adhering rigorously to treatment protocols, and making informed healthcare decisions (Carver, 1997; Stanton et al., 2006). Active coping solutions frequently depend on problem-focused methodologies, helping patients manage their disease. Conversely, specific individuals may have more passive or reliant behavioral responses, particularly when confronted with a diagnosis or without the internal or external resources to cope with stress. In certain instances, patients may exhibit social withdrawal, display an undue dependence on carers, or assume a posture of helplessness, so exacerbating psychological distress and diminishing participation in therapy (Lazarus & Folkman, 1984; Suls & Fletcher, 1985). These behavioral patterns are especially prominent in individuals who sense a loss of autonomy owing to their disease or encounter disturbances to their identity and roles within their families or communities (Charmaz, 1995).

Holland et al. (2010) assert that individuals lacking appropriate coping mechanisms or enduring unresolved emotional discomfort are predisposed to engage in maladaptive activities. These may encompass denial, substance abuse, evasion of medical consultations, or non-compliance with treatment regimens. These acts can be seen as ways to deal with emotional anguish in the short term, but they often make long-term health problems worse. Avoidance coping has been linked to inadequate psychological adjustment, heightened symptom load, and reduced quality of life in cancer patients (Greer et al., 2001; Schnoll et al., 2002). Furthermore, untreated psychiatric comorbidities, such as depression, anxiety, or post-traumatic stress disorder, have been demonstrated to affect behavioral responses dramatically. Patients enduring significant emotional distress may resort to self-isolation or exhibit anger and irritability, exacerbating the pressure on support networks and hindering communication with healthcare providers (Jacobsen & Jim, 2008). An interdisciplinary strategy that combines psychological assessment and early psychosocial interventions is crucial for identifying those susceptible to maladaptive coping and delivering focused support (Mitchell et al., 2011).

In conclusion, specific individuals utilize proactive coping strategies following a cancer diagnosis. Conversely, some individuals may exhibit excessive dependence, social disengagement, or engage in detrimental activities as a result of psychological suffering or inadequate coping mechanisms. A deeper comprehension of these behavioral responses highlights the significance of personalized psycho-oncological care, which can enhance treatment adherence and overall well-being.

2.4.6 Suppression and Numbing of Emotions

Some people with cancer or another long-term illness utilize techniques to keep their feelings in check and manage their stress. These people may numb or hold back their feelings on purpose or by accident, and they often don't want to talk about how they feel, whether it's fear, grief, or anger. This strategy may provide temporary psychological relief or help patients maintain a sense of control during stressful circumstances, although it may result in adverse outcomes in the long term. Suppressing emotions has been shown to interfere with emotional processing and cognitive integration, which makes it harder to change psychologically and increases the chance of long-term pain (Gross & Levenson, 1997; Richards & Gross, 2000).

Moos and Schaefer (1993) assert that avoidant coping strategies, particularly those rooted in emotional suppression, tend to exhibit diminished adaptability over time. Their crisis theory paradigm posits that effective coping involves not only the management of the immediate emotional consequences of illness but also the processes of cognitive restructuring, meaning-making, and emotional expression. When patients consistently suppress their emotions, they may relinquish critical opportunities to process the trauma of diagnosis, seek social support, or participate in problem-solving activities that facilitate recovery and adaptability. Over time, this can cause more anxiety, depression, and psychosomatic symptoms (Nausheen et al., 2009; Lutgendorf & Costanzo, 2003). Additionally, the repression of emotions may impede social connections and communication with carers and healthcare professionals. People who don't reveal their feelings may look distant or emotionally unavailable, which might make people feel less supported and more alone (King & Emmons, 1990). In therapeutic contexts, this inclination may obscure the urge for psychiatric assistance, as suppressed suffering is less likely to be recognized in standard clinical assessments (Solano et al., 2001). Research in psycho-oncology demonstrates that emotional expression, particularly when combined with cognitive processing, is associated with enhanced psychological and physical outcomes in cancer patients (Stanton et al., 2000; Pennebaker, 1997). Therapeutic modalities such as expressive writing, supportive-expressive group therapy, and mindfulness-based interventions have been formulated to alleviate emotional suppression by facilitating patients' acknowledgement and processing of difficult emotions within a secure and structured environment (Smyth, 1998; Carlson et al., 2004).

2.4.7 Emotional Resilience and Development

A cancer diagnosis can be very taxing on both the body and the mind, but many people are mentally strong. Emotional resilience means being able to handle stress, trauma, or tough times in a healthy and productive way. Patients with cancer must contend with their diagnosis, adhere to their treatment regimen, and preserve their quality of life (Bonanno, 2004). Many individuals not only surmount the complications associated with cancer but also undergo substantial psychological transformation, a condition known as post-traumatic growth (PTG). Post-traumatic growth is when you change your mind for the better after going through terrible events in your life. Common outcomes include a renewed appreciation for life, enhanced interpersonal relationships, increased personal resilience, a reevaluation of life goals, and spiritual or existential growth (Tedeschi & Calhoun, 2004; Morris et al., 2012). For cancer survivors, PTG may manifest as an intensified focus on fundamental objectives, heightened empathy towards others, or a more reflective and grateful approach to daily existence. Therapeutic and psychosocial interventions can assist this kind of growth to happen more quickly. Research demonstrates that interventions such as meaning-centered psychotherapy, narrative therapy, and mindfulness-based stress reduction can create the psychological conditions necessary for individuals to recontextualize their experiences and attain growth from adversity (Garland et al., 2007; Breitbart et al., 2015). Tedeschi and Calhoun (2004) contend that nurturing environments that promote emotional expression, introspective dialogue, and spiritual exploration significantly enhance the likelihood of post-traumatic growth and foster hope, an essential protective factor against depression and despair. Still, the emotional and behavioral reactions to cancer remain deeply individualized and fluid. A patient's personality, past trauma, cultural background, social support, and spiritual beliefs can all affect how they deal with, adapt to, and possibly grow after falling sick (Zoellner & Maercker, 2006). So, healthcare workers need to utilize a trauma-informed, psychologically sensitive way of caring for people that takes into account both their weaknesses and strengths.

In short, the emotional and behavioral parts of cancer care are complex to understand and constantly changing. Some individuals may experience notable distress and require targeted psychosocial assistance, whereas others may develop and enhance their internal resilience. Healthcare practitioners must remain cognizant of this spectrum of emotions, delivering care that is empathetic, culturally attuned, and rooted in

a comprehensive awareness of psychological variety. Encouraging both sensitivity and resilience not only enhances patient health but also demonstrates that healing is a whole process.

2.5 Effect on Carers

Carers, who are frequently spouses, adult children, siblings, or close friends, are an essential aspect of cancer care. They do more than simply be a buddy; they also aid with things like managing prescriptions, making appointments, getting rides, helping with everyday duties, and giving emotional support during treatment and recovery (Given et al., 2001; Northouse et al., 2012). Informal carers often act as case managers without even knowing it. They aim to maintain a stable home environment while filling in the gaps between patients and healthcare systems (Stajduhar et al., 2010). But occasionally, the strong commitment that carers need comes at a hefty cost. Caregiving can be a valid experience due to the emotional bond and sense of duty towards the patient; nevertheless, it may also lead to psychological discomfort, emotional fatigue, physical strain, and financial hardship (Grunfeld et al., 2004; Kim & Schulz, 2008). "Carer burden" is a word that expresses how caring for someone impacts their mental, social, financial, and physical health (Zarit et al., 1980).

People who care for cancer patients often indicate they have trouble with their mental and emotional health. Research consistently demonstrates elevated levels of anxiety, depression, sleep disturbances, and a sense of helplessness among informal carers, often comparable to or exceeding the levels reported by the sufferers themselves (Pitceathly & Maguire, 2003; Lambert et al., 2017). Geng et al. (2018) conducted a systematic study revealing that 30% to 50% of cancer carers had anxiety, with around one-third exhibiting depressive symptoms. These challenges are especially pronounced during the palliative and end-of-life stages, marked by intensified emotional distress and anticipatory grief (Hudson et al., 2011). Furthermore, carers' physical health often deteriorates when they care for someone over an extended period, particularly if they neglect their needs or delay seeking medical assistance. Fatigue, somatic problems, weakened immunity, and harmful lifestyle habits (e.g., irregular meals or inadequate sleep) are everyday (Vitaliano et al., 2003). Carers also often have money problems since they work fewer hours, have to take time off work, spend their own money, and can't get enough help from institutions or the government (van Ryn et al., 2011).

Low-income or immigrant families may have even more trouble accessing help because of structural problems that make it tougher for them to get the care they need. Caregiving isn't all bad, even with these issues. Many carers report positive elements of caregiving, including improved relationships, personal growth, spiritual enrichment, and the fulfilment derived from aiding a loved one in need (Kim et al., 2007). Psychosocial oncology literature is beginning to acknowledge this dual experience, wherein caregiving is simultaneously emotionally taxing and profoundly significant (Ullrich & Schaar, 2020). Given the critical role of carers in influencing patient outcomes, healthcare systems must routinely understand and address their needs. This includes routine psychiatric evaluations, educational resources, respite care services, and the inclusion of carers in the planning and decision-making processes for treatment (Applebaum & Breitbart, 2013). Policies that do not take into account the difficulties that carers confront put the carers' well-being, the viability of home-based cancer care, and the quality of patient outcomes at risk.

In conclusion, cancer patients are the primary focus of the clinical journey, but their caregivers are often the unsung heroes of that journey. To create a comprehensive and compassionate cancer treatment model, it is essential to understand the various forms of stress individuals experience, including emotional, physical, and economic aspects. Not only is it the right thing to do to help carers, but it is also a strategic need to improve overall patient care.

2.5.1 Stress that is emotional and mental

People who take care of cancer patients may feel tremendously agitated, anxious, sad, and emotionally drained. These moods sometimes develop gradually due to prolonged exposure to parental responsibilities, uncertainty, and anticipatory grief, as opposed to episodic emotional reactions. Bevans and Sternberg (2012) contend that caregiving in the context of cancer constitutes a chronic stressor, significantly diminishing the caregiver's physiological, emotional, and cognitive functioning. Their research reveals that up to 40% of informal carers experience clinical levels of psychological distress, exhibiting symptoms severe enough to meet the diagnostic criteria for anxiety or depressive disorders. Kim and Schulz (2008) also found that carers often experience higher levels of psychological morbidity than the patients they support, particularly in situations of little assistance or prolonged and intensive caregiving. Carers endure emotional distress stemming from various interrelated circumstances. Anticipatory sorrow is one of the most common types of grief. It is the process of grieving that starts before the person expires. This kind of

mourning is marked by despair, feeling helpless, and being more afraid of what might happen next (Al-Gamal & Long, 2013). Many carers are scared of losing someone, which can make them more anxious and less emotionally stable, especially when the prognosis is bad or the patient is in palliative care. Carers often feel helpless, especially when they see the patient suffering and feel they are unable to help. This emotional impotence can result in role overload, when carers get inundated by the numerous responsibilities of physical care, emotional support, household duties, employment, and child-rearing (Given et al., 2001). For many people, the combined effects of these stresses lead to burnout, which is an emotional state characterised by reduced empathy, disengagement, and physical fatigue (Figley, 1995). Northouse et al. (2010) did research that shows how emotionally distressed carers are, which is often worse than the cancer patient's distress. This is especially true for carers who don't feel ready for the clinical portions of care or who don't have enough emotional and social support. The emotional toll can be exacerbated in cases of aggressive or terminal cancer, as caretakers must confront mortality while attempting to maintain functional responsibilities and guarantee the emotional stability of the patient. Furthermore, carer distress has been shown to correlate with adverse patient outcomes, such as increased hospitalizations, decreased therapy adherence, and a lower quality of life for both carers and patients (Applebaum & Breitbart, 2013). Taking care of the mental health of caretakers is not just the moral thing to do, but it is also a key part of integrated cancer care.

2.5.2 Physical and Health-Related Burdens

Taking care of cancer patients is hard work, which can be bad for the health of informal carers. Carers typically have to give hands-on physical care, which can include helping with hygiene and toileting, delivering medications, helping with mobility and transfers, managing nutrition and feeding, and responding to medical needs at home. These chores, especially when done for prolonged periods, can make you tired all the time, make it hard to sleep, and hurt your muscles and bones, especially if you're an older person or already have health problems (Grant et al., 2013; Lee et al., 2015). Carers who care for patients with high dependency levels, like those with advanced cancer or who are getting intensive treatments, are more likely to feel physical strain. Moving, lifting, and moving patients can hurt your back, strain your joints, and create repetitive stress injuries if you don't have the correct gear or training (Van Houtven et al., 2011). The repetitive nature of caregiving tasks and the lack of physical relaxation can result in cumulative

long-term physical deterioration, reducing carers' functional capacity and quality of life (Bevans & Sternberg, 2012). In addition to creating physical wear and tear, caregiving responsibilities can also interfere with carers' health maintenance routines. Due to time constraints, mental exhaustion, or prioritizing the patient's needs, carers may neglect their health, resulting in missed medical appointments, delayed treatment for their issues, or failure to maintain balanced food and exercise habits (Lee et al., 2015). Chronic stress and insufficient sleep impair immunological function, elevate the risk of cardiovascular issues, and exacerbate preexisting health conditions (Vitaliano et al., 2003). The "carer cascade effect" occurs when a carer ignores their health because they are stressed, which makes their health worse and makes it harder for them to care for others (Schulz & Sherwood, 2008).

Research indicates that caregiving is associated with an increased likelihood of engaging in detrimental behaviors, such as smoking, excessive alcohol use, or insufficient sleep, particularly in the absence of adequate emotional support (Rha et al., 2015). Most of the people who care for cancer patients are women. They are more likely to suffer these health-related stressors because of conventional caregiving duties, a reluctance to ask for help, and additional responsibilities at home (Pinquart & Sörensen, 2006). These physical and health-related challenges significantly impact not only the welfare of carers but also the sustainability of home-based cancer care. When carers are sick, they may not be able to give patients the same level of care. This could mean that the patient has to go back to the hospital or live in a nursing home. As a result, focused treatments including training for carers, physical respite services, ergonomic equipment, and integrated health monitoring for carers are all pivotal parts of complete oncology care (Applebaum & Breitbart, 2013).

2.5.3 Problems with money and work

Taking care of cancer patients is hard on the body, which can be bad for the health of informal carers. Carers typically have to give hands-on physical care, which can include helping with hygiene and toileting, delivering medications, helping with mobility and transfers, managing nutrition and feeding, and responding to medical needs at home. These chores, especially when done for long periods, can make you tired all the time, make it hard to sleep, and hurt your muscles and bones, especially if you're an older person or already have health problems (Grant et al., 2013; Lee et al., 2015). Carers who care for patients with

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2.5.4 Social Isolation and Relationship Strain

The psychosocial consequences of caregiving extend beyond mental and physical health; they can also influence the caregiver's social networks and interpersonal connections. Taking care of a loved one with

cancer can be pretty lonely, and it can also put a lot of strain on relationships and make it hard to keep in touch with friends (Cohen & Erickson, 2006). As caring responsibilities grow more demanding, caregivers may need to cease engaging in activities with friends and colleagues, reduce social engagements, or withdraw from community events. This can make people less connected and less likely to get help from others (Ugalde et al., 2012). People have the option to go on this social retreat, or they can be compelled to go. Carers may purposely put the needs of the patient ahead of their own social life.

On the other hand, they might have problems with social settings, dealing with nasty people, or getting fewer invitations from people who don't know how to help or don't want to. As a result, caretakers may feel invisible, emotionally unsupported, or misunderstood by their broader social networks (Li & Loke, 2013). This isolation can make mental health problems regrettable, and it's especially terrible for carers who don't have official support systems or who live in rural or poor areas (Kim et al., 2015).

Relationships within the household may also become strained. Taking care of someone can commute how families and relationships work, which can lead to stress and conflict. Kim et al. (2015) note that marital conflict is common, especially when caregiving responsibilities—like household chores, managing finances, or raising children—are unfairly divided or poorly communicated. Emotional weariness might hinder carers' ability to maintain intimacy and communication, hence worsening partner relationships (Manne et al., 2011). When one person is both a spouse and a carer, it can be hard to tell the difference between the two positions. This can lead to confusion regarding duties and relationship fatigue. Also, caregiving can make relationships between parents and children worse, especially when a parent has to take care of a sick spouse or an ageing parent in addition to being a parent. Kids may feel like they're not getting enough attention, and carers may feel guilty or angry because they can't do all of their jobs well (Northfield & Nebauer, 2010). Caregiving can sometimes reveal existing problems in relationships, like when siblings fight over who should take care of someone or when in-laws have different ideas about what should happen. When there is no clear disclosure, unresolved family tensions, and too much emotion, extended family support might break down (O'Connor et al., 2008). This breakdown makes the caregiver feel even more alone in their job, which could make them less intense and more emotionally upset. We need to adopt a holistic approach to the social side of carer burden, which should include family counselling, peer support

groups, and training in how to talk to people. It is imperative to protect carers' mental health and relational welfare by empowering them to articulate their needs and maintain social engagement while normalizing the challenges of caregiving (Applebaum & Breitbart, 2013).

2.5.5 Changes in Identity and Role Confusion

For many people, becoming a carer involves a significant change in who they are, especially if they are caring for a spouse, adult child, or parent. What begins as a responsibility or an expression of affection for family can gradually evolve into a complex and all-encompassing function that alters interpersonal dynamics. Carers may have to balance their new jobs as a healthcare assistant, case manager, or emotional anchor with their old jobs as a spouse, brother, son, or daughter. This blurring of lines can cause inner turmoil, a loss of personal identity, and stress in relationships (Robinson, 2013). Applebaum and Breitbart (2013) stress that this change in duty can change essential parts of a person's identity, especially when caregiving is long-term, intense, or occurs during a terminal illness. For example, a spouse who becomes the primary carer for a partner with advanced cancer may struggle to sustain emotional closeness or romantic connection, as the relationship becomes dominated by caregiving routines and medical responsibilities. Similarly, adult children may assume the role of carer for a parent, leading to tension between a sense of obligation and uncertainty regarding their emotions. In such cases, the lack of reciprocal relational dynamics may reduce feelings of closeness and modify the caregiver's self-concept (Li & Loke, 2013). A sense of loss frequently exacerbates this transformation in identity for the previous iteration of the relationship. This is known as "ambiguous loss," which means that the person is physically there but cognitively or emotionally altered due to the illness (Boss, 2007). Carers may sometimes mourn the loss of their previous identities, particularly when caregiving responsibilities eclipse personal aspirations, social commitments, or professional roles (Ugalde et al., 2012). This is especially true for carers who have to cut back on their work or give up their own goals to care for someone else. Also, when carers feel like they aren't getting enough recognition, support, or training for their duties, this unacknowledged work can make them feel emotionally drained and lower their self-esteem (Cheng et al., 2014). If the healthcare system or society as a whole doesn't accept or support the carer's identity, they may feel alone and tired. This can be bad for both the caregiver's health and the care they give.

Interventions, such as carer identity support programs, narrative therapy, and psychoeducation, have proven effective in facilitating metamorphosize by validating experiences, fostering resilience, and helping individuals reclaim a sense of personal significance in their caregiving roles (Milne & Larkin, 2015). Assisting carers to restore their identities psychologically is an essential part of holistic cancer care.

2.5.6 Distress of the Soul and the Spirit

Along with the emotional, physical, financial, and relationship problems, many people who care for cancer patients also have to deal with significant spiritual and existential issues, especially when they are taking care of someone who is very unwell, in pain, or dying. Carers often have to deal with serious concerns about mortality, grief, purpose, and the meaning of life, much like the people they care for (Puchalski et al., 2009). While caring for someone, these existential issues may build up slowly or become more evident during times of crisis, loss, or bereavement. When caregivers think they can't help the patient with their discomfort or meet all their needs, they may feel guilty, sad, or that they're not doing enough. Some people may feel bad about living, especially if they are taking care of someone with terminal cancer and that person dies. Some people may wonder if the illness is fair, which can make them question their faith or spirituality, especially if the carer had strong religious or philosophical beliefs before (Alcorn et al., 2010). Caregiving can also help people think about their spiritual and personal growth and find meaning in their lives. Taking care of a sick person can cause carers to reevaluate their priorities, gain insights into love and sacrifice, and contemplate profound values such as compassion, legacy, and connection (Otis-Green et al., 2009). For many, confronting these concerns fosters a heightened sense of purpose, facilitating their navigation through the inherent ambiguity and loss associated with the caregiving experience. Puchalski et al. (2009) contend that addressing the spiritual needs of both patients and carers can bolster psychological resilience and facilitate healing, regardless of the illness's outcome. Spiritual care interventions, such as meaning-centered therapy, life review interventions, and spiritual counselling, have proven effective in supporting carers through complex emotional and existential difficulties, especially during the transition to palliative care or bereavement (Breitbart et al., 2012). However, the spiritual dimension of caregiving is inadequately acknowledged in several hospital settings. Carers often report inadequate access to spiritual or existential support, despite expressing a need for help in coping with grief, fear of death, or loss of hope (Pearce et al., 2012). It is essential to include spiritual care in oncology and palliative care systems so that carers may give

complete, person-centered care that takes into account both the emotional and existential dimensions of the experience.

2.5.7 Risk of Difficult Grief and Loss Issues

After a loved one passes away, carers of cancer patients undergo a complex and emotionally charged grieving process. Widen exposure to pain, coupled with caring responsibilities, can result in intricate or protracted mourning responses, especially when carers feel emotionally unprepared, unsupported, or burdened by guilt or unresolved issues stemming from the caregiving experience (Hudson et al., 2011). Individuals who were deeply emotionally invested, provided end-of-life care, or experienced a traumatic death are particularly vulnerable to developing prolonged grief disorder (PGD) characterized by intense yearning, persistent sadness, and an inability to accept the loss (Prigerson et al., 2009). Research by Lobb et al. (2010) demonstrates that carers face an elevated risk of psychological morbidity following bereavement, including major depressive episodes, anxiety disorders, and social disengagement. Many people experience a sudden loss of purpose or identity after spending months or years caring for someone, only to find themselves in a void after their work is done (Nielsen et al., 2016). Some common indicators of complicated grief are always wanting to be with the person who died, feeling bad about yourself, being irritated, having trouble sleeping, and having trouble getting back into the things you used to do. These effects can get worse if carers don't have easy access to breaks, emotional support, or clear communication during the caring process. Timely and structured grief support interventions can function as protective factors during the bereavement process. Lobb et al. (2010) suggest that grieving treatment, bereavement support groups, and informal peer support (such as from friends and family) are effective strategies to reduce the likelihood of pathological grief responses. Psychological debriefing, legacy work, and meaning-making therapies are associated with reduced suffering and enhanced adaptation to loss (Jordan & Litz, 2014). Furthermore, palliative care teams are increasingly recognizing the importance of continuity of care into grief, offering support to carers not only during the disease trajectory but also in the months following the patient's death.

2.6 Stages of the Cancer Journey

The psychological and emotional effects of cancer vary across the different stages of the illness. Every stage presents distinctive obstacles for patients and carers, requiring customized psychological support (Fitch et al., 2008).

Patients' and their carers' emotional, psychological, and practical experiences are shaped by the course of cancer care, which spans multiple overlapping phases. The acute phase of diagnosis and initial therapy, which is frequently characterised by extreme anxiety, panic, and shock, is typically when the journey starts. Individuals must quickly assimilate complicated information about their condition, make important choices regarding available treatments, and adapt to the new and frequently upsetting identity of being a “cancer patient.” Fitch et al. (2008) point out that carers must concurrently manage appointments and logistics, offer ongoing emotional support, and juggle these obligations with jobs, parenthood, and other responsibilities.

Many patients transition into a chronic phase, which is marked by continuous medication or organised monitoring, after the acute crisis passes. They might suffer from cumulative emotional and physical exhaustion, late-onset or persistent side effects, and continuous future uncertainty during this time. Fear and alertness are commonplace in daily living, even when the illness is stable or improving with therapy. In turn, carers may experience compassion fatigue and chronic stress, especially when providing long-term care for patients with severe or metastatic illness (Haley, 2003). The line between managing disease and "normal life" might become hazy when the obligations of caregiving become ingrained in daily activities.

A resolution phase, which could include remission, long-term survivability, or a shift towards palliative care, enters the trajectory for some. Ironically, when the level of medical interaction lessens and recurrence fears become more prominent, people in remission may feel more distressed. Numerous people experience a significant reevaluation of their identity, priorities, and life purpose, as well as difficulties reintegrating into social, familial, and professional responsibilities. Ganz et al. (2003) point out that many cancer survivors express feeling emotionally unprepared for life after treatment, highlighting the significance of continuing psychological follow-up instead of relying on the idea that distress will go away on its own after

therapy is over. This time may alternatively include a switch to hospice or palliative treatment in cases of progressing or terminal illness. According to Hudson et al. (2011), patients and their families need systematic care throughout this stage in order to manage symptoms, make end-of-life decisions, and navigate existential concerns.

When an illness recurs or progresses to its ultimate stage, the emotional shock of the initial diagnosis is frequently reactivated, but this time it takes place against a backdrop of compounded physical symptoms and occasionally fewer treatment options. As patients and loved ones deal with impending death and unresolved relational issues, the terminal phase is often marked by anticipatory grief, spiritual questioning, and complex family dynamics. According to Chochinov (2012), in order to assist patients in preserving a feeling of purpose, personality, and interpersonal connection at this time, palliative care must purposefully incorporate psychological and existential interventions, such as dignity therapy.

Lastly, for carers and families, the bereavement phase is an essential part of the cancer trajectory, even though it technically lasts beyond the patient's life. Despite compelling evidence showing caretakers are more likely to experience difficult grieving, sadness, and anxiety following the loss of a loved one, it is often disregarded in cancer programs. According to Lobb et al. (2010), healthcare systems are accountable for both identifying and assisting the caregiver's transition into grieving as well as for the patient's course of treatment. In order to recognise the role of caregiving and promote adaptive mourning in families and communities, this involves providing emotional support, grief counselling, and follow-up services. When considered collectively, this continuum—from diagnosis to survivorship or end-of-life care and finally to grief—shows that cancer is a long-term, changing experience that necessitates ongoing, phase-sensitive psychosocial support.

2.7 Treatments for Patients

Cancer treatment involves more than just controlling the biological aspects of the disease. There is a rising recognition that psychosocial therapies are crucial for addressing the emotional, psychological, and existential needs of patients throughout their illness trajectory. The National Comprehensive Cancer Network (NCCN) promotes routine psychosocial screening and coordinated assistance as essential elements of holistic cancer treatment (Holland et al., 2013). Interventions such as psychotherapy, mindfulness-based practices, pharmacologic support, psychoeducation, expressive therapies, digital health

tools, culturally sensitive programs, and peer networks have proven effective in reducing distress, improving quality of life, and promoting emotional and functional recovery (Faller et al., 2013).

2.7.1 Psychotherapy Techniques

One of the most researched and used psychological treatments is cognitive behavioral therapy (CBT). CBT helps patients with cancer understand and change their negative thought patterns, assign with depression and worry, and learn how to cope healthily. Osborn et al. (2006) contend that CBT significantly elevates mood and psychological adaptability while concurrently enhancing treatment adherence. Meta-analyses have confirmed its efficacy at various stages of cancer, particularly in reducing anguish and improving psychological resilience. More and more cancer treatment centers are using Acceptance and Commitment Therapy (ACT). ACT does not focus on eliminating symptoms; instead, it fosters psychological flexibility, enabling patients to accept difficult emotions, identify their values, and engage in actions that align with those values (Hayes et al., 2006). Initial studies indicate that ACT is effective in reducing cancer-related discomfort and enhancing overall well-being (Feros et al., 2013; Graham et al., 2020). For those with advanced or terminal cancer, Meaning-Centered Psychotherapy (MCP) offers a comprehensive framework to address existential suffering, foster a sense of purpose, and ameliorate spiritual well-being. Breitbart (2017) developed MCP, which has been shown to assist individuals nearing death in feeling less despondent and more spiritually connected.

2.7.2 Meditation and Mindfulness

Mindfulness-Based Stress Reduction (MBSR) and similar methods are often used to help patients deal with the stress that comes with having cancer. These treatments help people be more aware of their thoughts and feelings and lessen the effects of emotional and physical pain. Carlson et al. (2014) and Garland et al. (2014) have shown that MBSR enhances mood, built up the immune system, and reduces stress levels. People can better control their emotions by doing body scans, yoga, breathing exercises, and guided meditation.

2.7.3 Medication treatment

For individuals with moderate to severe psychiatric symptoms, pharmaceutical interventions may be necessary. These include antidepressants (such as SSRIs and SNRIs), anxiolytics, and, in more complicated circumstances, antipsychotic drugs for delirium or severe pain. Pirl (2004) emphasizes the significance of collaborating with mental health professionals, particularly when sufferers are undergoing chemotherapy or managing multiple illnesses concurrently. To get the best benefits and avoid interactions, it is crucial to make sure the correct dose is administered and that the patient is being followed.

2.7.4 Training in Psychoeducation and Coping Skills

Psychoeducational therapies help patients understand the disease process, prepare for the side effects of treatment, and make emotional responses more typical. When combined with coping skills training, they reduce uncertainty, raise self-efficacy, and promote adaptive adjustment (Devine & Westlake, 1995). Group-based programs also let participants meet new people, which can help them feel less alone and give them emotional support.

2.7.5 Therapies that work together and let you talk about how you feel

Art therapy, music therapy, and expressive writing offer nonverbal therapies for emotional processing and self-expression. Bradt et al. (2016) found that music therapy significantly reduced anxiety, fatigue, and discomfort during chemotherapy. Expressive writing therapies have been linked to reduced trauma symptoms, improved happiness, and enhanced meaning-making (Pennebaker & Smyth, 2016). These therapies offer a substantial option for individuals who may struggle with verbal disclosure.

2.7.6 Tools for e-health and digital health

Digital health developments, like smartphone apps, telehealth therapy, and online peer forums, offer psychological assistance that many people can use and adapt to fit their needs. These techniques often include mood tracking, cognitive behavioral exercises, guided relaxation, and health education. Chi and Demiris (2015) contend that while these technologies demonstrate promise, additional extensive

longitudinal studies are necessary to assess their long-term impacts and integration into standard cancer care.

2.7.7 Interventions Customized for Culture

Cultural views, health literacy, and spiritual traditions significantly influence patients' perceptions of illness and their reactions to psychosocial care. Surbone (2004) and Holland et al. (2013) contend that culturally adapted interventions—employing language, metaphors, familial engagement, or spiritual framing—demonstrate increased acceptance and improved outcomes, particularly among minority and immigrant populations. These programs are essential in areas where individuals from many cultures live and work, and they are required to be given in a way that is respectful of those cultures.

2.7.8 Networks of Survivors and Peer Support

Structured peer support groups and survivor networks give those who have just been diagnosed with cancer assistance, shared knowledge, and valuable tips. These programs help people feel less alone, normalize their worries, and make them stronger emotionally. Northouse et al. (2010) stress that peer mentorship promotes optimism, empowerment, and emotional regulation, mainly when conducted by trained survivors who demonstrate effective coping mechanisms.

Psychosocial therapies are a vital complement to biological treatment in oncology care. Taking care of patients' emotional, psychological, social, and spiritual requirements not only makes their lives better, but it also helps them stay in their therapy, feel better emotionally, and have better long-term outcomes. The finest care is whole-person, flexible, and personalized to each patient, and it uses evidence-based therapies across the complete patient experience. In today's world of person-centered medicine, it is both the right thing to do and necessary for clinical practice to include psychosocial care in standard oncology practice.

2.8 Interventions for Carers

It is hard on the mind, body, and wallet to take care of someone with cancer. Informal caregivers, often spouses, adult children, or close relatives, are very crucial for ensuring patients follow their treatment plans, giving emotional support, monitoring symptoms, and helping with decision-making. Even when they are essential, carers often feel burned out, emotionally ill, alone, and financially pressured, especially when they don't have any aid (Northouse et al., 2010). Research increasingly indicates that the well-being of carers is closely linked to the well-being of their patients. This demonstrates the significance of integrated, targeted interventions (Northouse et al., 2010; Applebaum & Breitbart, 2013). Carer interventions must adequately address the emotional, informational, spiritual, and practical dimensions of caregiving. These treatments must be personalized, readily available, and culturally intuitive. They can be given in person, in groups, online, or in the community.

2.8.1 Training in Psychoeducation and Care Skills

Educational interventions aim to enhance carers' competence, preparedness, and confidence by providing information on symptom management, medication administration, nutritional support, and navigation of the healthcare system. According to Northouse et al. (2010), psychoeducational interventions significantly reduce caregivers' anxiety and enhance caregiving outcomes. You can get training in person, online, or with printed materials. You can do it by yourself or with others.

2.8.2 Help with mental health and feelings

Emotional strain is a significant contributor to caregiving stress. Structured psychological therapies, such as Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and Supportive-Expressive Therapy, have been effective in alleviating distress and enhancing the quality of life for caregivers (Applebaum & Breitbart, 2013). These therapies help carers learn how to control their emotions, deal with stress, and change the way they think while they are dealing with anticipatory grief and chronic trauma.

2.8.3 Getting Help from Friends and Mentors

Peer mentorship links current carers with those who have had similar challenges, providing emotional support, optimism, and pragmatic guidance. This idea is fundamental in places where formal mental health treatments are hard to find or stigmatized (Kim et al., 2015). Peer-based programs help people feel normal, less lonely, and more capable of taking care of themselves. They do this by setting up constructed support groups or informal networks.

2.8.4 Services for Rest and Help with Daily Tasks

Respite care gives caretakers a break from their work, which helps them feel better both physically and mentally. You can acquire this by getting help at home, going to an adult day program, or staying in a facility for a short time. Gaugler et al. (2011) stress that community-based and hospital-affiliated programs significantly reduce carer tiredness and make it effortless to keep providing long-term care.

2.8.5 Financial and Legal Advice

If you can't work or have to cut back on your hours, taking care of someone with cancer can be pretty expensive. Carers may require assistance in comprehending health insurance, social security, disability benefits, estate planning, and workplace protections such as the Family and Medical Leave Act (FMLA). Longacre et al. (2015) argue that financial therapy, which social workers or legal aid clinics often provide, can help people who are experiencing difficulties with money and make sure that carers stay stable.

2.8.6 Tools for Technology and e-Health

Digital assets like apps for carers, telehealth therapy, and online education portals are simple to use. They may be used by many individuals, especially those who live in remote or underserved areas. These tools give carers the chance to learn, seek emotional support, and track their symptoms at their own pace. Chi and Demiris (2015) assert that digital technologies facilitate the responsibilities of carers and enhance their engagement; nonetheless, additional study is required to evaluate their long-term efficacy.

Cultural, spiritual, and gender norms influence caregiving experiences by shaping carers' perceptions of illness, emotional expression, and help-seeking behaviors. For example, male carers may be less likely to use emotional means because society expects them to be stoic. In contrast, carers from collectivist cultures may put family commitments ahead of their own needs (Boehmer et al., 2014). Adapting therapies to accord with these values, utilizing language, cultural metaphors, or spiritual framing, enhances both relevance and efficacy (Puchalski et al., 2009).

2.8.8 Help for Grief and Loss

After the patient dies, carers may experience profound or enduring grief, particularly if they lacked support during the caregiving activity. Structured grief counselling, bereavement groups, narrative therapy, and spiritual rituals offer pathways for healing and adaptation. Early intervention is effective in diminishing the prevalence of protracted grief disorder (PGD) and promoting post-loss meaning making (Lobb et al., 2010). To assist cancer caretakers, oncology services must include a range of complementary evidence-based therapies. Carers should be recognized as vital partners in care, not just for their crucial role in administering therapy but also for their influence on patient outcomes and the system's long-term viability. Putting their health first is essential for making families stronger, ensuring they receive proper care, and making the whole cancer journey better.

2.9 The role of Healthcare providers and multidisciplinary team

Healthcare providers are very crucial in finding, treating, and stopping psychological distress in cancer patients and their caregivers. A coordinated, multidisciplinary team that includes oncologists, nurses, psychologists, social workers, psychiatrists, palliative care specialists, chaplains, and patient navigators is the best way to give psychological oncology care. These teams make sure that care takes care of not only bodily health, but also mental, social, and spiritual wellness.

2.9.1 Screening and Early Identification

Doctors can find early signs of depression, anxiety, fear of recurrence, and existential distress by using routine psychosocial screening ways like the Distress Thermometer and the Problem List (NCCN, 2023). Identification expedites suitable referrals and diminishes the probability of psychological issues escalating. Jacobsen and Wagner (2012) conducted a study that revealed systematic distress screening enhances communication, patient satisfaction, and subsequent outcomes.

2.9.2 Communication and Patient-Centered Care

Communication that is both transparent and kind is an essential part of psychological treatment. Providers must communicate complex information with empathy, engage in collaborative decision-making, and affirm the emotional experiences of their patients. Teaching healthcare workers how to communicate better makes them more competent and increases patient trust (Kissane & Breitbart, 2007). Also, patient-centered communication encourages autonomy and makes sure that therapy is in line with each person's values.

2.9.3 Incorporating psychosocial services into clinical pathways

Psychosocial care must be included in the standard procedures of oncology. Some examples of this are adding psychosocial metrics to quality assurance measures, setting up referral routes, and putting mental health specialists in oncology clinics. Jacobsen and Wagner (2012) assert that institutions integrating psychological care prepare enhanced patient outcomes, reduced emergency room visits, and elevated treatment adherence.

2.9.4 Working together as a multidisciplinary team

Routine case conferences with people from different fields and collaborative treatment planning are held to make sure that care is comprehensive and well-coordinated. Social workers help families by giving them counselling and linking them to resources. Psychologists are in charge of doing tests and therapy. Palliative care teams are in charge of dealing with existential anguish and complicated symptoms. Chaplains are in

charge of meeting spiritual needs. This collaborative approach makes ensuring that care is given as completely and quickly as feasible (Holland et al., 2013).

2.9.5 Help for providers and ways to avoid burnout

Oncology doctors are also at risk of compassion fatigue and burnout. Institutions must provide supplements in the form of debriefing sessions, mental health services, task management, and wellness activities. Taking care of healthcare workers' health is important for keeping them compassionate and minimizing the number of employees who leave (Back et al., 2016).

2.9.6 Training and Professional Development

Medical professionals and nurses should learn about psycho-oncology, palliative care, and communication as part of their training. Healthcare practitioners can stay current on the latest research, evidence-based practices, and culturally relevant treatment models by taking part in continuing education (Breitbart, 2017). In conclusion, the integration of psychological care into standard cancer practice is greatly facilitated by the involvement of healthcare practitioners and interdisciplinary working groups. Their proactive participation can transform cancer therapy into a comprehensive and individualized experience.

2.9.7 Social Support Networks

Social support is an answered protective element in cancer care. Support from family, friends, community groups, or religious organizations can mitigate emotional suffering, enhance adherence, and elevate quality of life. On the other hand, social isolation is associated with worse mental health and a higher risk of death (Pinquart & Duberstein, 2010). Socioeconomic position, employment, and housing stability also influence an individual's capacity to receive care and manage treatment requirements. Patients dealing with poverty, insecure housing, or unstable relationships may have even more psychosocial problems. Social workers and patient navigators are essential in overcoming these barriers.

2.9.8 Intersectionality and Health Disparities

Psychosocial outcomes are influenced by intersecting identities, including race, gender, sexual orientation, and disability. For example, LGBTQ patients may experience discrimination in healthcare environments, decreased social support, and heightened psychological susceptibility (Boehmer et al., 2014). Patients from racial and ethnic minorities are also less likely to get mental health care or interventions that are customized to their culture.

To fix differences, we need to make adjustments to the system, such as hiring a more diverse workforce, teaching cultural humility, and creating policies that include everyone. Equity-focused psychological care is both ethical and essential for alleviating suffering and enhancing outcomes among various communities. In short, psychosocial oncology needs to take into consideration cultural, spiritual, and social factors to be effective. A truly patient-centered approach respects each person's unique values, beliefs, and life experiences.

2.10 Factors requiring cultural, spiritual and gender-specific consideration

Cancer is a profoundly personal life journey, and cultural, spiritual, and gender-related variables greatly influence individuals' perceptions and responses. To give psychosocial care that is whole and centered on the person, you need to understand these characteristics.

2.10.1 Cultural Beliefs and Practices

A person's cultural background might affect how they think about cancer, what they think caused it, and how they react to a diagnosis and treatment. In many cultures, cancer is linked to stigma, shame, or fatalism, which may dishearten individuals from pursuing early treatment or revealing their disease (Surbone, 2004). Cultural norms also affect how people like to make decisions, involve their families, and talk to each other.

In socialist cultures, family members frequently take precedence in treatment decisions, occasionally preventing patients from receiving thorough disclosure of their condition. On the other hand, cultures that

value individualism may place greater emphasis on patient autonomy. When healthcare methods don't match up with cultural expectations, it can cause distrust, non-adherence, and mental discomfort. Providing language-concordant services, implementing cultural rites, and involving community or spiritual leaders are all parts of culturally responsive care. Teaching healthcare workers how to be culturally competent is crucial for closing gaps and building stronger therapeutic relationships.

2.10.2 Spiritual and Religious Influences

Spirituality and religion can be beneficial for many patients and caregivers when they are going through tough times. Spiritual beliefs provide frameworks for comprehending suffering, sustaining hope, and deriving meaning from the cancer journey. Prayer, meditation, reading scripture, and religious rituals are some examples of practices that can help people feel better and less stressed (Puchalski et al., 2009). However, spiritual suffering may occur when cancer confronts fundamental beliefs, incites existential crises, or results in a felt abandonment by a higher power. Convocation spiritual needs is an integral part of both palliative care and holistic cancer therapy. Spiritual evaluations and referrals to chaplaincy or faith-based counsellors are advised, especially in end-of-life contexts.

2.10.3 Gender-Specific Experiences

Men and women frequently encounter and articulate cancer-related misery in distinct manners. Women generally exhibit elevated levels of anxiety, sadness, and body image issues, particularly in malignancies that impact reproductive or noticeable areas of the body (e.g., breast, ovarian, skin cancers) (Helms et al., 2008). They are also more prone to look for help from friends and family and join therapeutic groups. Men may be less likely to show their feelings or get help for their mental health in view of societal ideals about masculinity and emotional stoicism. This may lead to the underreporting of discomfort and untreated psychiatric problems. Gendered expectations can also affect the duties of carers. For example, women are more likely to be carers, which can make their own mental and physical burdens worse.

LGBTQ people with cancer have to deal with extra problems, like prejudice, not getting culturally competent care, and feeling alone. These sufferers may experience stress associated with the disclosure of

sexual or gender identity and the lack of inclusive support systems (Boehmer et al., 2014). Gender-sensitive techniques entail acknowledging varied experiences, employing inclusive language, and tailoring interventions to position with gender identities and roles. In brief, cultural, spiritual, and gender-specific elements have a significant impact on how sufferers and carers deal with cancer. Being aware of these things can help build trust, improve communication, and make sure that psychosocial care is fair, open, and helpful.

2.11 Research Gaps and Limitations in the Existing Literature

Psychosocial oncology has made significant progress, although there hold out gaps in the research that hinder the effectiveness, equity, and comprehensiveness of therapy. Finding and resolving these gaps is essential for improving outcomes for both patients and caretakers.

2.11.1 There aren't enough people from diverse groups represented

Most psychosocial oncology studies have been conducted in affluent nations, predominantly focusing on individuals who are white and middle-class. We are in need of research that is more comprehensive and that takes into account racial, ethnic, socioeconomic, and cultural diversity. Populations frequently under-represented, such as LGBTQ+ individuals, immigrants, rural residents, and non-English speakers, limit the generalizability of findings and the applicability of interventions (Boehmer et al., 2014; Surbone, 2004).

2.11.2 Inadequate Longitudinal Data

The majority of psychosocial studies concentrate on short-term or cross-sectional outcomes. The absence of longitudinal studies tracking psychological, emotional, and behavioral results throughout the entire cancer trajectory, including survival, recurrence, and end-of-life care, is a significant limitation. Stanton et al. (2005) and Ganz et al. (2003) contend that longitudinal studies are crucial for understanding the durability of treatments and the changing requirements of patients and caregivers.

2.11.3 Carers don't get enough attention.

Even though carers often experience a lot of pain, many studies focus more on patients and don't look at the aspects that are special to caregivers. Bevans and Sternberg (2012) and Lobb et al. (2010) noted a lack of substantial research on therapies specifically designed for different types of carers, such as spouses, children, and elderly parents. Additionally, there are no guidelines for assisting caretakers during periods of grief and loss.

2.11.5 Technology Integration is Limited

There is a lack of empirical study on the long-term effectiveness, usability, and equity of digital tools and telehealth platforms in psychosocial oncology, despite their increasing popularity. Chi and Demiris (2015) contend that research frequently overlooks older folks or communities without technology approach resulting in a deficiency of solutions that are both scalable and inclusive.

2.11.6 Insufficient Focus on Existential and Spiritual Needs

Research and therapeutic care frequently fail to appropriately address spiritual and existential anguish, despite its critical importance in various Oncology experiences. Breitbart (2017) and Puchalski et al. (2009) have both remarked that additional research is needed to investigate the effectiveness of meaning-centered therapies, chaplaincy models, and culturally sensitive spiritual interventions.

2.11.7 No Standardization in Psychosocial Screening

There are no set norms or mechanisms to enforce them when it comes to screening for distress, and different institutions use quite diverse strategies. Because of this variety, it is difficult to compare the results of various systems and use the best techniques across all of them. Jacobsen and Wagner (2012) contend that research is essential to ascertain the most effective, feasible, and culturally suitable screening instruments available. Nonetheless, psychological oncology has made considerable progress, yet it still possesses substantial deficiencies in its studies. By addressing these limitations through inclusive, longitudinal, and

interdisciplinary research, care delivery will be strengthened, ensuring that psychosocial support is accessible, equitable, and evidence based.

2.12 Summary and Conclusion

This chapter has examined the extensive and varied psychological concerns related to cancer, highlighting the significant effects these complications impose on both patients and caretakers. Cancer is not only a biological illness but also a deeply psychological, emotional, social, and spiritual journey. Psychological distress, including despair, worry, and dread of recurrence, is prevalent among patients and can adversely affect quality of life and therapy outcomes (Walker et al., 2014; Simard et al., 2013). The literature demonstrates that patients endure psychological suffering. Even though they are sometimes ignored, caretakers have a heavy load to bear because they are so crucial in keeping the patient stable during diagnosis, treatment, recovery or palliation. Bevans and Sternberg (2012) and Kim et al. (2015) assert that carers endure considerable mental, physical, and financial stress, underscoring the imperative for support systems that are both organised and accessible, tailored to the unique needs of caregivers.

The chapter also impacts how these psychological consequences alter during cancer, starting with the shock of getting a diagnosis and going all the way through survivorship, recurrence, and grieving events. Hudson et al. (2011) and Chochinov (2012) assert that the dynamic nature of distress necessitates the implementation of interventions that are timely, phase-specific, and contextually appropriate. Cognitive-behavioral therapy, mindfulness-based approaches, psychoeducation, and pharmacological treatments are all examples of successful psychosocial interventions that can be employed with patients. Similarly, carers might gain advantages from education, counselling, respite care, and peer support. Research by Osborn et al. (2006) and Northouse et al. (2010) indicates that integrating these supports into standard cancer care may improve treatment adherence, satisfaction, and general well-being.

The chapter also talked about how important it is to give care that takes into account cultural, spiritual, and gender-based considerations. It stressed how crucial it is to change interventions to fit each person's unique personal and social situation. A globally applicable strategy is inadequate; psychological care must be

comprehensive, equitable, and adaptable (Surbone, 2004; Boehmer et al., 2014). Finally, even though psychological oncology has come a long way, there are still many areas that need to be studied. Some of these are that different groups are not well represented, that not enough attention is devoted to long-term survivorship and therapies for carers, and that there are problems that make it hard to provide psychosocial care in clinical settings. To fill these gaps, we need to do research that includes everyone, long-term studies, and implementation science.

In conclusion, psychosocial care is not an additional aspect of complete cancer treatment; it is a fundamental component. Healthcare professionals can provide care that is more compassionate, effective, and patient-centered if they recognize and address the whole span of psychological and social challenges associated with cancer. The goal of this chapter is to set the stage for future research and practice that will improve the lives of those who are directly touched by cancer.

CHAPTER III:
METHODOLOGY

3.1 Research design

The research style used in this study incorporates both qualitative and quantitative approaches, which are combined in order to provide a full analysis of the obstacles that cancer patients and their caregiver's encounter. Because it strikes a balance between the empirical rigor of quantitative data and the subtle insights that are gleaned from qualitative inquiry, this methodology is especially well suited for a topic as delicate and diverse as cancer.

The conclusions of the investigation are reliable and confirmed by various sources because the study utilizes a number of different sources of information, such as interviews, medical records, and surveys. It uses two theoretical frameworks that are complementary to each other the Theory of Change and the Theory of Constraints to provide a structure for data gathering, guide the analytic process, and make suggestions for interventions that can be implemented in practice. This combination is novel, delivering both actionable approaches for enhancing patient care and explanatory depth.

The study takes into consideration the holistic realities of patients and their caregivers by taking into account the physical, psychological, social, and financial aspects of cancer. It brings attention to problems such as psychological distress, side effects that are associated with therapy, dietary limitations, financial difficulties, systemic inefficiencies (for example, shortages of hospital beds and medications), and the significant emotional impact that mortality has on families. Additionally, the research emphasizes from an existential standpoint how a diagnosis of cancer marks a significant life transition that has an impact on identity, relationships, and well-being.

The contribution that this study makes to the field of research is that it provides a framework that is both organized and multi-dimensional for the purpose of examining these issues. It pinpoints significant deficiencies in cancer care management and suggests solutions that might be implemented on a larger scale by combining theoretical frameworks with practical facts. Patient-centered care guidelines, management methods for hospitals, and policy frameworks, especially in situations when resources are scarce, are all

anticipated to be informed by the findings. In the end, the research lays the groundwork for organizational practices in oncology care that are more inclusive, egalitarian, and effective than those that are now in place.

3.2 Theoretical Frameworks

The Biopsychosocial Model of Health is used as the overarching conceptual guide for this study, which is grounded in two fundamental frameworks: the Theory of Change (ToC) and the Theory of Constraints (ToCns).

Theory of Change (ToC)

The Theory of Change (ToC) framework illustrates the process of transformation that cancer patients undergo, from the time of diagnosis to the point when they achieve enhanced physical well-being, increased psychological stability, and social reintegration. It gives a roadmap of the mechanisms by which interventions are anticipated to bring about the desired outcomes. The Table of Contents (ToC) inside this research project emphasizes the series of measures that are necessary in order to get better results for patients. Among these actions are psychological counseling, changes in food, financial assistance, and rehabilitation in the community. It places an emphasis on the significance of taking care of intermediate milestones which include decreased anxiety, greater treatment adherence, and reinforced family support networks during the process of working toward long-term objectives, such as increased resilience and an improved quality of life. Furthermore, the ToC model acknowledges that cancer treatment necessitates involvement at multiple levels, ranging from individual patients to those who provide care, medical professionals, and legislators.

Theory of Constraints (ToCns)

The Theory of Constraints (ToCns) is a framework that is focused on determining and mitigating the most significant systemic constraints that impede advancement in cancer treatment. When applied in this context, it brings attention to problems such as shortages of hospital beds, difficulty accessing mental health specialists, stock-outs of pharmaceuticals for cancer, delays in diagnoses, and financial obstacles to treatment. ToCns facilitates the development of solutions that are geared toward specific problems, such as the growth of infrastructure, optimization of referrals, financial protection plans, and campaigns to raise awareness, through the identification of these bottlenecks. Quantitative metrics (such as the number of

delays in diagnosis, the frequency of bed shortages, and the number of times treatment was interrupted) and qualitative feedback (such as patient narratives that describe distress, stigma, or psychological requirements that were not satisfied) were both used in order to operationalize this hypothesis.

The Theory of Change (ToC) and the Theory of Change Narrative (ToCns) work in tandem to provide a dual perspective. ToC describes the pathway to desired outcomes, while ToCns identifies and helps overcome the barriers that stand in the way of achieving those outcomes. Interventions are guaranteed to be both strategically structured and systemically practicable as a result of this integration.

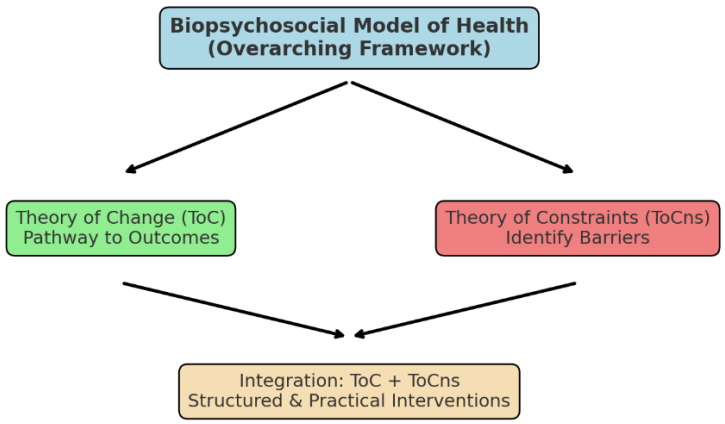

Figure 3: Simplified Theoretical Framework: Invented from the study and sources as mentioned in the description
Source: Gupta et al. (2021)

Table 1: Theoretical Framework: Guided by the Biopsychosocial Model of Health

1.Psychological	2. Economical	3. Sociological	4. Demographical	5. Physical
Anxiety	Socio-Economical	Social-Hangout	Sex difference, Age , Other factors	Physical problems
Stress Free Model	Socio- Economic Awareness Model	Socio-Hangout Model	Demographical and Other factor Model	No Harm Be Calm Model

Source: Table 2: Theoretical Framework: Guided by the Biopsychosocial Model of Health

Key Variables: Psychological stress, demographical needs, physical well- being, dietary needs, financial burden, access to care.

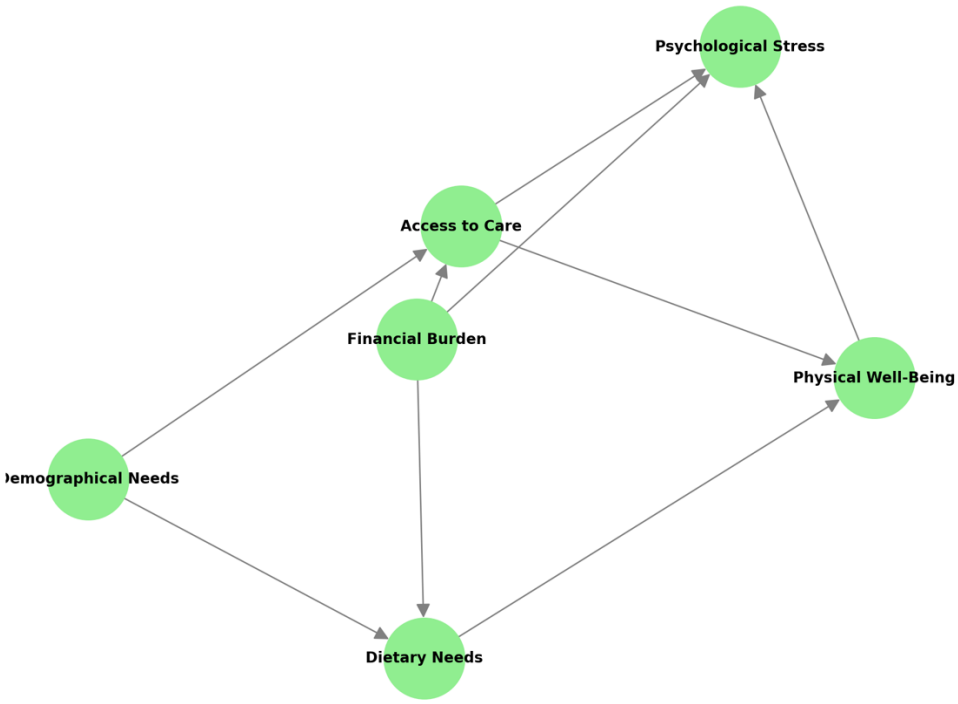

Figure 4: Causal Model of Key Variables in Cancer Patient Care: : Invented from the study and sources as mentioned in the description
Source: Gupta et al. (2021)

3.3 Operationalization of Constructs

The conceptualization of abstract ideas into quantitative indicators is the process of operationalization. In this case, the key theoretical constructs of emotional distress, anxiety, comorbidity, employment status, and financial hardship were operationalized. Structured surveys, established rating scales, and medical data were all utilized in order to make this accomplishment possible. Likert-type scales were utilized to gauge

the degree of emotional distress and anxiety experienced by the participants, where 0 represented no change and 5 represented an extreme condition. • Patient medical history and physician reports were used as the basis for the documentation of comorbidities. • Employed, jobless, retired, or unable to work owing to sickness were the categories used to classify employment status. • Structured questions were used to evaluate financial strain. These questions inquired about out-of-pocket payments, the affordability of treatment, and disruptions to household income.

The subjective and intangible components of the patient experience were able to be transformed into quantitative data through the use of this procedure. This data could then be examined statistically in conjunction with qualitative insights.

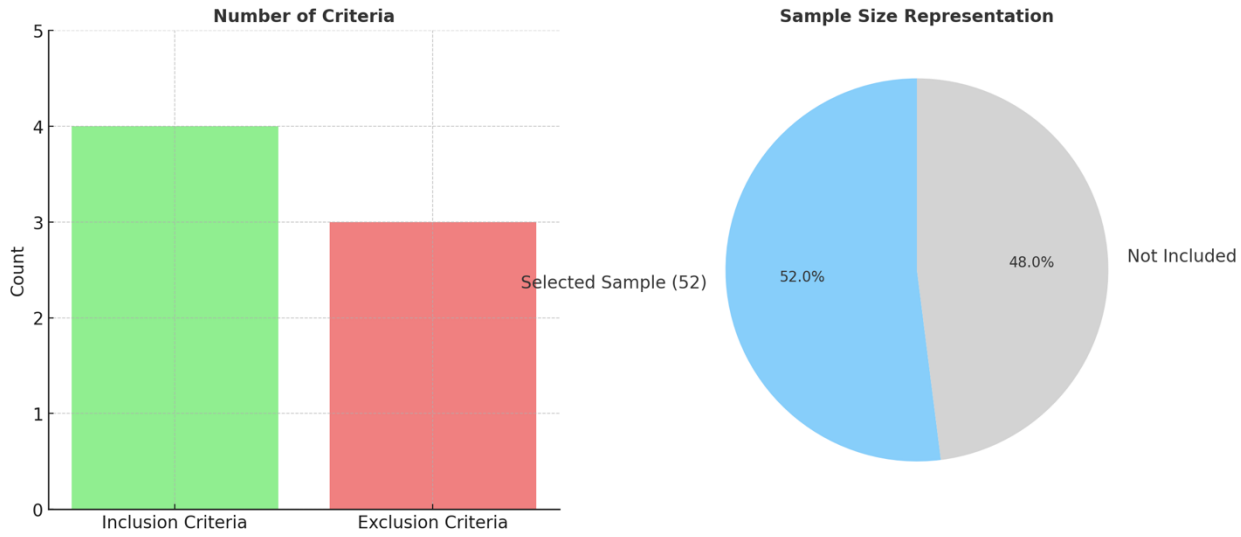

Figure 5: Sampling and Participant Selection
Source: Extracted from the data of the patients from the study

3.4 Data Collection Methods

A systematic mixed-methods approach was used to guide the data collection procedure. This approach combined clinical record reviews, quantitative questionnaires, and qualitative interviews. The research was able to document not just measurable indicators but also the real emotional, social, and psychological

experiences that cancer patients have since it employed a triangulated technique. A range of symptoms, such as anxiety, fatigue, treatment side effects, functional status, nutritional difficulties, financial strain, and effects on family members, were recorded using standardised techniques. A deeper comprehension of coping mechanisms, individual issues, and the subjective experience of treatment was made feasible by the utilisation of qualitative interviews. To confirm the diagnosis, pre-treatment cognitive tests, comorbidities, and treatment stage, the clinical records were examined. This was carried out to ensure that the data was accurate and pertinent to clinical practice.

The approaches for collecting data were led by carefully developed inclusion and exclusion criteria in order to ensure that the sample accurately mirrored the population of interest while maintaining the rigour of scientific research and the sensitivity of ethical considerations. As a result of these variables, the selection of participants was based on the establishment of methodological consistency, the strengthening of the validity of self-reported data, and the coordination of the recruitment process with the overall objectives of the study.

Participants are required to satisfy a number of essential prerequisites in order to be considered eligible for participation. Additionally, in order for them to be eligible, they must be at least 18 years old. This constraint allowed the study to concentrate on the psychological, social, and economic elements of cancer as they manifest in adulthood. In addition to ensuring that all participants had the mental and legal capacity to give informed permission, this constraint also allowed the study to ensure that all participants were properly informed. Adults are particularly affected by job, the responsibility of providing care for others, and the management of their finances, and the ways in which these factors interact with their illness experience are significantly different from the ways in which children and teenagers are affected. In addition, because of the developmental maturity they possessed, they were able to articulate their experiences through the use of structured surveys and interviews, as well as to think critically about the conditions in which they found themselves.

In addition, a confirmed medical diagnosis of cancer was required, which the clinical records of ACI-Cumballa Hill Hospital were able to attest to. When this was done, it ensured that each and every participant was actively coping with the sickness and the therapies that were associated with it. This brought their actual life experiences into alignment with the scientific aims of the study. During the verification process,

official documents were utilised, which served to further safeguard the data's integrity and relevance respectively.

Participants were required to speak at least one of the three languages that are commonly used in hospital settings: English, Marathi, or Hindi. This was done to ensure that meaningful communication could take place during the process of data collection. Participants were able to comprehend the topic of the study, explain their thoughts in a cohesive manner, and accurately score the items on the questionnaire as a result of this language requirement. In addition, it promoted inclusivity by allowing for the linguistic diversity of the hospital's patient base while simultaneously preventing misunderstandings that could put the reliability of the data at risk.

A suitable level of cognitive ability was required of the participants in order for them to be able to participate in interviews and questionnaires in a comprehensible way, as well as to appreciate the nature of the study and its purpose. Due to the fact that the study contained self-reported measures of psychological and emotional states, it was essential that the participants be able to reflect on their experiences and provide assessments that were consistent and pertinent without incurring an excessive amount of cognitive strain because of the inclusion of these measures.

The basic clinical and demographic information of the participants who were eligible for the study was collected. This information included the case number, age, gender, job status, diagnosis, and comorbidities. The collection of further data on cognitive performance prior to therapy was carried out, in addition to the collection of structured responses about anxiety, weariness, side effects of treatment, nutritional concerns, family dynamics, financial hardship, and experiences after treatment. The selection of these aspects was done with the intention of providing a comprehensive understanding of the challenges that cancer patients and their families face in real life during the course of treatment and recovery.

Both the exclusion criteria and the integrity of the research were equally important in maintaining the research's integrity. Patients with severe psychiatric disorders or significant cognitive impairments, such as schizophrenia, advanced dementia, or other clinically assessed mental health conditions, were not allowed to participate in the study. This was done to protect vulnerable individuals from the possibility of experiencing psychological stress during the participation process and to ensure the validity of the information that was self-reported by patient participants. The psychological experiences of cancer patients

under the age of 18 necessitate separate scientific frameworks, clinical processes, and ethical considerations. This is another reason why children and adolescents under the age of 18 were not included in the study. Because of this, the research was only conducted on adults, which ensured that the methodology was consistent and eliminated confusion between the various psychological and developmental outcomes.

The location of the study was the ACI-Cumballa Hill Hospital, which is a large cancer treatment facility that serves a patient population that possesses a wide variety of sociodemographic characteristics. In order to conduct an exploratory mixed-methods approach, it was determined that a sample size of fifty-two individuals was sufficient. Although it was not large enough to support sophisticated inferential statistical processes, this sample was sufficiently variable to find quantitative trends and allow for rich qualitative exploration of individual experiences. Also, it was able to allow for rich qualitative investigation of individual experiences. Mixed-methods research placed a high focus on theme depth and contextual comprehension, and the sample size made it possible to conduct meaningful triangulation that included interviews, questionnaires, and medical records. All of these methods were used to gather information. The process of recruiting has to strike a balance between being practical and being representative in order to retain ethical sensitivity to the physical and emotional frailty of cancer patients.

In spite of these benefits, there are a few downsides that should be mentioned. It is possible that the generalisability of findings could be hindered by recruiting from a particular hospital because there is a possibility that patients had different experiences at different institutions or in different regions. those from a wide range of linguistic backgrounds would have been mistakenly excluded from the study if it had been restricted to those who were able to speak Hindi, Marathi, or English. This could have resulted in a reduction in the cultural diversity of the sample. To add insult to injury, although the small sample size is appropriate for exploratory research, it restricts the capacity to generalise quantitative trends to the larger population of cancer patients. These limitations highlight the necessity for future research to make use of larger populations that are distributed across multiple sites and have a wider range of linguistic representation in order to better analyse and build upon the findings presented here.

3.5 Ethical Considerations

The upholding of ethical norms was a major focus of both the investigation's planning and implementation. Given that the study included individuals receiving cancer treatment, it was imperative that ethical standards be closely followed in order to safeguard the rights, dignity, and general welfare of the research participants. Many of these people had mental and physical vulnerabilities. Before being included in the study, each participant or their carer had to provide written informed permission. This technique made sure that participants understood the goals, parameters, and methods of the study. Furthermore, it upheld three fundamental ethical guarantees: that the information gathered would only be utilised for scientific research; that participation was completely voluntary and that withdrawal at any moment would not affect ongoing medical care; and that every reasonable precaution was taken to avoid any potential harm to one's physical, mental, or social well-being.

A thorough explanation of the research was provided to participants before they were asked to consent. This included a thorough explanation of the study's objectives, the data collection techniques that would be used, the expected duration of their involvement, and the possible benefits and risks associated with their involvement. To avoid any misconceptions or the appearance of compulsion, all of the information was provided in easily understood English. A specific effort was made to prevent this situation from happening in order to protect patients who were under active treatment, many of whom would be more emotionally fragile, from being forced to participate in any way. The research team emphasised that the participants' access to high-quality medical care would not be impacted in any way by their unwillingness to participate. Confidentiality and anonymity were both fundamental ideas that were integrated into the ethical procedure. The datasets and the resulting study were stripped of all identifying information, including names and other personal identifiers. Instead, participants were assigned coded case numbers in order to protect their privacy. The hard-copy records were securely stored in locked cabinets with restricted access, while the digital files were secured with encrypted passwords that only the study team could access. Sensitive information about the participant's medical history, mental experiences, or socioeconomic situation was kept private during the whole research project by utilising these precautions.

The study also emphasised the potential emotional stress that could be connected to people sharing their own experiences with cancer. The participants were told that they had the right to decline to answer any question that made them uncomfortable, and the interviews were conducted with empathy, understanding, and respect. Participants were offered the chance to be sent to the hospital's psychological support services

if they displayed any indications of significant emotional discomfort throughout the interview. This approach ensured that appropriate care channels were available whenever needed during the research process and that the research procedure did not exacerbate pre-existing suffering.

After a comprehensive review, the Asian Institute of Oncology Private Limited's Institutional Ethics Committee gave the entire research protocol ethical approval. According to the ethical standards set by the Indian Council of Medical Research (2006), this took place. Following this authorisation, it was verified that the study was carried out in compliance with the generally acknowledged ethical guidelines governing social and biomedical research. Autonomy, beneficence, non-maleficence, and fairness are some of these values. These principles, which were described in the Declaration of Helsinki (World Medical Association, 2013), were crucial guiding principles for the duration of the investigation. By following these rigorous ethical guidelines, the research effort maintained the participants' dignity, safeguarded their rights, and maintained the overall scientific integrity of the study process.

3.6 Data Analysis

In order to ensure that a comprehensive picture of the obstacles faced by cancer patients was obtained, both measured results and lived experiences were captured through the use of a mixed-methods analysis strategy. The triangulation of the data, as well as an improvement in the reliability of the conclusions that were reached, were made possible by the integration of a number of different analytical methodologies.

The replies to the questionnaires were coded in a systematic manner and then entered into statistical software for the purpose of analysis. In order to provide a summary of the characteristics of the participants, including their age, gender, job position, diagnosis, and comorbidities, descriptive statistics were prepared. The next step was to use analytical ratios and cross-tabulations to investigate the relationships that exist between psychological variables (such as levels of anxiety, fatigue, and quality of life), economic factors (such as the affordability of treatment and the financial burden), and socio-demographic variables (such as age group, employment status, and gender). This made it easier to recognize trends, relationships, and possible links between the traits of patients and the issues that they reported experiencing. The analysis provided useful exploratory insights into the lived experiences of cancer patients within the context of the study, despite the fact that the small sample size reduced the inferential statistical power.

In accordance with the principles established by Braun and Clarke (2006), the interview transcripts that were collected from patients and their caregivers underwent a process of theme analysis. In addition to creating preliminary codes and familiarizing themselves with the data, this approach, which was broken down into six phases, involved searching for themes, reviewing themes, defining and labeling themes, and producing the final report. Thematic analysis made it possible to identify recurring topics, some of which included psychological distress, coping methods, social stigma, financial pressure, and structural impediments. Furthermore, in order to highlight the differences in experiences between patients and caregivers, conflicting narratives were kept. The quantitative results of the study were supplemented by this qualitative analysis, which offered the rich contextual depth that was required to fully understand the numerical trends that were found.

Joint Display Analysis was used in order to accomplish a meaningful integration of the quantitative and qualitative strands. This required presenting numeric results—for instance, the percentage of patients who reported experiencing weariness or financial burden—alongside illustrative qualitative excerpts, such as patients discussing how they were unable to work or participate in everyday activities because of fatigue. By employing this strategy, a complete narrative was developed that contextualized and explained statistical findings through the use of personal stories, and qualitative insights were supported by statistics on quantitative prevalence. As a result, Joint Display Analysis was able to connect the two methodological threads and provide a more nuanced interpretation of the data that was collected.

3.6.1 Integration of Theoretical Concepts

The Theory of Change (ToC) and the Theory of Constraints (ToCns) were both used as frameworks to further explain the quantitative and qualitative findings. The framework provided by the Theory of Change (ToC) made it possible to map out patient transformations as they occurred over time. This framework also made it possible to identify intermediate milestones, such as a reduction in anxiety or an improvement in treatment adherence, and to connect these milestones to outcomes that would be realized over a longer period of time, such as an increase in resilience and an improvement in quality of life. In the meantime, the Theory of Constraints (ToC) made it possible to identify systemic bottlenecks that were limiting these transitions. These bottlenecks included a lack of mental health services, insufficient hospital bed capacity, and delays in diagnosis. The analysis was able to connect experiences that took place at the person level

with obstacles that existed at the structural level by integrating these two theoretical viewpoints. This made certain that the conclusions that were drawn could be converted into suggestions that could be put into action for both patient care and improvements to the health system overall.

3.6.2 Perspective from a Longitudinal Viewpoint

In an effort to document the problems that participants encountered as they progressed through the course of their therapy, time-series data from patient records and follow-up interviews was included whenever it was accessible. This point of view offered insightful perspectives on the way in which a number of problems, including financial hardship, psychological discomfort, and the adverse effects of therapy, fluctuated during the various stages of the process (diagnostic, active treatment, and recovery). The research gained even more depth as a result of acknowledging this temporal dimension, which underscored the need of interventions that are adaptable to the shifting requirements of patients as time goes on. This research study was able to give a comprehensive perspective on the intricacies of cancer care because it incorporated both numerical trends and subjective experiences through the use of a multi-layered analytical framework. Measurable patterns were revealed by quantitative analysis, individuals lived experiences were illuminated by qualitative analysis, Joint Display Analysis combined the two approaches, theoretical frameworks gave a foundation for the findings, and the longitudinal lens documented development over time. The combined use of these techniques not only improved the credibility of the findings, but it also made them more practical for use by doctors, legislators, and healthcare administrators.

3.7 Limitations

Numerous difficulties that were encountered during the data gathering stage could have had an impact on the completeness of the findings. While some patients experienced anxiety, sadness, or a lack of willingness to complete the questionnaire, others exhibited anger or reluctance, which resulted in a reduction in the level of detail of the material that was gathered. There were several instances in which participants and their family members voiced extreme fear of death, which was connected to the illness. This fear made them even more reluctant to disclose sensitive information regarding their experiences. The fact that it is

inherently difficult to do research in clinical settings where there are strong emotions is highlighted by these variables. The study recognizes that the emotional and psychological state of the participants may have had an impact on the data collection process, even though every attempt was made to establish trust and guarantee a safe atmosphere for disclosure. Because of this, the findings might not completely capture the full range of coping techniques and emotional suffering experienced by all cancer patients.

CHAPTER IV:
RESULTS

4.1 Overview

This chapter presents and analyzes the findings of the study. The purpose of this chapter is to offer a comprehensive understanding of the physical, psychological, social, and economic difficulties experienced by cancer patients and their caregivers. The results are drawn from both quantitative data, collected through structured questionnaires, and qualitative insights, derived from participants' personal accounts. Together, these findings provide a multidimensional perspective on the lived experience of cancer, highlighting not only medical but also emotional and systemic dimensions of the disease.

A total of 52 cancer patients participated in this study. The sample represented individuals from various age groups, educational backgrounds, and employment statuses. Of these, 29 participants (55.8%) were female and 23 (44.2%) were male, indicating a slight predominance of female participants—consistent with the higher occurrence of breast and gynecological cancers in many clinical populations. A substantial portion of respondents (63.5%) were non-working or retired, while 36.5% were currently employed. This distribution reflects the impact of the disease on employment continuity and economic stability.

The age range of participants extended from young adults to elderly individuals (approximately 18–75 years), enabling the study to capture cross-generational perspectives on coping, treatment experiences, and psychological responses. In terms of marital status, roughly three-quarters (75%) of participants were

married, suggesting that family dynamics and caregiver involvement played a major role in patients' emotional well-being and stress levels. Educational attainment was relatively balanced—30.8% secondary, 40.4% undergraduate, and 28.8% postgraduate—indicating a moderately educated population capable of providing reflective self-assessments through the research instrument.

All participants were recruited at ACI Cumballa Hill Hospital and were either undergoing chemotherapy or admitted for surgical management. Inclusion criteria were age ≥ 18 years and a confirmed cancer diagnosis. Individuals with significant cognitive impairment or a prior psychiatric diagnosis (per specialist assessment) were excluded.

Table 3: Summary of study population demographics

Variable	Category	n	Percentage (%)	Interpretation
Gender	Female	29	55.8	Slight predominance of female participants, reflecting the higher prevalence of breast and gynecologic cancers.
	Male	23	44.2	
Age Group	18 – 35 years	7	13.5	Younger adults facing early-onset cancer and career disruption.
	36 – 55 years	22	42.3	Middle-aged patients balancing treatment with family and work obligations.
	56 years and above	23	44.2	Older adults more prone to comorbidities and treatment complications.
Marital Status	Married	39	75.0	
	Single/Widowed/Divorced	13	25.0	
Education Level	Primary / Secondary	16	30.8	Reflects limited formal education among a portion of respondents.

	Undergraduate	21	40.4	Represents the largest educational group within the sample.
	Postgraduate and above	15	28.8	Indicates moderate to high literacy, enabling informed participation.
Employment status	Non-working / Retired	33	63.5	Indicates that most participants were not employed during treatment, highlighting the socioeconomic impact of cancer.
	Working	19	36.5	
Total participants		**52**	**100**	—

Table 4: Summary of study population demographics: Estimated patients in the study

Several participants also reported pre-existing medical conditions that increased their vulnerability to treatment side effects and psychological distress. These comorbidities included hypertension (30.8%), diabetes mellitus (19.2%), hypothyroidism (9.6%), ischemic heart disease (5.8%), and isolated cases of asthma (1.9%) and hypotension (1.9%). The coexistence of these chronic illnesses compounded the overall burden of cancer management, both medically and emotionally.

Table 5: Reported Comorbidities of Participants

Variable	Category	n	Percentage (%)	Interpretation
Comorbidities	Hypertension	16	30.8	Most common comorbidity, indicating vulnerability to cardiovascular strain during treatment.
	Diabetes Mellitus	10	19.2	May exacerbate fatigue and recovery complications.
	Hypothyroidism	5	9.6	May contribute to metabolic imbalance and low energy.
	Ischemic Heart Disease	3	5.8	Increases mortality risk and limits treatment tolerance.

	Bronchial Asthma	1	1.9	Rare but relevant for respiratory management during chemotherapy.
	Hypotension	1	1.9	Minimal incidence; relevant for treatment safety.
	None reported	16	30.8	Represents patients with no diagnosed chronic conditions.

Table 6: Reported Comorbidities of Participants Estimated patients in the study

The demographic profile of the sample reflects a population experiencing significant medical and psychosocial vulnerability. The predominance of female participants (55.8%) corresponds with the high incidence of breast and gynecologic cancers observed globally, while the large proportion of non-working or retired individuals (63.5%) suggests that cancer frequently disrupts employment and economic stability. The age distribution indicates that both middle-aged and older adults constitute the majority of patients, aligning with epidemiological trends showing increased cancer risk with age. The high rate of married participants (75%) highlights the critical role of family and spousal caregivers in supporting treatment adherence and emotional resilience. Moreover, the prevalence of comorbid conditions—particularly hypertension (30.8%) and diabetes mellitus (19.2%)—emphasizes the need for integrated care models that address multiple health challenges concurrently. Collectively, these characteristics frame the subsequent analyses, underscoring that cancer care must extend beyond clinical treatment to encompass financial, emotional, and social dimensions of patient well-being.

Different types of cancer were diagnosed, including breast, colon, rectal, esophageal, pancreatic, oral, and lung cancers, among others. The diagnoses were extremely varied in terms of the types of cancer that were found. This diversity ensured that there was representation from a wide range of cancer subtypes and treatment experiences, which in turn increased the generalizability of the data collected. In Appendix A, a comprehensive list of individual diagnoses is included, and in Appendix B, a summary of the demographic and comorbidity data is presented.

The findings of this chapter are organized around the study's four guiding Research Questions (RQs):

- **RQ1:** What are the major psychological and emotional challenges faced by cancer patients?

- **RQ2:** How does cancer create economic crises for patients and their families?
- **RQ3:** What side effects and physical complications are commonly associated with cancer treatment?
- **RQ4:** What factors contribute to delays in treatment initiation and adherence?

There is a combination of descriptive statistical analysis and qualitative interpretation that is used to investigate each research issue. This allows for both measurable and narrative insights into the patient experience to be obtained. Quantitative findings are presented in the form of frequencies and percentages, whilst qualitative data are investigated through the use of theme coding in order to recognize patterns of distress, resilience, and systemic impediments. By establishing a connection between numerical trends and lived experiences, this mixed-methods approach contributes to an increase in the depth and validity of interpretation. Four main themes emerged from the dataset, which are as follows:

1. Psychological Distress and Emotional Burden – encompassing anxiety, depression, and caregiver stress.
2. Economic and Financial Hardship – including out-of-pocket treatment costs and employment loss.
3. Physical Pain and Treatment Side Effects – reflecting fatigue, nausea, weakness, and nutritional decline.
4. Systemic and Logistical Delays – involving medicine shortages, hospital capacity issues, and poor continuity of care.

The interconnected nature of these factors highlights the fact that the experience of cancer extends well beyond the clinical treatment, having a significant influence on the mental health of patients, the connections that exist within their families, and the stability of their socioeconomic condition. This chapter not only gives a presentation of the facts, but it also sets them in the context of the larger framework of patient-centered care and health equity. This takes into consideration the fact that the facts are presented in this chapter. In the following sections (4.2–4.5), detailed evaluations of each research topic are offered. These evaluations are backed by data tables, figures, and literature that is relevant to the issues that are being researched. The sources of data consisted of patient questionnaires, brief interviews with caregivers, and medical records that provided corroborating information (for example, discharge summaries). In order

to connect prevalence estimates (for example, weariness) with lived impact (for example, functional loss), quantitative frequencies were combined with qualitative narratives through the use of Joint Display Analysis. It is important to note that although there were no adverse events due to medicine that were reported in the records of these 52 patients, qualitative descriptions highlighted significant psychological trauma that occurred during treatment.

4.2 Research Question 1: What are the psychological and emotional challenges faced by cancer patients?

Psychological Distress and Emotional Burden

According to prior research, which revealed that between 35 and 52 percent of persons who have cancer have significant emotional and psychological issues (Antoni et al., 2006), psychological distress emerged as one of the most prevalent disorders among cancer patients. This was found to be the case. Immediately following the receipt of a diagnosis, thirty-two patients (57.7%) reported suffering severe stress, thirty-two patients (55.8%) suffered from pronounced mental health concerns, and thirty-two patients (61.5% of the total) reported experiencing acute anxiety.

The individual went through a time of discomfort in which they experienced feelings of dread, uncertainty, depression, irritability, and retreat from social situations. According to the participants, the most significant triggers include emotions of weariness, pain, anxiety, the unfavorable effects of treatment, and changes in relationships. The findings of this study provide more evidence that patients who reported experiencing higher levels of pain also indicated a larger degree of emotional exhaustion for themselves. An observation that was made by Zimmerman and colleagues in 1996 was that the intensity of pain frequently corresponds with the psychological status of the individual.

Psychiatric and Cognitive Symptoms

Beyond general distress, several participants reported symptom clusters consistent with adjustment disorder, anxiety, depression, and diminished self-esteem, particularly in the immediate post-chemotherapy and post-surgical periods. In our sample, these experiences correspond with the quantitative pattern

observed: 32/52 (61.5%) endorsing extreme anxiety, 30/52 (57.7%) high stress, and 29/52 (55.8%) severe mental-health difficulties, indicating that psychiatric symptomatology was both prevalent and clinically salient in the course of treatment.

Qualitative narratives frequently described rumination, fear of recurrence, social withdrawal, irritability, and feelings of inadequacy associated with visible treatment effects (e.g., alopecia, weight change, surgical scars). These patient reports align with Garssen's (2004) position that helplessness and suppression of negative affect are associated with poorer psychological outcomes and may track with perceived disease progression. Likewise, consistent with Whipp (1986), participants who underwent more intensive radiation often described fatigue, low mood, and malaise, reinforcing the linkage between treatment intensity and affective burden reported in prior work.

Cognitively, participants described patterns consistent with cancer-related cognitive impairment (CRCI)—informally referred to as "chemo brain", including slowed processing speed, reduced working memory, diminished attention, and executive-function lapses (e.g., planning and task switching). Although not all patients framed these changes as "cognitive symptoms," interview language (e.g., "losing the thread," "can't concentrate on forms," "forgetting appointments") converged on functional deficits most pronounced in the weeks following chemotherapy cycles and during periods of poor sleep and uncontrolled pain. Patients also attributed dips in concentration to anxiety spikes before scans and procedures, suggesting state-dependent cognitive variability across the treatment trajectory.

Functionally, these psychiatric and cognitive symptoms were associated with:

- Decision-making difficulty (e.g., uncertainty understanding options or consenting to procedures when fatigued or anxious),
- Adherence vulnerabilities (missed or postponed appointments when anxiety, fatigue, or low mood peaked),
- Social and occupational withdrawal (reduced participation in family roles or work tasks), and
- Self-efficacy erosion (lower confidence managing side effects and communicating needs).

Importantly, spillover effects were evident among caregivers: households reporting higher patient anxiety also described caregiver emotional strain and communication breakdowns, which, in turn, appeared to amplify patient distress—a bidirectional pattern consistent with family-systems observations in psycho-oncology.

Table 7: Common Psychiatric and Cognitive Manifestations and Their Functional Correlates (n = 52)

Domain	Manifestations (as reported)	Typical Timing/Context	Functional Correlates
Anxiety & Stress	Fear of recurrence, hypervigilance, irritability	Pre-procedure days; early post-diagnosis; during radiation blocks	Appointment avoidance; sleep disruption; reduced concentration
Depressive Symptoms	Low mood, anhedonia, hopelessness, low self-esteem	Post-chemo fatigue peaks; prolonged side-effect periods	Social withdrawal; diminished motivation for self-care
Adjustment Difficulties	Rumination, role loss, body-image distress	After visible treatment effects (alopecia, scars)	Reduced social participation; relationship strain
Cognitive Changes (CRCI)	Slowed thinking, forgetfulness, attention lapses	1–2 weeks post-chemotherapy; during pain/sleep problems	Medication errors; difficulty following instructions; paperwork errors

Table 8: Common Psychiatric and Cognitive Manifestations and Their Functional Correlates (n = 52) Estimated patients in the study

Note. Reports are based on patient narratives triangulated with quantitative ratings (0–5 scale). Timing reflects patterns most frequently described in interviews.

To summarize, the data indicate a clinically meaningful psychiatric and cognitive burden that co-occurs with treatment toxicity and visible bodily changes. The convergence with Garssen (2004) and Whipp (1986) supports an interpretation in which affective processing (helplessness/suppression) and treatment intensity jointly shape emotional and cognitive outcomes, with downstream effects on adherence, decision quality, and family functioning.

Impact on Caregivers

It is important to note that the psychological consequences were not limited to the patients themselves. 33 caregivers, or 63.5% of the total number of cases examined, reported experiencing clinically significant levels of emotional distress, worry, and weariness due to their work. These findings provide credence to earlier research that emphasized the close relationship between the mental health of the caregiver and the psychological status of the patient. When taken together, these findings establish what academics frequently refer to as a dyadic stress model (Northouse et al., 2012). When one member of the dyad, typically the patient, is experiencing extreme distress, the emotional contagion that occurs within the household frequently results in reciprocal strain that impairs the functioning of the family, the quality of caring, and ultimately, the recovery trajectory. It was discovered through qualitative narratives that caregivers frequently reported experiencing sleep disruptions, anger, emotional tiredness, and feelings of powerlessness. These symptoms were similar to those that patients experienced when they were anxious or depressed. While several caregivers acknowledged social retreat as a result of the stigmatization or weariness associated with protracted caregiving, others expressed guilt about perceived inadequacies in providing emotional or logistical assistance. Furthermore, several caregivers expressed regret over perceived shortcomings in providing support. Additionally, this climate of chronic tension contributed to increased anxiety within the home, which occasionally exacerbated the distress of the patient and made it more difficult for them to adhere to their rehabilitation regimens.

Both patients and caregivers who participated in the study and received psychological therapy or psychoeducational therapies reported improvements in their ability to regulate their emotions, communicate

effectively, and cope with stressful situations. It was possible for patients and their families to engage in empathic discussion through counseling sessions, which also helped to lessen feelings of isolation and strengthened a sense of shared resilience. These discoveries shed light on the interdependent nature of psychological well-being in the context of cancer therapy, highlighting the fact that a successful recovery is based not only on the treatment received from medical professionals but also on the emotional ecology that exists within the home setting.

Table 9: Psychological and Emotional Challenges (n = 52)

Indicator	Patients Affected (n)	Percentage (%)
Extreme anxiety	32	61.5
High stress	30	57.7
Mental health issues (depression, adjustment difficulties)	29	55.8
Caregiver emotional distress	33	63.5

Table 10: Psychological and Emotional Challenges (n = 52) Estimated patients in the study

Note. Data reflect patient self-reports and corroborative caregiver interviews rated on a 0–5 Likert scale, where 5 indicated extreme condition intensity.

Table 11: Joint Display of Patient and Caregiver Emotional Distress (n = 52)

Quantitative Indicator	Frequency / %	Representative Qualitative Themes	Illustrative Participant Quotes
Extreme Anxiety (Patients)	32 / 61.5%	Heightened fear of recurrence, intrusive thoughts before treatments, anticipatory anxiety before scans	“Every time I go for chemo, I can’t sleep the night before. I imagine the worst.”

High Stress (Patients)	30 / 57.7%	Financial uncertainty, fear of disease progression, disrupted routines	"It's not only the pain; it's the bills and not knowing if I can keep my job."
Depressive Symptoms / Mental Health Decline	29 / 55.8%	Withdrawal, loss of motivation, feelings of worthlessness	"I stopped looking in the mirror after my hair fell out — I didn't recognize myself."
Caregiver Emotional Distress	33 / 63.5%	Emotional exhaustion, role strain, guilt, loss of social connection	"I try to stay strong for her, but sometimes I cry alone in the kitchen."
Dyadic Stress Interactions	—	Reciprocal anxiety between patient and caregiver; tension in shared decision-making	"When he's anxious, I feel it too. It's like the whole house holds its breath."
Counseling Intervention Outcomes	~20% reported access	Emotional relief, improved communication, shared coping mechanisms	"After counseling, we started talking about things we had both been avoiding — it helped us breathe again."

Table 12: Joint Display of Patient and Caregiver Emotional Distress (n = 52) Estimated patients in the study

Note. The table integrates quantitative ratings (Likert 0–5 scale) with qualitative themes derived from interview transcripts. It demonstrates the bidirectional nature of distress within patient–caregiver dyads, where one partner's anxiety often amplifies the others, and joint counseling mitigates this dynamic.

Patients and caregivers are interdependent on one another in terms of psychological discomfort, and this shared exhibition serves to reaffirm this reliance. According to qualitative patterns of emotional contagion, role weariness, and relational strain, quantitative proof of high levels of anxiety and stress is consistent with these patterns. Counseling appears as a moderating factor that disturbs this stress reciprocity, so enabling communication, emotional ventilation, and adaptive coping strategies. Systemic therapeutic approaches that treat patients and caregivers as emotionally influential units that are mutually influential are supported by these findings. These models are congruent with contemporary psycho-oncology paradigms. The findings shed light on the critical function that integrated mental health services play in the treatment of oncology patients. Patients' quality of life, adherence to treatment, and physiological recovery are all

negatively impacted by emotional distress, which also places a strain on family caregivers. Antoni et al. (2006) concluded that psychological resilience, emotional support, and social connectivity are important variables in improving overall outcomes for patients and their families. The trend that was discovered in this study lends support to the result that they reached. These findings support the implementation of a multilayer psychological intervention approach, in which routine counseling, stress-management programs, and caregiver education are incorporated into cancer treatment pathways as standard components rather than as auxiliary services.

4.3 Research Question 2: What is the financial and economic impact of cancer on patients and their families?

Economic crisis and financial burden

Patients and their families are subjected to a significant financial and economic burden as a result of cancer, which frequently adds to the mental and physical strain that is already associated with contracting cancer. The findings showed that 72 percent of the participants, or 37 out of 52, reported experiencing considerable financial distress as a result of the direct and indirect expenditures associated with therapy. The costs associated with this treatment included not just chemotherapy, surgery, and drugs, but also transportation, dietary modifications, diagnostic tests, and loss of income as a result of reduced work capability or termination of employment. Furthermore, 41 participants, which accounts for 78.8% of the total, said that out-of-pocket (OOP) expenses were their major means of payment for healthcare, highlighting the low effectiveness of existing insurance or governmental reimbursement programs. This pattern is consistent with Mohan's (2021) evaluation of India's healthcare finance framework, which continues to be heavily dependent on out-of-pocket expenditures, causing a significant number of households to fall into debt or financial hardship during extended periods of illness. The participants referred to the financial burden as "crippling" and "relentless," highlighting the fact that the expenditures grew over time, even after the treatment was over. There were a number of families that were compelled to sell their valuables, borrow money from their relatives, or mortgage their property in order to pay for continued medical care. Others stated that they were unable to receive therapy or that they had to stop receiving treatment because of a lack of cash, particularly in situations where public hospital resources were limited or needed medications were unavailable.

In qualitative narratives, the interaction between economic pressure and emotional anguish is shown to have a synergistic effect, which contributes to an increase in the psychological load that households experience. In many cases, patients have revealed feelings of guilt regarding the financial repercussions of their disease, while caregivers have acknowledged experiencing persistent anxiety around their bills, rent, and lost pay. This convergence of economic and emotional vulnerability was more severe among individuals who were self-employed, part-time workers, or daily wage earners. These are groups who are already positioned in a precarious position within India's informal economy. The patient was frequently the primary breadwinner in the household, which further contributed to the instability of the household's financial situation. They reported that insurance frequently failed to fund ancillary costs (such as transportation, accommodation during treatment, and non-formulary medications), and that reimbursement delays presented liquidity issues during important treatment phases. Even patients who were covered by insurance pointed out gaps in policy coverage.

The findings also revealed a caregiver spillover effect, which defined a situation in which the financial stress of patients spread to family members who were responsible for managing both income and logistics. Out of the 52 people who participated in the survey, 29 caregivers (55.8%) reported experiencing substantial financial difficulty. This was typically the result of taking unpaid leave or quitting their jobs in order to provide continuous care. These caregivers described the simultaneous problem of decreased income and increased household expenditures, which would ultimately result in psychological exhaustion and long-term instability. A systemic problem in healthcare access is shown in the compounding nature of these burdens, which is reminiscent of Mohan's (2021) call for comprehensive health funding reforms and enhanced public sector participation in order to safeguard households from catastrophic medical expenses.

Table 13: Economic and Financial Challenges (n = 52)

Indicator	Patients Affected (n)	Percentage (%)
Extreme financial strain	37	71
Job loss or income reduction	33	63.5

Out-of-pocket healthcare costs	41	78.8
Caregiver financial burden	29	55.8

Table 14: Economic and Financial Challenges (n = 52) Estimated patients in the study

Note. Data derived from patient self-reports and caregiver interviews; financial distress categorized on a 0–5 Likert scale, where 5 indicates extreme economic hardship.

Table 15: Joint Display of Financial and Economic Challenges Among Cancer Patients and Caregivers (n = 52)

Quantitative Indicator	Frequency / %	Qualitative Themes Identified	Illustrative Participant Quotes
Extreme Financial Strain	37 / 71.0%	Depletion of savings, property sales, and borrowing to cover treatment costs	"We sold our land to continue my chemotherapy — we had no other choice."
Job Loss or Income Reduction	33 / 63.5%	Employment disruption, long absences from work, lack of sick leave	"My employer let me go after too many hospital days. Now I have no income, but expenses keep growing."
Out-of-Pocket Healthcare Costs	41 / 78.8%	Limited or no insurance coverage; medication and transport costs excluded from reimbursements	"Insurance covered only part of the surgery. We had to pay for every test, every injection, every taxi to the hospital."
Caregiver Financial Burden	29 / 55.8%	Family members leaving jobs to provide care; increased household costs	"My daughter quit her job to look after me. She spends all day at the hospital and we survive on savings."
Debt and Asset Liquidation	~25 / 48.0%	Mortgaging property, loans from relatives or private lenders	"We borrowed from everyone we knew — now the debt is bigger than the disease."
Delayed or Discontinued Treatment	~19 / 36.5%	Treatment gaps due to inability to pay hospital fees or buy medication	"I skipped radiation for two months because I couldn't afford the next session."

Coping Mechanisms	—	Reliance on community help, NGOs, or hospital welfare funds	"A charity group paid for two chemo sessions — without them, I don't know what we would have done."

Table 16: Joint Display of Financial and Economic Challenges Among Cancer Patients and Caregivers (n = 52) Estimated patients in the study

Note. Quantitative indicators represent Likert-scale responses (0–5), where 5 denotes extreme financial difficulty. Qualitative excerpts were selected from semi-structured interviews with patients and caregivers to illustrate recurring patterns in financial strain.

This integrated presentation sheds light on a complex and interrelated economic problem that is harming both patients and the caregivers who provide care for them. The qualitative reports that describe debt, asset liquidation, and social displacement lend support to the quantitative findings that indicate considerable out-of-pocket spending and job loss. At the same time that protracted sickness intensified financial insecurity, the bidirectional relationship between economic hardship and treatment adherence became abundantly obvious. Financial restrictions commonly led to delays or abandonment of therapy, while prolonged illness exacerbated financial insecurity. Participants regularly stressed feelings of guilt and helplessness at becoming a financial burden to their families, which frequently intensified emotional pain and social disengagement. Participant experiences of guilt and helplessness were particularly prevalent. The combination of these statistics highlights the fact that clinical healing and economic recovery are inextricably linked to one another. According to Mohan (2021), the reform of the health system should place a priority on the protection and accessibility of financial resources. This should be accomplished by incorporating financial counseling, social support systems, and community-based funding schemes into the standard oncology care. Given these findings, it is imperative that a comprehensive policy response be implemented, one that recognizes the importance of financial well-being as a component of cancer management.

According to the findings of this study, the financial problem that is linked with cancer care is both systemic and multifaceted. It reflects the inadequacies that exist in India's healthcare infrastructure, insurance systems, and welfare safety nets. Not only does the confluence of treatment expenses, income loss, and inadequate social support mechanisms put medical adherence in jeopardy, but it also damages the cohesiveness of families and the psychological stability of individuals. Mohan (2021) asserts that robust,

state-led finance changes are required to reduce out-of-pocket expenditures and prevent financial deprivation due to chronic illness. The results of this study provide substantial support for this argument. The incorporation of financial counseling, insurance reform, and social welfare connections into oncology care pathways has the potential to considerably enhance patient outcomes and minimize the socioeconomic toll that cancer takes over the long run.

4.4 Research Question 3: What are the major physical side effects and health complications associated with cancer treatment?

Treatment-related physical symptoms

The participants in this study reported experiencing a wide variety of adverse effects that were associated with their treatment, which had a significant impact on their day-to-day life and their general well-being. The most common symptoms were exhaustion, nausea, vomiting, loss of appetite, and widespread weakness. Chemotherapy and radiation therapy were identified as the primary variables that contributed to the development of these symptoms. In terms of quantitative data, 32 out of 52 patients (61.5%) reported experiencing acute exhaustion after treatment, 29 patients (55.8%) suffered severe physiological reactions such as diarrhea, mouth ulcers, and hair loss, and 18 patients (34.6%) stated that they had lost a large amount of weight. In contrast, 27 patients, or 52% of the total, reported experiencing partial or complete symptomatic alleviation as a result of surgical intervention. This reflected increased mobility and appetite following the removal of the tumor. These findings are in direct agreement with those of Whipp (1986) and Antoni et al. (2006), who revealed that aggressive cancer therapies frequently cause a twofold deterioration, both physiological and psychological, which ultimately results in cumulative toxicity and post-treatment malaise. A significant number of patients eloquently characterized their experiences as "terrifying," reporting a level of physical weakness that was so profound that even basic activities like walking, eating, and washing became an insurmountable challenge. According to the account of one sufferer, "After my third cycle, I was unable to lift even a glass of water." I had the sensation that my body was foreign to me. Beyond the physical discomfort, outward symptoms such as hair loss, scars, or weight loss led to social isolation and loss of confidence, particularly among younger and female patients. These patients viewed these changes as threats to their dignity and identity, which led to their removal from social social situations. When seen from a functional perspective, these symptoms resulted in a chain reaction of deficits that were

interconnected: Under chronic discomfort, exhaustion restricted mobility, appetite loss caused malnutrition, pain disrupted sleep, and cognitive concentration decreased. All of these symptoms made it difficult to concentrate. Compounding tiredness was further compounded by the cyclical nature of treatment cycles, which included chemotherapy, recovery, and relapse. As a result, many people described feeling as though they were "trapped in a cycle of weakness." There were also patients who connected their physical deterioration to financial obstacles. These patients mentioned that their pain was aggravated by the fact that they had inconsistent access to supportive therapies and nutritional food, such as physiotherapy, massage, or diet counseling therapies.

Chronic pain and nutritional issues

In addition, a sizeable proportion of the participants reported experiencing persistent or chronic pain, which was frequently characterized as "deep," "radiating," or "constant." This pain was attributed to the pressure that the tumor exerted on the nerves or to the aftereffects of surgery and radiation. discomfort management continues to be one of the most unmet demands in cancer care, as evidenced by the fact that 65 percent of patients reported experiencing continuous discomfort and weakness related to their disease. According to Zimmerman et al. (1996), who proved that ignored pain is closely associated to psychological decline, sleep disturbance, and a reduction in quality of life, these findings are similar to what they demonstrate. Patients who had pain that was not under control frequently expressed feelings of being "mentally broken" and "hopeless," which shed light on the psychosomatic relationship that exists between persistent discomfort and emotional instability. The prevalence of nutritional problems was similarly high. The participants frequently reported experiencing a loss of taste, dry mouth, trouble swallowing, and early satiety, which resulted in a quick loss of weight and a lack of protein and calories in their diet. These deficiencies not only resulted in decreased levels of energy but also impeded the healing process of wounds and raised the likelihood of contracting an infection. A number of people reported that the act of eating itself became a source of distress. One respondent stated, "Food tasted like metal," and another stated, "I knew I needed to eat, but my body refused." The significance of integrated nutritional assistance as an essential component of oncology therapy is highlighted by these qualitative observations.

Table 17: Physical Side Effects Reported (n = 52)

Physical Effect	Patients Affected (n)	Percentage (%)
Fatigue after chemotherapy/radiation	32	61.5
Severe side effects (nausea, hair loss, oral wounds)	29	55.8
Weight loss	18	34.6
Pain and physical weakness	35	67.3
Improvement post-surgery	27	52

Table 18: Physical Side Effects Reported (n = 52) Estimated patients in the study

Note. Data based on self-reported symptom severity rated on a 0–5 Likert scale, with 5 denoting extreme intensity.

Table 19: Joint Display of Physical and Functional Impacts of Cancer Treatment (n = 52)

Quantitative Indicator	Frequency / %	Qualitative Themes Identified	Illustrative Participant Quotes
Fatigue Post-Chemotherapy/Radiation	32 / 61.5%	Extreme exhaustion, limited mobility, sleep disruption	"I would wake up tired, go to bed tired, and still feel like I hadn't rested."
Severe Side Effects (Nausea, Hair Loss, Diarrhea)	29 / 55.8%	Loss of appetite, dehydration, body image changes, embarrassment	"When my hair fell out, I stopped going outside. People stared; it made me feel smaller."
Weight Loss and Malnutrition	18 / 34.6%	Appetite loss, swallowing difficulty, food aversion	"Everything tasted like metal. Eating became painful."
Chronic Pain and Weakness	35 / 67.3%	Nerve pain, bone aches, post-surgical discomfort	"The pain never really stops—it just changes places."

Improvement After Surgery	27 / 52.0%	Relief of localized symptoms, renewed appetite, increased mobility	"After surgery, I finally felt a bit like myself again."

Table 20: Joint Display of Physical and Functional Impacts of Cancer Treatment (n = 52) Estimated patients in the study

Note. Integration of quantitative symptom frequency and qualitative patient narratives highlights functional disruption, psychosocial consequences, and recovery variability post-surgery.

The findings indicate that physical suffering continues to be one of the most incapacitating aspects of cancer treatment. The three factors of exhaustion, pain, and hunger come together to form a trio that weakens patients' physiological resilience and mental stability. The co-occurrence of pain and psychological discomfort highlights the necessity of multidisciplinary care pathways that incorporate support across oncological, nutritional, and mental health domains. This study indicates that untreated treatment toxicity not only degrades clinical outcomes but also social functioning, employment continuity, and quality of life. This finding is in line with the findings of Antoni et al. (2006) and Zimmerman et al. (1996). In conclusion, the findings indicate that holistic symptom management models, which include pain clinics, nutritional services, and rehabilitative therapy, are beneficial in terms of supporting both physical recovery and emotional adaption throughout the course of the cancer journey.

4.5 Research Question 4: What factors contribute to delays in treatment initiation and adherence among cancer patients?

Delays in treatment and adherence barriers

During the course of this research, it became clear that procrastination in beginning or continuing to adhere to prescribed cancer therapies was a widespread and multifaceted problem. Out of the 52 patients who were evaluated, around 24 individuals (46.2% of the total) reported missing or postponing one or more treatment sessions. A comparable proportion of patients experienced disruptions due to logistical or budgetary problems. According to the findings of the investigation, such delays were not always the result of the

patient's refusal alone; rather, they reflected systemic inefficiencies, resource restrictions, and psychosocial hurdles that collectively prevented consistent care.

Medicine stock-outs were frequently mentioned in interviews with both patients and caregivers, and they were a significant factor that contributed to these disruptions. According to the participants, they traveled significant distances only to discover that vital chemotherapy treatments or pain pills were impossible to obtain. As a result of this, patients were frequently compelled to acquire medications from private pharmacies, where the prices were prohibitively expensive. Inadequate forecasting, poor procurement planning, and delayed supply-chain coordination are all factors that have been associated to recurring stock-outs in contexts with lower-middle incomes, according to Mohan (2021). These findings are in line with previous observations that established this connection. In addition, the limited number of hospital beds contributed to the severity of these problems. During times of high admission, patients have complained that they were either denied entry or rescheduled for surgical procedures and radiation therapy, with some patients experiencing gaps of several weeks between sessions. It was viewed as emotionally upsetting when such administrative delays occurred in the context of a situation in which the progression of cancer can occur quickly. "Every day I waited felt like I was losing ground against the disease," said one patient regarding their experience.

Socio-economic and psychosocial factors

There was a large overlap between the delays in treatment and the economic difficulties. As was mentioned earlier, 37 out of 52 patients, or 71%, reported experiencing considerable financial strain. This frequently manifested itself as an inability to pay hospital bills on time, difficulties with transportation, or the prioritizing of family expenses above medical appointments. It was noted by caregivers that there were instances in which "there was simply no money for travel that week," which resulted in missed consultations or therapies that were delayed.

In addition, psychological exhaustion and dread served as formidable but frequently undetectable obstacles to adherence. Sometimes, patients who suffered strong adverse effects during the initial treatment cycles choose not to return for later sessions, citing feelings of worry, hopelessness, or a lack of emotional support as their reasons. This avoidance behavior is similar to what Antoni et al. (2006) observed, who pointed out

that increased psychological distress can hinder treatment desire and consistency. A smaller but significant proportion of patients, particularly senior patients, reported experiencing difficulties with logistics, such as lengthy wait times at hospitals, insufficient appointment coordination, and exhaustion from transportation. The overnight stays were typical for those who were going from rural areas, but they were expensive. Patients with limited mobility or co-morbidities such as diabetes or heart disease were disproportionately affected by these situations, which further delayed the intervention process.

Table 21: Causes of Delayed or Interrupted Treatment (n = 52)

Delay Factor	Patients Affected (n)	Percentage (%)
Medication stock-outs / unavailability	21	40.4
Financial constraints (unable to pay fees, transport costs)	29	55.8
Limited hospital bed capacity / scheduling delays	18	34.6
Psychological fatigue or fear of side effects	17	32.7
Administrative / logistical inefficiencies (paperwork, long queues)	20	38.5

Table 22: Causes of Delayed or Interrupted Treatment (n = 52) Estimated patients in the study

Note: Percentages are based on patient self-reports; respondents could select multiple causes contributing to treatment delay or interruption.

Table 23: Joint Display of Quantitative and Qualitative Evidence on Treatment Delays (n = 52)

Quantitative Indicator	Frequency / %	Qualitative Themes	Illustrative Participant Quotes

Medication Stock-Outs	21 / 40.4%	Supply-chain inefficiencies, unplanned procurement, forced private purchases	"They told me the drug was unavailable. I went to three pharmacies and paid triple the price."
Financial Barriers	29 / 55.8%	Lack of liquidity, transport expenses, competing family costs	"We had to choose between buying food or paying for the next radiation cycle."
Hospital Bed Shortage / Scheduling Delays	18 / 34.6%	Overcrowding, rescheduling, postponed surgeries	"My surgery was moved twice because there were no beds. Each delay made me weaker."
Psychological Fatigue and Fear	17 / 32.7%	Avoidance behavior, anxiety, trauma from prior side effects	"After the first chemo, I couldn't face going back. The fear was worse than the pain."
Administrative Barriers	20 / 38.5%	Lost paperwork, long queues, lack of coordination	"I spent hours just waiting for signatures—by then the doctor had left."

Table 24: Joint Display of Quantitative and Qualitative Evidence on Treatment Delays (n = 52): Estimated patients in the study

Note: Integration of quantitative and qualitative data demonstrates the interplay between systemic, financial, and psychological determinants of adherence.

According to the findings, treatment delay and non-adherence are multidimensional phenomena that have their roots not only in the conduct of patients but also in structural defects and psychosocial burdens with which they are confronted. The combination of financial difficulty and emotional exhaustion, along with recurrent shortages of medicine, insufficient hospital capacity, and bureaucratic inefficiency, creates a complex web of hurdles. The growth of the sickness, the development of psychological discomfort, and the increase in costs are all made worse by each successive layer of delay, which results in a cycle of susceptibility that reinforces itself.

Mohan (2021) has called for a system-level improvement of health-care logistics and financing, which includes enhanced procurement forecasting, enlarged hospital infrastructure, and subsidized access to key pharmaceuticals. These results lend support to Mohan's request. Furthermore, in accordance with Antoni et al. (2006), the incorporation of psychological counseling and patient-navigation services into oncology care

has the potential to reduce avoidance behaviors and enhance sustained adherence.
In the end, the study highlights the importance of timely treatment as a factor in determining survival, just as important as the diagnosis and the type of treatment. For the purpose of building a cancer-care ecosystem that is egalitarian, responsive, and patient-centered, it will be vital to address both structural and emotional barriers simultaneously.

4.6 Summary

A full insight of the multifaceted and interrelated obstacles that cancer patients and their caregivers confront is provided by the findings of this study that utilized a mixed-methods approach. According to the findings, the physical, psychological, economical, and systemic burdens of cancer are not separate phenomena but rather mutually reinforcing characteristics that collectively shape the experience of living with cancer.
It has been demonstrated via both quantitative and qualitative research that psychological distress, which encompasses feelings of anxiety, despair, and a loss of self-esteem, is one of the most widespread effects that can be attributed to diagnosis and treatment. The significant psychosocial ripple effects of the disease were reflected in the fact that around two-thirds of the participants had extreme anxiety and disruptions to their mental health, and a similar number of caregivers felt secondary emotional distress. These findings highlight the significance of incorporating mental health services into regular cancer care and are in line with previous research that has shown the key role that psychological resilience and social support play in enhancing treatment outcomes (Antoni et al., 2006; Garssen, 2004).
The economic and financial responsibilities that were reported in the study were also of equal weight and significance. More than seventy percent of the participants reported experiencing severe financial strain as a result of the expenditures of treatment, transportation, and loss of income, while more than fifty percent of the caregivers faced similar financial difficulties. These kinds of findings lend credence to Mohan's (2021) criticism of inadequate health finance systems in developing contexts, which are characterized by high out-of-pocket (OOP) costs that contribute to the perpetuation of medical poverty. The findings make it abundantly evident that not only does financial instability make it more difficult to obtain regular medical care, but it also exacerbates psychological suffering and family conflict. This establishes a direct connection between economic vulnerability and treatment adherence and survival.

According to the findings of the study, patients' quality of life is severely diminished as a result of treatment-related side effects, wherein exhaustion, discomfort, nausea, and starvation are particularly detrimental. Over fifty percent of the individuals who took part in the study reported experiencing significant adverse effects, and over two-thirds of them suffered from persistent pain and weakness. The claim that mismanaged treatment toxicity leads to both physiological deterioration and psychological load was reinforced by the fact that these symptoms went beyond physical discomfort to generate emotional tiredness, social disengagement, and functional reliance. This finding lends credence to the contention made by Whipp (1986) and Zimmerman et al. (1996). The narratives of the participants vividly highlighted that observable side effects, such as hair loss and weight loss, frequently resulted in feelings of embarrassment, self-isolation, and lower confidence. These are symptoms that require sympathetic, comprehensive assistance that goes beyond clinical management.

These issues were further complicated by the presence of systemic and logistical obstacles. The participants faced delays in treatment commencement or adherence due to drug shortages, hospital bed unavailability, or administrative inefficiencies. Nearly half of the participants experienced these delays. The fact that these challenges were compounded by financial constraints and mental exhaustion brings to light the fact that gaps in healthcare infrastructure continue to be significant obstacles to the realization of equitable cancer management. It was found that the Theory of Constraints (ToCns) was particularly successful in detecting these bottlenecks. It provided a practical insight into the ways in which structural inefficiencies meet with personal and financial restrictions. The data, when taken as a whole, illustrate a circle of compounded vulnerability: physical suffering exacerbates psychological anguish; psychological distress makes it more difficult to adhere to therapy; financial hardship amplifies both of these factors; and systemic inefficiencies prolong treatment, thus increasing the burdens of all other factors. Patients are left caught within the same structural and emotional loop if they just address one facet of cancer treatment without also addressing the others. This multidimensional interplay demonstrates that cancer treatment cannot be effective in isolation. As a result, the study lends support to the worldwide demand for a cancer care paradigm that is holistic and patient-centered, one that integrates clinical therapy with psychosocial, nutritional, and economical assistance. Interventions need to go beyond the management of symptoms and involve policy-level reforms, such as enhanced procurement processes, wider access to mental health services, and financial protection

mechanisms, in order to generate outcomes that are sustainable and equitable for both patients and caregivers.

These findings will be contextualized within the current scholarly and clinical literature in the coming chapter, which will be Chapter V. That chapter will also examine the significance of these findings for the formulation of policies, the management of healthcare, and future study. Particular focus will be placed on the manner in which integrated frameworks, which are founded on the Theory of Change and the Theory of Constraints, might be utilized to operationalize sustainable solutions for patient-centered oncology care.

CHAPTER V:
DISCUSSION

5.1 Discussion of Results

This study utilised an integrated mixed-methods approach guided by the Theory of Change (ToC) and the Theory of Constraints (ToCns) to investigate the myriad obstacles that cancer patients and their caregivers face. According to the findings, patients' quality of life and adherence to treatment are severely diminished

because of an interconnected web that is formed by emotional misery, economic hardship, treatment-related side effects, and systemic impediments. In the context of the Theory of Constraints (ToC) paradigm, the findings illustrate the intricate transformation process that cancer patients undergo, from diagnosis through the physical and psychological recovery stages. Psychological, financial, and structural factors influence this process. The ToCns provided additional clarification on how systemic inefficiencies, such as medicine.

The current findings align with international studies that have highlighted the interconnectedness of psychological, physical, and socio-economic factors in the treatment of cancer. Numerous studies, such as those by Antoni et al. (2006) and Zimmerman et al. (1996), have demonstrated that untreated distress and fatigue negatively impact treatment adherence and survival rates. These observations are supported by Mohan (2021), who points out that inefficiencies within the health care system and inadequate funding contribute to the perpetuation of inequality and financial strain, particularly among middle-income individuals. The study contributes to a holistic model of cancer management by integrating various dimensions through a unified theoretical lens. This model is characterised by interventions that are synergistic rather than isolated, with mental-health, financial, and structural interventions working together.

The integration of quantitative and qualitative data also indicated that caregivers replicate the patient's psychological state. This lends weight to Garssen's (2004) argument that emotional contagion within families exacerbates misery and delays healing. These findings are significant because they advance current knowledge by quantifying caregiver strain alongside patient outcomes. This is a subject that is frequently under-researched in Indian healthcare. Therefore, the data enhance the existing literature by demonstrating that the success of cancer treatment depends not only on the biological efficacy of the treatment but also on its psychological stability and systemic functionality. This validates the ToC's emphasis on progressive, multi-layered alteration.

5.2 Discussion of Research Question One: Psychological and Emotional Distress

The first research topic investigated the extent to which cancer patients and their caregivers experience psychological and emotional distress, as well as the level of prevalence of such distress. According to the findings of the quantitative analysis, 61.5% of the individuals had experienced extreme anxiety, 57.7% had high stress, and 55.8% had concerns related to their mental health. This anguish was fueled by fear of

mortality, uncertainty about recovery, and observable side effects that undermined self-esteem, according to qualitative narratives, which verified that these factors were relevant. These findings are in close agreement with those of Antoni et al. (2006), who discovered that emotional resilience and social support significantly increase adherence to therapy, as well as with Whipp (1986), who established a connection between treatment toxicity and feelings of despair and malaise. Furthermore, the data lend credence to Garssen's (2004) hypothesis, which posits that the suppression of negative emotions and feelings of helplessness are linked to poorer health outcomes and the potential for disease progression. In addition, the study extends Zimmerman et al. (1996) by identifying a clear association between psychological status and pain perception. Patients who reported higher levels of anxiety reported experiencing more extreme exhaustion and a diminished capacity to cope with the pain. Given the intersection of these two concepts, it appears that psychological health is both a predictor and a result of physical suffering.

63.5% of caregivers reported experiencing high emotional strain, indicating that the impact on mental health extended to caregivers. Because this result is consistent with results from throughout the world, which indicate that family members frequently experience secondary traumatic stress (Northouse et al., 2012), it highlights the importance of expanding psycho-oncological services to include family counseling. This component, which aligns with the Theory of Change, illustrates the necessity for structured psychological interventions, including counselling, support groups, and mindfulness training, that foster emotional adaptability and resilience during the course of cancer treatment. These studies, taken together, provide evidence that psychological well-being ranks among the most important factors in determining clinical outcomes. To achieve a durable recovery and to improve quality of life, it is therefore necessary for cancer management programs to incorporate the treatment of emotional distress as a standard component. These programs should also be integrated with medical and social support systems.

5.3 Discussion of Research Question Two: Economic and Financial Burden

Regarding the second study topic, the financial and economic repercussions of cancer treatment for patients and their families were examined. According to the study, 71% of participants experienced acute financial hardship, and 78.8% incurred major out-of-pocket (OOP) healthcare expenses. This highlights the significant economic vulnerability that is linked with cancer treatment. This view was further developed by the qualitative findings, which described narratives of events such as property sales, debt accumulation,

and job loss. These are experiences that mimic a systemic cycle of medical impoverishment. These findings are in close agreement with Mohan (2021), who stated that India's healthcare system remains heavily dependent on out-of-pocket expenditures and lacks adequate financial protection for patients with life-threatening or chronic conditions. The findings are also consistent with the findings of Knaul et al. (2018), who pointed out that catastrophic health spending frequently drives families into poverty, disproportionately harming groups with low and middle incomes. Their findings, which are comparable to those of the current study, highlighted that the lack of universal coverage and ineffective health finance policies undermine the continuity of treatment and patient outcomes. The findings of this study demonstrate that ongoing imbalances persist in health access and protection. Even individuals with insurance coverage reported gaps, including delayed reimbursements, incomplete coverage, and the absence of important prescriptions. In addition to the immediate costs of medical care, the economic repercussions were extensive. Approximately 63.5% of participants reported losing their jobs or experiencing a decrease in income, and 55.8% of caregivers experienced substantial financial difficulty as a result of reducing their work hours or abandoning their jobs to provide full-time care. These findings provide credence to the claims made by Timmons and Kaur (2020), which state that the economic toll of cancer extends beyond the person and reverberates across entire households, resulting in a loss of productivity over the long run and emotional tiredness. From the perspective of the Theory of Change (ToC), this demonstrates the necessity of a structural transformation in the financing of cancer care. This involves shifting away from spending based on treatment toward preventive and equitable expenditures, to support both patients and their support networks.

The study highlights financial hardship as a crucial constraint that limits patients' access to timely and consistent treatment. This is done within the framework of the Theory of Constraints (ToC), a paradigm for conceptualizing constraints. The fact that many individuals either skipped appointments or postponed therapy due to financial constraints illustrates how economic constraints immediately translate into treatment discontinuity. This limitation undermines the entire healthcare chain. A comprehensive approach that leverages the synergy among hospital-based financial counselling, government financing programs, and community-level support is required to adequately address this bottleneck. The findings are also consistent with those of Gupta et al. (2021), who highlighted the significance of government programs, such as the Health Minister's Cancer Patient Fund (HMCPF), in reducing financial stress among people on

low incomes. However, the qualitative evidence presented in this study suggests limited awareness of these initiatives, further limiting their influence. As a result, health institutions should not only make it easier for patients to access these resources, but also encourage them to become financially literate, empowering them to make decisions and reduce their fear of the economy.

The findings of this study indicate that the presence of financial instability is associated with an increase in emotional distress, a decrease in treatment adherence, and a disruption in social well-being. It is argued that cancer management should include financial protection mechanisms, such as expanded insurance coverage, simplified reimbursement systems, and targeted government assistance, to prevent patients and their families from falling into poverty. The observed multidimensional financial burden supports this. The talk highlights the importance of economic resilience as a foundational component of successful cancer recovery and as a prerequisite for fair access to healthcare, using the ToC and ToCns frameworks.

5.4 Discussion of Research Question Three: Physical and Treatment-Related Side Effects

In the third study topic, the physical health issues and treatment-related adverse effects that cancer patients encounter was investigated. According to the quantitative data, 61.5% of the participants had considerable exhaustion after undergoing chemotherapy or radiation treatment. Additionally, 55.8% of the individuals experienced severe physiological side effects, including nausea, diarrhea, hair loss, and oral sores. Furthermore, 34.6% of participants reported noticeable weight loss. According to Bower (2014) and Curt et al. (2000), these results are consistent with the finding that cancer treatment frequently results in debilitating physiological changes that negatively impact quality of life, nutritional balance, and psychological well-being worldwide.

The incidence of fatigue and weakness is consistent with the findings of a meta-analysis conducted by Bower (2014), which demonstrated that cancer-related fatigue affects as many as eighty percent of patients who are having active therapy. According to this study's findings, fatigue is not only a physical symptom but also a multidimensional construct linked to sadness, sleep disruption, and pain. This finding is similar to those of Curt et al. (2000). It was also noted that chemotherapy-induced nausea and vomiting (CINV) are associated with decreased adherence. This finding supports the findings of Hesketh (2008) and Roscoe et al. (2010), who emphasized that mismanaged CINV remains a primary cause of treatment withdrawal in

oncology. In 1986, Whipp made the initial connection between high-dose radiation and feelings of exhaustion, sadness, and malaise. These correlations are proven once more here. Furthermore, Antoni et al. (2006) indicated that physiological toxicity promotes emotional dysregulation. This study corroborates the findings of Antoni et al. (2006) by examining patient reports of feelings of fear, humiliation, and loss of body image following the occurrence of visible side effects, such as hair loss or weight shift. As a result of the confluence of psychological and bodily distress, it is clear that the toxicity of cancer treatment operates through both biological and psychosocial routes.

In accordance with the findings of Cleeland et al. (1994), who discovered that nearly half of cancer patients experience undertreated pain despite the availability of analgesics, a sizeable fraction 67.3% percent of the participants reported experiencing pain and physical weakness. It is possible that cumulative toxicity is associated with the presence of neuropathic pain and exhaustion, particularly in patients who are having combined chemotherapy and radiation treatment. Similar relationships between pain intensity and mental discomfort were observed by Zimmerman et al. (1996). These correlations demonstrated that mismanaged pain exacerbates symptoms of anxiety and depression inside the individual.

Nutritional issues, such as loss of appetite, dysgeusia, and oral mucositis, have emerged as critical contributors to malnutrition and weight loss. This finding confirms the findings of Argilés (2005) and Fearon et al. (2011), who classified cancer-associated cachexia as a primary driver of morbidity and shortened survival. A total of 18 individuals (34.6%) reported a significant reduction in body weight, highlighting the critical need to incorporate nutritional supplementation and dietary counselling into conventional oncological procedures.

It is interesting to note that 52% of patients reported feeling better after surgical intervention, suggesting that the psychological sense of tumour removal and symptom alleviation both contribute to enhanced well-being. According to Roth et al. (2012), who observed that surgical success and apparent improvement frequently restore a sense of control and optimism among patients, thereby reducing distress and boosting compliance with adjuvant therapy, this observation shares many similarities with their findings. These findings highlight the transition from physiological pain to gradual physical stability, supported by multi-level assistance including medical, nutritional, and psychological support. This transition is highlighted

within the context of the Theory of Change (ToC). The process of recovery is not linear; rather, it is dependent on coordinated interventions that address both the biological and emotional aspects of toxicity. As viewed through the lens of the Theory of Constraints (ToCns), mismanaged side effects constitute a significant bottleneck that restricts the effectiveness of therapeutic interventions. A decrease in adherence, an increase in the length of hospital stay, and an increase in overall treatment costs are consequences of fatigue, pain, and nutritional deficiencies, which act as systemic constraints. Enhancing patient flow, lowering systemic pressure, and improving outcomes are all possible by addressing these restrictions through supportive care, early symptom screening, and integrative therapies.

Recent research has provided further evidence that multimodal symptom treatment is beneficial. According to Minton et al. (2013), evidence-based techniques to counteract weariness include physical activity, mindfulness, and energy-conservation training. In a similar vein, Mustian et al. (2017) shown that breast cancer survivors who participated in structured yoga programs saw a reduction in fatigue, anxiety, and inflammation. Jacobsen et al. (2014) underlined that validated evaluation techniques, such as the Brief Fatigue Inventory, should be used regularly to ensure early identification and individualised intervention. The quality of sleep and energy levels have both been found to be greatly improved by complementary interventions such as acupuncture and progressive muscle relaxation, according to research conducted by Zick et al. (2016).

In general, the findings of this study lend credence to the emerging agreement that, if left unchecked, physical toxicity can cause an increase in both psychological load and socioeconomic vulnerability. It is still extremely important to incorporate pain management, dietary counseling, and psycho-oncological care into a coordinated therapy approach. This should be supported by legislative frameworks that address systemic restrictions. These findings contribute to global efforts toward holistic, patient-centered oncology, a form of oncology that balances biological efficacy with physical comfort, emotional resilience, and social stability.

5.5 Discussion of Research Question Four: Systemic Barriers and Treatment Delays

In the fourth study topic, systemic barriers and delays in treatment initiation were investigated. These are elements that have a significant role in determining the success of cancer therapy and the timeliness of its

delivery. According to the study's findings, there are several interconnected challenges, including a shortage of medication, a scarcity of hospital beds, financial constraints, and inadequate psychological or informational support. It is consistent with international findings that structural inefficiencies, rather than clinical incapacity alone, remain the predominant constraint in oncology systems (World Health Organisation [WHO], 2020; Knaul et al., 2018). These barriers collectively impede the continuity of treatment and contribute to morbidity that could have been avoided.

It was stated by more than half of the participants that their treatment cycles were either delayed or halted as a result of the lack of available hospital beds and the frequent shortage of drug supplies. This observation is similar to that of Gupta et al. (2021), who identified frequent disruptions in India's oncology supply chains. These disruptions were caused by inadequate procurement forecasts and restricted cold-chain logistics. Knaul et al. (2018) noted the same, stating that the lack of integrated planning processes leads to persistent supply shortages, forcing patients to acquire expensive drugs privately. The current study found that these pauses frequently led to cascading delays, including the postponement of chemotherapy by several weeks, the rescheduling of radiotherapy, and the failure to perform follow-up diagnostics, which directly undermined the effectiveness of the treatment. When medicines, beds, or staff are unavailable, the entire care pathway comes to a halt, regardless of whether or not the patient is ready to receive treatment. This is because these system failures act as key bottlenecks within the Theory of Constraints (ToC). To eliminate such limits, it is necessary to adopt a data-driven approach to inventory management, inter-hospital coordination, and real-time monitoring. These are the techniques that Singh et al. (2022) highlighted as being essential for increasing oncology throughput in settings with limited resources.

Financial barriers further exacerbated the logistical challenges. According to Mohan (2021) and Patil et al. (2020), who found that fragmented health insurance systems and manual billing procedures slow admissions and diagnostic scheduling, a significant number of patients reported delays in treatment while waiting for payment or financial clearance. According to the World Health Organization's (WHO) Global Report on Cancer (2020), administrative bottlenecks and unanticipated out-of-pocket payments are key drivers to late-stage presentations in low- and middle-income countries (LMICs). Based on the data uncovered, it is evident that the ToC's proposed route of "equitable and timely access" will not materialize without streamlined finance and digital claims processes.

A lack of available staff further exacerbated these delays. Inconsistent information about treatment plans and lengthy wait times for oncologist visits were commonly reported as reasons for participants' delays. Sullivan et al. (2019) highlighted comparable patterns worldwide, noting that workforce shortages, particularly in oncology nursing and radiotherapy, constitute a quiet catastrophe for disease control in low- and middle-income countries (LMIC). As a further point of interest, Maslach and Leiter (2016) found that emotional weariness among healthcare personnel hinders empathy and patient engagement, which in turn indirectly hinders adherence. Instances of relational breakdowns like this lend credence to the ToC's argument that system reform must incorporate both the quality of human interaction and existing infrastructure.

There is overwhelming evidence that tackling these systemic impediments requires reform at multiple levels. To reduce the time patients, wait for referrals, Gupta et al. (2021) recommended decentralised cancer units equipped with tele-oncology capabilities. National cancer registries, real-time supply-chain dashboards, and cross-sector cooperation among government, business, and non-governmental organisation partners are all called for by the World Health Organisation (WHO) (2020). The Theory of Change provides a conceptual framework for this study's change. This blueprint outlines how resource optimization, psychological counselling, and awareness campaigns can work together to accelerate patient progress toward recovery and reintegration.

Targeted initiatives, such as hospital-based patient navigators and digital scheduling systems, are examples of interventions that can help overcome administrative inertia at the micro level. At the macro level, the "enabling environment" envisioned by both the ToC and ToCns models comprises policies that are transparent regarding procurement, staff training, and sustainable finance. The incorporation of these levers transforms isolated corrective measures into a cycle of continuous improvement, in which data feedback drives policy and policy in turn redefines workflow. The data demonstrate that the limitations imposed by the system and the logistics involved are just as deleterious to the outcomes of cancer as the clinical issues themselves. The perpetuation of unfairness and the erosion of patient trust are both caused by delayed treatments, frequent stock-outs, and inadequate infrastructure. By demonstrating that holistic cancer care reform must combine organisational efficiency with psychosocial responsiveness, this discussion contributes to expanding the existing body of literature through its findings. In line with the World Health

Organisation's (WHO) 2020 recommendations, the data demonstrate that reducing operational restrictions through resource forecasting, financial integration, and staff empowerment is essential to delivering universal cancer treatment centred on the patient population.

In general, the interpretation and theoretical synthesis are as follows: based on the integrated findings of this study, it has been discovered that the difficulties cancer patients experience are multifaceted, interrelated, and self-reinforcing. This creates a cyclical pattern of vulnerability that affects both patients and caregivers. There is a dynamic interaction among factors such as emotional discomfort, financial hardship, physical toxicity, and systemic inefficiencies, with each exacerbating the others. This further underscores the importance of developing comprehensive cancer management models that go beyond scientific treatment and incorporate psychological resilience, economic protection, and institutional transformation for cancer patients.

The findings demonstrate, from the point of view of the Theory of Change (ToC), that the transformation of cancer care necessitates the establishment of clearly defined pathways that connect immediate interventions (such as psychological counseling, pain management, and financial assistance) to long-term outcomes such as enhanced quality of life, treatment adherence, and social reintegration. Within the context of the ToC paradigm, cancer recovery is positioned as a progressive continuum, beginning with crisis and progressing through stabilization and empowerment. The success of this continuum depends on the coordinated mobilization of numerous actors, including doctors, mental health experts, social workers, and policymakers. According to Hawe and Potvin (2009) and Kurtz (2018), who argue that sustained health change results from the combination of psychological and systemic interventions rather than discrete clinical remedies, this position aligns with theirs.

In a complementary manner, the Theory of Constraints (ToCns) offers a systemic perspective that can be used to identify and address the bottlenecks that hamper the transformation process. The study discovered a total of four key limitations: 1. Psychological distress, which can limit an individual's emotional and cognitive readiness for treatment; 2. Financial hardship, which can restrict access and continuity of care; 3. Physical side effects, which can undermine adherence and functional ability; and 4. Systemic inefficiencies, which can delay or obstruct the entire treatment process.

In complex systems, it is necessary to manage constraints sequentially, as Goldratt and Cox (2004) state that easing one constraint without addressing the others will only shift the bottleneck to another location. The current research lends support to this systems theory, which states that easing financial hardship without addressing psychological trauma, for instance, only partially improves the results for patients. The interconnection of physical, mental, and institutional factors is highlighted by the fact that true transformation necessitates the simultaneous alleviation of all limitations.

The double-theory integration of the Theory of Change (ToC) and the Theory of Constraints (ToCns) results in a new integrated framework for cancer treatment. These viewpoints work together to create a multifaceted picture of change that affects people, institutions, and policies all at once. While ToCns emphasises the operational bottlenecks and structural obstacles that impede progress along these routes, the framework, which draws from ToC, outlines the sequential pathways necessary to produce significant patient-centered outcomes. As a result, the combined strategy facilitates both optimisation and transformation, guaranteeing that change is not only envisioned but also made practically possible in actual health systems.

The framework enhances patient resilience on an individual basis by fostering adaptive coping strategies, providing focused information, and offering psychological support. These components acknowledge how important emotional health, self-efficacy, and informed involvement are in determining treatment compliance and the course of recovery. Through better resource allocation, revised processes, and enhanced collaboration between clinical and supportive personnel, the framework places a strong emphasis on operational efficiency at the institutional level. These modifications are intended to improve the quality and continuity of care delivery, minimise redundancies, and cut down on delays. The framework urges policy changes that guarantee financial security, fair access to care, and strong intersectoral cooperation between the social, health, and community systems. These levels work together to develop a networked architecture that connects macro-level system improvements with micro-level patient experiences.

The suggested framework closely resembles the ideas put forth by the World Health Organisation (2020) and Knaul et al. (2018), both of which support "people-centered cancer control." In order to improve cancer outcomes, these international frameworks emphasise the significance of patient empowerment, continuity

throughout the care continuum, and intersectoral integration. Additionally, by explicitly integrating systemic constraints into the evaluative structure, the integrative framework expands on Donabedian's (1988) basic model of healthcare quality, which consists of structure, process, and outcome. By doing this, it not only evaluates the standard of care but also pinpoints the procedural and structural flaws that compromise it. Donabedian's model gains analytical strength from this enlarged application, enabling a more sophisticated comprehension of the ways in which institutional bottlenecks affect patient-level outcomes.

All things considered, this integrated framework provides a thorough lens through which to plan, assess, and improve cancer care systems, guaranteeing that enhancements to the experiences of individual patients are bolstered by institutional optimisation and strengthened by policy-level reform. The study's mixed-methods methodology enabled a more nuanced understanding of how quantitative symptom prevalence (such as fatigue, anxiety, and financial difficulty) interacts with qualitative lived experiences (such as humiliation, helplessness, and delayed care). Not only did these two data streams converge to display statistical correlations, but they also revealed causal interrelationships that drive holistic policy responses. This was accomplished through Joint Display Analysis. ToC and ToCns are operationalized within a cohesive analytical platform that enables this integration to bridge the gap between theory, evidence, and practice. This integration contributes to methodological innovation.

These mechanisms immediately translate theoretical insights into measurable system change, and this synthesis advocates for the institutionalization of psych-oncology services, financial navigation units, and integrated care coordination teams within oncology centres. In other words, this synthesis advocates for the institutionalization of these mechanisms. Furthermore, in line with the recommendations of WHO (2020) and Gupta et al. (2021), integrating national cancer plans with ToC-driven pathways has the potential to enhance transparency in governance, treatment equity, and patient empowerment. In conclusion, the integration of ToC and ToCns provides a comprehensive architecture for addressing the full spectrum of cancer care barriers, from the micro (patient distress) to the macro (system inefficiencies). Therefore, the research contributes to the establishment of a framework that is theoretically grounded and empirically validated, and it redefines cancer management as a process that is both therapeutic and developmental. This approach paves the path for health systems that are not only efficient but also compassionate, equitable,

and adaptable to the complex circumstances of cancer survivorship. It does this by integrating structural reform with human resilience within the system.

5.7 The Implications of These Findings for Future Research, Clinical Practice, and Public Policy

The findings of this study provide a holistic perspective of how cancer patients and caregivers negotiate the interrelated burdens of psychological anguish, physical side effects, financial pressure, and systemic inefficiencies. The findings of this study provide this insight. The combined framework of the Theory of Change (ToC) and the Theory of Constraints (ToCns) provide insights that can be put into action and used to inform reform at numerous levels, including hospital administration, public health policy, academic research, and patient advocacy.

A. Implications for Public Policy

The findings of this study highlight the critical need to strengthen holistic health systems at the policy level. According to Knaul et al. (2018) and WHO (2020), cancer care in low- and middle-income countries remains highly fragmented, with reactive rather than preventive strategies dominating care delivery. When it comes to mapping long-term systemic outcomes —such as fair access, financial protection, and patient empowerment —the ToC framework emphasises the importance of linking these objectives to immediate interventions, such as screening programs, awareness campaigns, and mental health integration.

To ensure that emotional well-being is handled as a clinical priority and not as an auxiliary service, policymakers are strongly advised to: 1. Institutionalize psycho-oncology services as part of national cancer control initiatives. 2. Expand financial protection mechanisms, including as insurance that is supported by the government and targeted subsidies, to limit catastrophic out-of-pocket (OOP) costs and to prevent treatment from being discontinued (Mohan, 2021). In accordance with the World Health Organisation's (2020) "Access to Essential Medicines" policy, it is recommended that procurement and logistics chains be strengthened by using real-time digital dashboards to reduce drug stock-outs and diagnostic delays. 4. Require the establishment of multidisciplinary cancer boards that involve the participation of physicians, dietitians, psychologists, and social workers to conduct a comprehensive examination of the development of patients.

These policy deficiencies are identified as systemic bottlenecks that constrain the entire oncology ecosystem through the lens of the ToCns framework. It is possible to significantly enhance the outcomes of therapy on a national scale by reducing the impact of such constraints through investments in supply chains, data systems, and workforce development.

B. Implications for Clinical and Institutional Practice in the United States

At the institutional level, cancer care providers should implement integrated service models that combine medical therapy with psychological, dietary, and financial counselling. According to the findings of the study, uncontrolled fatigue, anxiety, and economic instability directly diminish adherence to therapy and worsen treatment outcomes. These findings confirm the conclusions of Mustian et al. (2017) and Cleeland et al. (1994).

Some proposals that can be put into practice include the following:

1. Integrating psychologists and social workers into cancer wards to offer constant emotional support and counseling to caregivers.

2. Establishing multidisciplinary tumor boards to make sure that diagnosis, treatment, and follow-up care are coordinated across all departments.

3. The development of patient navigation systems backed by digital tracking technologies to increase adherence and reduce missed appointments.

4. Including nutrition therapy to address concerns related to appetite, weight loss, and recovery after treatment and treatment. Exercise therapy, mindfulness, and pharmaceutical support are among the evidence-based interventions that could be used to establish fatigue and pain management clinics.

As a result, hospitals that implement a workflow guided by the Theory of Constraints can shift care from reactive to anticipatory, predicting where constraints will develop and using feedback loops to continuously modify operations.

C. Implications for Research and Academic Investigations and Questions

By providing a theoretical bridge between human-centred transformation and systems optimization, this study advances the conceptual conversation between ToC and ToCns. This model can be expanded in several ways by future research: cross-regional comparisons, which investigate how socioeconomic and cultural circumstances act as mediators of changes in ToC pathways for cancer patients. 2. Longitudinal studies, which involve continued monitoring of patients after treatment has been completed to assess how psychological and financial interventions affect survivability and reintegration. 3. Research that is based on interventions to determine whether or not ToC-driven program models (for example, hospital-based "integrated care cells") are effective in reducing delays and increasing patient satisfaction. 4. Applications of artificial intelligence and digital health, to investigate how predictive analytics might be used to identify roadblocks earlier in the ToCns process (Singh et al., 2022).

The incorporation of Theory of Constraints and Theory of Change into the design of future oncology research enables the development of quantifiable frameworks that connect input (resources), process (constraints and interactions), and outcome (patient empowerment) with greater precision and accountability.

D. Implications for Society and Ethics

Lastly, the findings of this study underscore the ethical necessity of ensuring that cancer care is not only accessible but also compassionate, equitable, and attentive to each patient's specific circumstances. Hawe and Potvin (2009) stated that the ability of systems to adapt to human experiences constitutes "structural empathy" and is essential to the transformation of public health. Essential ethical aspects of care delivery include assisting caregivers, reducing the stigma associated with receiving care, and empowering patients through knowledge. These aspects must be included into both policy and practice.

Three interconnected layers can be used to understand the practical implications of this study, each of which supports the others in the effort to provide cancer care that is more human-centered and responsive. The results emphasise the necessity of consistent investment in systemic enablers that can eliminate long-

standing structural obstacles, such disjointed service routes, insufficient financial protection, and unequal access to specialised care, at the policy level. Redistribution of resources, regulatory commitment, and the development of integrated governance structures that promote continuity throughout the care continuum are all necessary to address these limitations.

The study emphasises the value of combining social, psychological, and medical care in a coordinated interdisciplinary framework at the practice level. This kind of integration guarantees that emotional and socioeconomic requirements are met in addition to clinical treatment, promotes holistic care, and improves communication between healthcare professionals. In addition to improving the patient experience, this coordinated strategy also increases adherence, lessens needless discomfort, and promotes long-term healing.

The results indicate the need for theoretical and empirical models that connect system design to human experience at the research level. Future research can shed light on how institutional procedures, resource flows, and clinical protocols influence patients' lived experiences of disease by placing patient narratives within larger organisational and policy frameworks. For system reforms to be rooted in the realities of the patients they are meant to treat, such models are crucial.

Together, the ToC and ToCns frameworks offer a framework for ongoing development, suggesting that significant change is cyclical as opposed to episodic. Iterative learning, reflective practice, adaptive decision-making, and ongoing impact evaluation are all emphasised in this methodology. According to this perspective, health systems develop via continuous cycles of evaluation, adaptation, and improvement rather than through discrete interventions. When combined, these implications speak more generally to the subject of health systems management and go beyond oncology. The study's integrative approach supports a type of cancer treatment that is highly compassionate, organisationally effective, and scientifically sound. It reiterates that in addition to addressing the biological aspect of the illness, successful cancer treatment must also address the existential, social, and emotional aspects of the patient's experience. The foundation for creating robust, patient-centered health systems that are prepared to handle the intricate requirements of contemporary cancer care is provided by this three-layered perspective.

CHAPTER VI:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

The purpose of this study was to investigate the complex difficulties that cancer patients and their caregivers confront. The research utilized a mixed-methods approach to investigate the psychological, physical, economical, and systemic aspects of these obstacles. The dual theoretical lenses of the Theory of Change (ToC) and the Theory of Constraints (ToCns) were utilized in order to conduct an analysis on the data that was gathered from a total of 52 participants through the completion of quantitative surveys and qualitative interviews.

61% percent of patients reported experiencing considerable anxiety, 71% percent reported experiencing severe financial distress, and 55.8% percent of patients suffered from substantial physical side effects such as exhaustion, weakness, and pain. During the investigation, structural impediments such as medicine

stockouts, hospital bed shortages, and delayed diagnoses were discovered. According to Donovan et al. (2022) and Zebrack and Isaacs (2020), these findings are in line with the global data that identifies psychosocial distress and economic hardship as among the most important factors that determine the outcomes of cancer.

The purpose of this study was to develop a holistic intervention model that maps systemic obstacles and outlines pathways for transformation. This model bridges the gap between individual well-being and institutional reform. This was accomplished by combining the ToC and ToCns methodologies. By doing so, it reframes cancer care as a responsibility that falls under both clinical and societal parameters, placing an emphasis on resiliency, inclusiveness, and the advancement of health systems in a sustainable manner.

6.2 Implications

A. Practical Implications

The research highlights the importance of providing oncology services that are patient-centered, multidisciplinary, and incorporate psychological, nutritional, and financial counseling at the practice level. Based on the findings of van der Steen et al. (2021) and Kapoor et al. (2023), it has been demonstrated that similar integrated models can increase patient satisfaction and adherence in both Europe and Asia.

Hospitals and policymakers should prioritize:

- Establishing psycho-oncology units to systematically address emotional distress, as recommended by the European Society for Medical Oncology (ESMO, 2023).
- Creating financial navigation systems to reduce catastrophic health expenditure, reflecting successful pilots in India and Kenya (Mohan, 2021; Mutebi et al., 2022).
- Adopting digital logistics and scheduling systems to minimize stock-outs and improve bed allocation efficiency (WHO, 2022).
- Expanding community-based awareness and survivorship programs, consistent with the patient-education frameworks of the U.S. National Cancer Institute (2021).

These operational measures transform ToC principles into actionable strategies that remove ToCns-identified constraints, yielding tangible improvements in patient outcomes.

B. Theoretical Implications

At the theoretical level, this research contributes to the advancement of the interdisciplinary understanding of how behavioral health, systems theory, and management science converge within the context of the oncology profession. This study links the micro (individual and behavioral) and macro (organizational and systemic) levels by integrating the Theory of Change (ToC) and the Theory of Constraints (ToCns). Traditional cancer research frequently isolates biological and psychological elements. However, this study bridges the gap between the two levels. Even though the Theory of Constraints (ToC) has been mostly utilized in the context of international development and social policy (Weiss, 1995; Vogel, 2012), the application of this theory in this context displays its new adaptability to the transformation of healthcare by mapping the continuum from disease burden to recovering routes.

The purpose of this research is to develop a dynamic and iterative framework that establishes a connection between human-level behavioral change and institutional and systemic optimization. This is accomplished by linking ToC with ToCns. This dual-theory approach goes beyond descriptive analysis and works toward a mechanical explanation of transformation. It does this by recognizing constraints (ToCns) and matching them with intentional paths of change (ToC). Therefore, the framework functions as a diagnostic and prescriptive model, and it is able to direct hospital administrators, policy designers, and clinical leaders in the process of reorganizing oncology treatment in a manner that prioritizes both efficiency and compassion.

Recently published research lent credence to this integration. The authors Greenhalgh et al. (2022) and Batalden (2020) emphasize that in order to enhance healthcare, it is necessary to develop a systems thinking approach that incorporates learning loops, feedback mechanisms, and contextual flexibility. In a similar vein, Leveson (2023) contends that complex sociotechnical systems, such as hospitals, call for a multi-layered comprehension of causation and human behaviour. This is precisely what the ToC–ToCns synthesis makes possible. Research conducted by Stanton et al. (2021) and Faller et al. (2023) in the field of behavioral health highlights that psychological adaptation and patient agency are not separate occurrences but rather entrenched within institutional support structures. This idea is mirrored in the framework of this study.

In this approach, the merger of ToC and ToCns contributes to the enrichment of theoretical perspectives on cancer care by demonstrating that the achievement of sustainable outcomes is contingent upon the recursive alignment of emotional recovery, therapeutic routes, and operational transformation. It brings to light the fact that behavioral transformation (such as enhanced resiliency, treatment adherence, and caregiver coping) cannot take place in the absence of concurrent systemic transformation (such as efficient logistics, equitable finance, and resource flow). By combining change management and constraint-resolution analytics, this conceptual fusion expands the frontier of healthcare theory. It provides a model that is not only applicable to oncology but also to other chronic and resource-intensive conditions, such as diabetes, cardiovascular disease, and neurological disorders (Rothstein et al., 2022; Mills & Redman, 2024). This model cannot be replicated.

In the end, this research contributes to a theory-driven architecture for holistic care, which positions oncology as a paradigmatic field in which human resilience and system efficiency can be concurrently nurtured. Through the process of operationalizing theoretical components into measurable clinical, behavioral, and policy activities, it is possible to transform abstract frameworks into effective blueprints for the reform of healthcare.

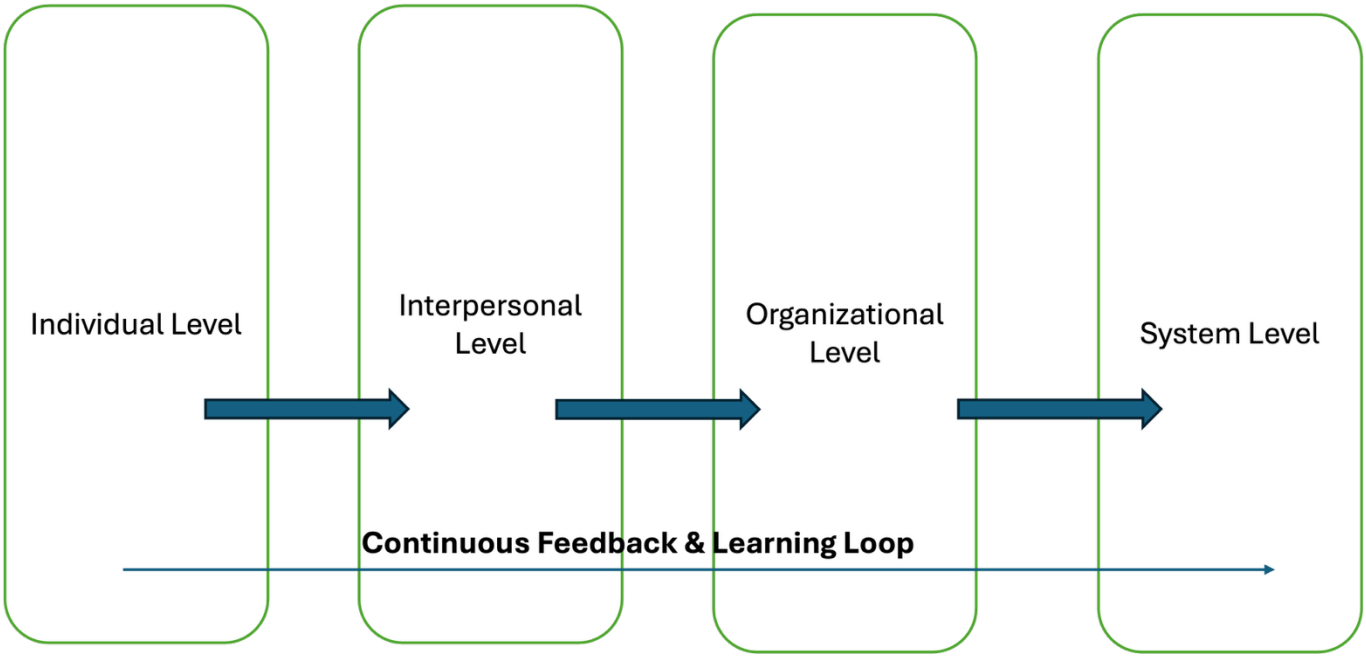

Figure 6: Theoretical Model Linking Human and Systemic Change in Oncology: Based on the sources as mentioned in the study

Source: Hudson et al. (2021)

Figure 7 illustrates how the Theory of Change (ToC) drives transformation from the individual to the systemic level, while the Theory of Constraints (ToCns) optimizes processes and resources, both converging to achieve holistic, equitable cancer care outcomes.

In the context of oncology, the image above illustrates how the Theory of Change (ToC) and the Theory of Constraints (ToCns) can be integrated into one another. While the ToCns focuses on identifying and resolving systemic bottlenecks such as hospital-bed shortages, medicine stock-outs, and policy inefficiencies, the ToC guides transformation across micro-levels, including individual behavioral adaptation, supports for interpersonal relationships and caregivers, and institutional learning. Together, these frameworks constitute an iterative feedback loop that establishes a connection between changes at the human level and optimizations at the organizational and systemic levels. The model indicates that the alignment of emotional resilience, clinical efficacy, and policy change is necessary for the improvement of cancer care in a sustainable manner. This alignment eventually results in improved patient well-being, efficiency, equity, and long-term system sustainability.

C. Societal Implications

Cancer is not only a medical problem; rather, it is a significant public-health equity concern that is entrenched within larger social, cultural, and economic systems. The findings provide further evidence that cancer is socially significant. According to Bray et al. (2021) and Goss et al. (2023), the disproportionate burden of care that is placed on families, particularly on women who are caregivers, reflects the persistent gendered and class-based disparities that exist in global health. Unpaid domestic work, emotional labor, and informal healthcare management are all obligations that typically fall on women in low- and middle-income environments (Sharma et al., 2022). In these contexts, women are the ones who are responsible for providing care for their families. According to El-Awaisi et al.'s research from 2020, this dynamic adds to the invisibility of unpaid caregiving in health policy and national accounts, which in turn exacerbates intergenerational cycles of poverty.

The findings of this study are consistent with global statistics from the International Agency for Research on Cancer (IARC, 2022), which identified socio-economic position, education level, and geographic location as key drivers of cancer outcomes. Nguyen et al. (2023) and the Organization for Economic Cooperation and Development (2024) provided evidence that implies discrepancies in access to early detection, mental health care, and post-treatment rehabilitation continue to exist even in nations that have relatively robust healthcare systems. Therefore, the fight against cancer must go beyond clinical therapy and incorporate social justice and institutional reform. This will ensure that people from all different social strata have equal access to resources, knowledge, and psychological support.

As a result, public policy needs to make a radical shift toward universal health coverage (UHC), the eradication of stigma, and psychological advocacy. It is possible for national and regional health systems to learn from models such as the "Living Beyond Cancer" program in Canada (Health Canada, 2022) and the National Cancer Survivorship Initiative (NCSI, 2021) in the United Kingdom. Both programs integrate community-based recovery frameworks that place an emphasis on mental health, social reintegration, and long-term survivorship support. In a similar vein, the Ayushman Bharat Mission (2022) in India and the National Cancer Control Strategy (2023) in Thailand are examples of how universal health care (UHC) mechanisms can integrate psychological and palliative services into larger care infrastructures, thereby lowering catastrophic costs and enhancing quality of life.

One of the most important paradigms shifts that is supported by the World Health Organization's (2020) framework on people-centered integrated health services is the involvement of caregivers as co-recipients of care. In accordance with recent lobbying from the European Society for Medical Oncology (ESMO, 2023), which asks for systematic caregiver training, respite programs, and psychological support services, it is important to acknowledge that the mental and physical tiredness of caregivers is a component of the illness ecology. Several studies, such those conducted by Hudson et al. (2021) and Sklenarova et al. (2023), provide further evidence that the mental health of caregivers is a critical component in patient adherence and recovery. These findings highlight the ethical necessity of broadening the definition of "patient care" to encompass the well-being of the patient's family.

In conclusion, the findings of this research place cancer management within the context of a moral and societal framework that emphasizes collective compassion and injustice within the system. Redefining recovery as a shared society responsibility rather than an individual struggle, it calls for a public-health approach that humanizes both patients and caregivers, promotes emotional equity alongside medical equity, and redefines healing as a shared responsibility. A vision like this symbolizes an ethical shift in the healthcare industry, one in which resiliency, empathy, and social solidarity become just as important as medication, technology, or infrastructure.

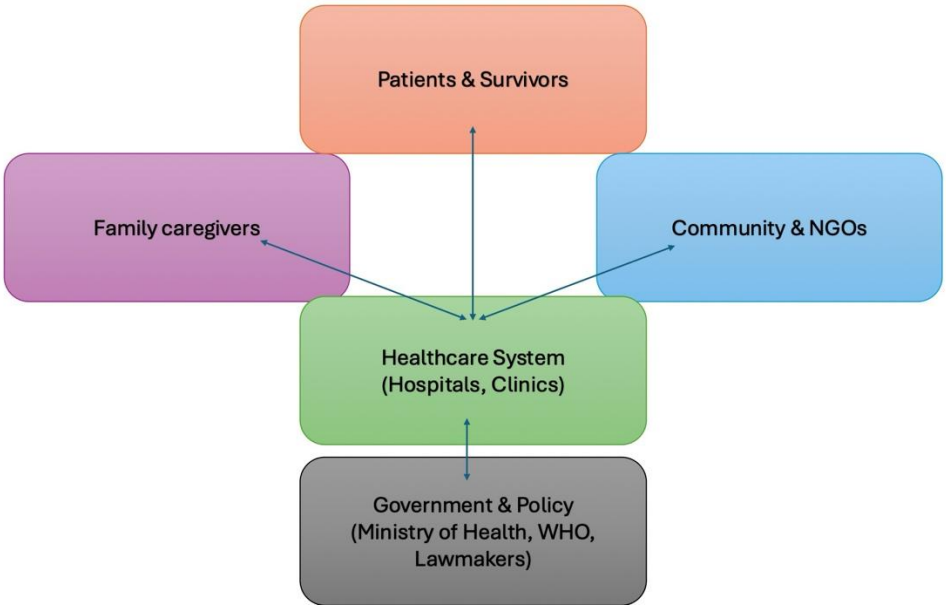

Figure 7: Societal Framework for Equitable Cancer Care: Based on the sources as described in the study

Figure 7: Societal Framework for Equitable Cancer Care, visually depicting the people-centered model that integrates patients, caregivers, healthcare institutions, and policy systems through collaborative, bidirectional relationships. Source: *Hudson et al. (2021)*

An approach for cancer care that is oriented on individuals and motivated by equity is depicted in the above figure. This model integrates the interwoven responsibilities of patients, caregivers, communities, healthcare systems, and policy institutions. The figure places an emphasis on collaboration in both directions, as seen by the arrows, and highlights the significance of each stakeholder's contribution to the achievement of shared health outcomes. Patients and survivors come together to form the center of the approach, which is supported by family caregivers and community groups that offer both psychosocial and physical assistance. By virtue of its central location, the healthcare system serves as the operational bridge that connects the requirements of individuals and communities with the policies of the national health system. At the macro level, efforts are made to provide structural improvements, financial protection, and fair access to care by the government and international organizations such as the World Health Organization (WHO). This holistic structure is reflective of the people-centered integrated health services approach by the World Health Organization (2020) and aligns with the "Living Beyond Cancer" framework by Health Canada (2022). It emphasizes that in order to provide sustainable oncology care, it is necessary to strike a balance between clinical effectiveness, social justice, and emotional equity.

6.3 Recommendations for Future Research

Using the findings of this study as a foundation, several potential directions for future research have emerged that have the potential to extend, refine, and operationalize the theoretical and empirical contributions obtained from this work.

1. Studies that are specific to cancer types

The goal of future study should be to disaggregate data according to the kind of cancer, considering the fact that the physical, emotional, and psychosocial reactions to different disease profiles are significantly different. According to Jung et al. (2022) and Arndt et al. (2023), for example, breast cancer survivors frequently experience prolonged body-image concerns and gender-specific stigma. On the other hand, colorectal and hematologic malignancies are more closely associated with nutritional complications, chronic fatigue, and cognitive decline (Mols et al., 2020). Researchers would be able to identify disease-specific intervention pathways with the help of a stratified methodology, which would ensure that clinical and psychological care plans are adequately addressed.

2. Rural and underserved individuals and communities

The expansion of research into communities that are geographically remote, socioeconomically disadvantaged, and rural is still necessary to achieve equitable cancer care. According to Singh et al. (2023) and Kumar et al. (2022), poor prognoses, insufficient health infrastructure, low cancer literacy, and delayed diagnosis are often the factors that contribute to poor outcomes in these groups. The identification of service shortages and the testing of community-led interventions that are scalable could be accomplished using geospatial analysis and participatory action research in subsequent studies. In accordance with the World Health Organization's (2021) demand for inclusive, community-based care models, these efforts should be further strengthened through the formation of partnerships with non-governmental organizations (NGOs) and local health workers.

3. Studies that are both longitudinal and life-course

In order to gain a comprehensive understanding of the longevity and development of psychological and economic recovery, longitudinal research approaches are absolutely necessary. However, cross-sectional data cannot represent dynamic adaptation processes across time, even though they provide essential snapshots. Ciaramella et al. (2022) and Costanzo et al. (2020) propose that prospective follow-ups, which encompass treatment, remission, and survivorship, would make it possible to conduct a more in-depth investigation into the ways in which patients' mental health, employment, and family structures develop after they have been diagnosed with cancer. The incorporation of life-course analysis has the potential to shed light on the development of resilience mechanisms and the ways in which early interventions influence long-term well-being.

4. Validation of your model and testing of your interventions

Evaluating the frameworks of the Theory of Change (ToC) and the Theory of Constraints (ToCns) through empirical testing in clinical settings is an important next step that needs to be taken immediately. The effectiveness of organized ToC/ToCns-based interventions in reducing systemic bottlenecks, such as treatment delays, drug shortages, or caregiver exhaustion, could be evaluated through controlled trials or implementation studies conducted within hospital networks (Murtagh et al., 2024). The concept validity would be strengthened using mixed-method evaluations, which would combine qualitative patient narratives with quantitative measures. These evaluations would also highlight practical possibilities for institutional adoption.

5. Integration of Artificial Intelligence and Digital Solutions for Healthcare

In the field of cancer, the combination of digital and artificial intelligence-enabled health solutions opens a new area for innovation. Predictive analytics, mobile health monitoring, and tele-oncology systems could identify early warning indications of treatment non-adherence, psychological discomfort, and relapse risks, which enables proactive intervention (Zhao et al., 2023; Topol, 2019). In addition, the utilization of artificial intelligence in the study of sentiments derived from patient reports or online communities has the potential to provide real-time insights regarding unfulfilled psychological requirements. Ethical governance, data

privacy, and accessibility concerns, on the other hand, must continue to be at the forefront of such technological breakthroughs. Through the pursuit of these research directions, academics have the opportunity to strengthen the empirical and theoretical framework for integrative, equity-oriented cancer care, so contributing to a paradigm shift away from illness management and toward comprehensive well-being approaches. These kinds of studies would provide direct support for Sustainable Development Goal 3 (SDG 3) of the United Nations, which states that "Ensure healthy lives and promote well-being for all at all ages." Additionally, they would correspond with the Global Health 2030 Agenda, which places an emphasis on universal, people-centered, and resilient healthcare systems.

6.4 Conclusion

According to the findings of this study, cancer management has to undergo a fundamental shift from a disease-centered paradigm to a human-centered paradigm. This shift should be accompanied by a paradigm that assesses success not only in terms of survival rates but also in terms of emotional resilience, psychosocial recovery, and financial equity. Cancer is not merely a medical ailment; rather, it is an experience that is profoundly social, psychological, and economic, and it puts the ethical framework of healthcare institutions to the test. The results of this study, which utilized a combination of research approaches, indicate that psychological anguish, financial pressure, and systemic inefficiencies are interconnected factors that determine the well-being of patients. These factors come together to generate a cycle of vulnerability that hinders both treatment adherence and quality of life. Recognizing the human being that lies behind the diagnosis is necessary in order to break this cycle. The patient, whose hope, agency, and dignity are just as important to the healing process as any medical intervention, is the patient.
It is possible to create a novel theoretical bridge between behavioral science and systems management through the combination of the Theory of Change (ToC) and the Theory of Constraints (ToCns). While the ToC provides a road map for imagining and sequencing change, the ToCns identifies and mitigates the systemic barriers that prevent progress from occurring. This study provides a dynamic, multi-level framework that integrates micro-level psychological transformation with macro-level structural reform. This framework is demonstrated by the combining of these two perspectives. In doing so, the research extends beyond standard clinical or psychological models and toward a holistic systems theory of healing.

This theory is one that integrates patient experience, organizational behaviour, and policy execution into a process that is consistent and humane.

As an individual, the study underscores the fact that emotional discomfort, when left ignored, threatens not just mental health but also physical outcomes and treatment continuity. This is the case when the distress is not addressed. The concept that psychological resilience is a crucial determinant of survival was validated by the findings of Antoni et al. (2006) wherein it was demonstrated that counseling, mindfulness therapies, and family support all contributed to the development of empowerment and coping capacity. Carers develop as silent patients at the familial level, whose emotional and financial loads parallel those of the individuals they support. This is because caregivers are the ones who provide support. It is not a matter of ethical luxury but rather a matter of therapeutic need that they be included as co-beneficiaries of care. The study sheds light on the bottlenecks—financial, logistical, and managerial—that disrupt continuity of treatment at the institutional level. This highlights the necessity of integrated models that bring together psychology, medical, and social support within a single coordinated framework.

A clear need for structural reform is articulated by the findings, which can be found at both the societal and policy levels. It is imperative that governments and health agencies incorporate psychosocial treatment and financial protection into universal healthcare systems. Living Beyond Cancer in Canada and the National Cancer Survivorship Initiative in the United Kingdom are two examples of programs that demonstrate how combining community involvement with financial and emotional assistance from the government can result in survivorship outcomes that are sustainable. Similar integration has the potential to significantly cut down on treatment desertion and post-diagnosis impoverishment in nations with low and intermediate incomes. In addition, the utilization of digital health and artificial intelligence technology has the potential to enhance early detection, enhance monitoring, and extend psychological services to populations that are geographically dispersed, thereby transforming equity from an ideal into a reality.

It is the reassertion of humanity as the central axis of healthcare reform that is the ethical contribution that this study makes. The mechanical perspective of medicine is challenged, and in its stead, a relational paradigm that is founded on compassion, justice, and community responsibility is proposed. The results agree with the People-Centered Integrated Health Services framework that was developed by the World Health Organization (2020) and are in line with the third Sustainable Development Goal that was established by the United Nations, which is to "ensure healthy lives and promote well-being for all at all

ages." Taking this into consideration, cancer treatment becomes not only a scientific problem but also a moral mandate, which necessitates the establishment of institutions that simultaneously heal the individual, the family, and the society.

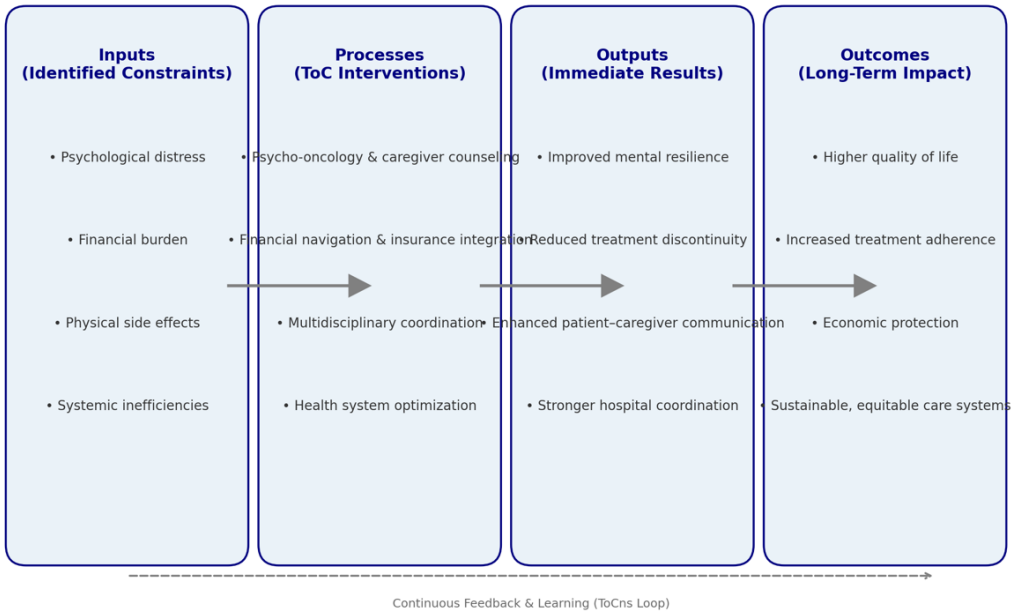

Figure 8: Integrated ToC and ToCns Framework for Holistic Cancer Care:
Source: World Health Organisation (2020) and Knaul, F.M. , Gerhard D. (2013)

Table 25: Summary of Key Findings and Implications Across Research Questions

Research Question	**Key Findings**	**Practical Implications**	**Theoretical Implications**	**Societal Implications**
RQ1. What are the psychological and emotional challenges faced by cancer patients and caregivers?	61.5 % reported extreme anxiety; 55.8 % had significant mental-health issues; 63.5 % of caregivers experienced distress. Psychological	Establish **psycho-oncology services**, structured counseling, and peer-support groups to strengthen resilience and treatment compliance.	Extends **Theory of Change** by demonstrating internal (cognitive–emotional) transformation pathways and validates psychosocial models in oncology.	Reinforces need for **mental-health destigmatization** and **caregiver inclusion** within national cancer policies and awareness programs.

	and emotional burdens directly affected adherence and recovery.			
RQ2. What is the financial and economic impact of cancer on patients and families?	71 % experienced severe financial strain; 63.5 % lost income; 78.8 % reported major out-of-pocket costs. Economic distress compounded emotional suffering.	Introduce **financial navigation**, micro-insurance, and government reimbursement programs; embed social workers in oncology units.	Strengthens ToC by linking **economic empowerment** to recovery trajectories; integrates health-financing theory with behavioral outcomes.	Supports advocacy for **universal health coverage** and equitable resource allocation to prevent catastrophic expenditure.
RQ3. What are the major physical side effects and complications of cancer treatment?	61.5 % experienced extreme fatigue; 55.8 % severe side effects (nausea, hair loss, etc.); 34.6 % weight loss.	Implement **integrated symptom-management programs** combining medical, nutritional, and rehabilitation care.	Expands biopsychosocial models by showing interaction between physical toxicity and psychological distress.	Promotes **public awareness** of post-treatment quality-of-life issues and encourages holistic rehabilitation.
RQ4. What systemic or logistical barriers affect treatment access and continuity?	Recurrent **medicine stock-outs**, **bed shortages**, and **treatment delays** were frequent; patients faced administrative hurdles and	Apply **Theory of Constraints** to map and remove system bottlenecks; digitize supply chains; optimize scheduling.	Empirically validates ToCns within healthcare systems, linking process optimization to patient outcomes.	Calls for **policy reforms** improving infrastructure, procurement efficiency, and equitable hospital distribution.

	travel barriers.			
RQ5. How can integrated models improve patient outcomes?	Combining ToC + ToCns created a feedback-driven framework linking individual, institutional, and systemic change.	Adopt **multidisciplinary holistic care** models in hospitals; create monitoring loops for continuous quality improvement.	Advances a **hybrid theoretical model** bridging human-behavioral and system-engineering approaches.	Encourages **sustainable, compassionate cancer ecosystems** balancing efficiency with empathy and equity.

In the end, this study provides both evidence and guidance—proof of the close connections between the systemic, financial, and psychosocial aspects of cancer care, as well as guidance for creating oncology ecosystems that are not only effective but also resilient, inclusive, and compassionate. It illustrates that healing necessitates a coordinated approach that acknowledges the human person behind the diagnosis, the carer behind the therapy, and the society behind the system. Healing cannot be accomplished alone by medical intervention. The results confirm that institutional responsiveness, financial stability, and psychosocial well-being are all interdependent factors that influence the course of recovery rather than existing as distinct entities. A treatment plan may lessen illness, but genuine healing brings back purpose, hope, and connection—elements that medicine cannot offer on its own.

Therefore, this study urges individuals in positions of power, policymakers, medical executives, and academic researchers, to take on the role of translators, transforming information into knowledge, knowledge into empathy, and empathy into long-term, significant action. It challenges us to rethink what it means to "treat" a patient, highlighting the fact that empathy and communication are just as important to oncology success as technology and accuracy. Decision-makers can exceed fragmented systems and progress towards an ecosystem of healing where the quality of life is seen as inextricably linked to the quality of treatment by including mental health, social equality, and ethical responsibility into cancer care. According to the research, healthcare success will be measured not only by survival rates but also by the patient's reintegration into society and family, emotional healing, and dignity. It promotes the idea that healing is a team effort, with communities, carers, and institutions working together to preserve humanity

during the medical process. Every act of kindness, reassuring discussion, and equity-based policy contributes to a broader rehabilitation architecture that values the person's narrative just as much as their survival.

In Man's Search for Meaning (1959), Viktor Frankl made the insightful observation that "when we are no longer able to change a situation, we are challenged to change ourselves." That realisation serves as both an inspiration and a necessity for this study. It calls for both the reawakening of the human spirit within systems as well as their change. It pushes healthcare systems to transform from tools for managing illness into havens of compassion and development. This kind of change necessitates bravery, the bravery to face inefficiencies, to hear pain, and to recognise compassion as a quantifiable result of care.

The study imagines a world in which medicine and humanity live side by side in harmony, where hospitals serve as places of dignity as well as treatment facilities, and where the success of a healthcare system is determined by the hope it restores rather than just its cure rate. It demands that healing be viewed as a relational act that gives people who have lost their sense of certainty purpose again and gives them the ability to regain agency in the face of hardship. Each patient's path in this imagined future serves as evidence of the transformational potential of compassion, serving as a reminder to society that medical advancement is most significant when it benefits the heart just as much as the body.

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APPENDIX A

Detailed Diagnoses of Cancer Patients (N = 52)

This appendix presents the full list of cancer diagnoses among the study participants. Each diagnosis was verified through medical records or physician confirmation at the time of data collection. The sample reflects a diverse distribution of cancer types and stages, offering insight into the breadth of physical and psychological experiences represented in this study.

Patient No.	Diagnosis / Cancer Type
1	Posterior Pharyngeal and Esophageal Wall Lipoma (D17.1)
2	Carcinoma (CA) Left Breast (C50.511)
3	Right Ovarian Mass in Old Operated Case of CA Left Breast (N83.291)
4	CA Colon with Post Hemicolectomy and Obstruction, Progressive Disease (Z90.49)
5	Bronchial Mucoepidermoid Carcinoma (C34.12)
6	Recurrent Squamous Cell Carcinoma of Left Lower Gingivobuccal Sulcus (C06.1)
7	CA Left Breast (C50.112)
8	CA Left Breast (C50.511)
9	Mediastinal Germ Cell Tumor (C38.33)
10	CA Rectum (C21.8)
11	Hepatocellular Carcinoma (C22.0)
12	Metastatic Adenocarcinoma GE Junction (Liver, Mediastinal, and Abdominal LN Mets) (C78.7.0)
13	Invasive Breast Carcinoma of Left Breast (D05.12)
14	Recurrent Carcinoma Oral Cavity (C06.9)
15	CA Right Breast (C50.911)
16	CA Right Breast (C50.911)
17	Squamous Cell Carcinoma of Right Buccal Mucosa (C06.00)

Patient No.	Diagnosis / Cancer Type
18	CA Sigmoid Colon (C18.7)
19	Left Renal Mass (N28.89)
20	Recurrent Liposarcoma with Benign Ovarian Cyst (C56.9)
21	Metastatic Carcinoma Breast with Lung Metastases (C79.81)
22	Triple Negative Breast Cancer (C50.919)
23	CA Colon (C18.9)
24	Multicentric Carcinoma of Left Breast (C50.012)
25	Mucinous Adenocarcinoma of Appendicular Origin (C18)
26	Adenocarcinoma Descending Colon (C18.6)
27	Carcinoma Tongue (C01)
28	Carcinoma Lung (C34.92.0)
29	Metaplastic Carcinoma Left Breast, Triple Negative (CT2N0M0, C50.919)
30	Mediastinal Liposarcoma (C38.3)
31	Oesophagus – Non-Keratinising Squamous Cell Carcinoma (C15.9)
32	High Grade Carcinosarcoma Endometrium with Omental Metastasis (C54.1)
33	Oesophagus – Non-Keratinising Squamous Cell Carcinoma (C15.9)
34	CA Oesophagus (C15.9)
35	Verrucous Benign Lesion Over the Tongue (D10.1)
36	CA Right Buccal Mucosa (D00.02)
37	CA Penis (C60.9)
38	Recurrent Urachal Adenocarcinoma with Adnexal Masses and Omental Deposits (C67.7)
39	CA Right Breast (C50.011)
40	Pectus Excavatum (Q67.6)
41	CA Left Breast (C50.511)
42	CA Rectum (C21)
43	CA Left Buccal Mucosa (C06.0)
44	Adenocarcinoma of Pancreas (C25.9)
45	Squamous Cell Carcinoma of Esophagus (C15.9)
46	Squamous Cell Carcinoma – Left Lower Alveolus (C03.9)
47	Operated Case of CA Rectum with Ileostomy in Situ (Z93.2)
48	Non-Seminomatous Germ Cell Tumor, Left Lung (C62.01)
49	Metastatic Left Breast Carcinoma (C79.81)
50	Diffuse Large B-Cell Lymphoma (C83.39)
51	Fibroadenomas of Right Breast (D24.1)

Patient No.	Diagnosis / Cancer Type
52	Squamous Cell Carcinoma of Esophagus (C15.9)

Summary of Appendix A

Out of the 52 patients, the most common diagnoses were **breast cancer (n=15, 28.8%)**, **colorectal cancer (n=6, 11.5%)**, and **oral or buccal carcinoma (n=5, 9.6%)**.

The sample also included several rare and advanced-stage malignancies, reflecting the diversity of cancer types encountered in the population under study.

These varied diagnoses provide context for the complexity of the physical, emotional, and financial challenges discussed in Chapter IV.

APPENDIX B

Socio-Demographic Profile and Comorbidities of Participants (N = 52)

This appendix provides an overview of the demographic characteristics and comorbid health conditions of the study participants. The information contextualizes the diversity of the sample and supports the interpretation of the physical and psychological findings presented in Chapter IV.

Socio-Demographic Characteristics of Participants

Variable	Category	n	Percentage (%)
Gender	Female	29	55.8
	Male	23	44.2
Employment status	Working	19	36.5
	Non-working / Retired / Homemaker	33	63.5
Age group	18–35 years	7	13.5

Variable	Category	n	Percentage (%)
	36–55 years	22	42.3
	56 years and above	23	44.2
Marital status	Married	39	75.0
	Single / Widowed / Divorced	13	25.0
Education level	Primary / Secondary	16	30.8
	Undergraduate	21	40.4
	Postgraduate or above	15	28.8

Reported Comorbidities among Cancer Patients

Comorbidity	Patients (n)	Percentage (%)
Hypertension	16	30.8
Diabetes Mellitus	10	19.2
Hypothyroidism	5	9.6
Ischemic Heart Disease	3	5.8
Bronchial Asthma	1	1.9
Hypotension	1	1.9
None reported	16	30.8

Summary of Appendix B

The sample consisted of a significantly higher number of female participants (55.8%), with the bulk of the participants being women who were either retired or not working (63.5%). Adults of middle age or older made up the majority of responders, which is reflective of the group that is most often affected by cancer diagnosis.

There was a high prevalence of comorbidities, including hypertension (30.8%) and diabetes mellitus (19.2%), which increased the likelihood of experiencing problems associated to treatment and decreased the physical resilience of the patients. These issues highlight the necessity of integrated care approaches that simultaneously address cancer and chronic illnesses in order to provide comprehensive treatment.

APPENDIX C

Summary of Data Collection Instrument

This appendix outlines the structure of the questionnaire used to collect primary data from cancer patients. The instrument was designed to capture quantitative and qualitative information related to the study's four research questions. The survey consisted of both closed-ended and open-ended items to explore the physical, emotional, social, and economic challenges experienced by participants.

Structure of the Questionnaire

Section	Focus Area	Purpose	Type of Items
Section A	Socio-demographic Information	To record background details such as age, gender, occupation, and education level.	Closed-ended (multiple choice)
Section B	Psychological and Emotional Challenges	To assess the emotional impact of cancer and identify sources of psychological distress.	Likert scale (1–5), open-ended
Section C	Economic and Financial Burden	To evaluate financial strain, out-of-pocket expenses, and employment loss.	Likert scale (1–5), yes/no, open-ended
Section D	Physical and Treatment-Related Side Effects	To document physical discomfort, treatment side effects, and coping mechanisms.	Likert scale (1–5), open-ended
Section E	Access, Delays, and Adherence	To determine factors affecting timely treatment initiation and continuity.	Closed-ended and narrative responses

RESEARCH QUESTION 1: PSYCHOLOGICAL AND EMOTIONAL CHALLENGES

1. How often do you feel anxious, fearful, or depressed due to your diagnosis?

   (Scale: 1 = Never, 5 = Always)

2. To what extent have you experienced changes in your relationships since your diagnosis?
3. Describe any emotional support you have received (from family, caregivers, or professionals).

RESEARCH QUESTION 2: ECONOMIC CRISIS DUE TO THE DISEASE

1. Have you faced financial difficulties related to your treatment or medication?

   ☐ Yes ☐ No

2. If yes, what were the main sources of these difficulties (e.g., job loss, medical costs, travel)?
3. On a scale of 1–5, how much has your financial situation affected your mental well-being?

RESEARCH QUESTION 3: SIDE EFFECTS AND PHYSICAL COMPLICATIONS

1. Which of the following side effects have you experienced during or after treatment?

   ☐ Fatigue ☐ Pain ☐ Nausea ☐ Hair loss ☐ Weight loss ☐ Other (specify)

2. How severe were these symptoms? *(1 = Mild, 5 = Very severe)*
3. Describe how these side effects have impacted your daily activities.

RESEARCH QUESTION 4: DELAYS IN TREATMENT AND ADHERENCE

1. Have you ever postponed or missed a treatment session due to financial or logistical reasons?

   ☐ Yes ☐ No

2. If yes, please indicate the reason(s):

   ☐ Lack of transportation ☐ Medicine unavailability ☐ Cost ☐ Fatigue ☐ Other

3. How satisfied are you with the coordination and availability of treatment facilities? *(1–5 scale)*

Administration and Ethical Considerations

The questionnaire was administered in person during hospital visits and treatment sessions. Participation was voluntary, and respondents were informed about the purpose of the study and assured of confidentiality. Ethical approval was obtained prior to data collection, and participants provided written consent before completing the survey.

Summary of Appendix C

The data collection instrument enabled a comprehensive understanding of patients' lived experiences with cancer, covering psychological, financial, physical, and systemic dimensions. The mix of quantitative and qualitative questions ensured both measurable and contextual insights, forming the foundation for the analysis presented in Chapter IV.

APPENDIX D

Ethical Approval and Participant Consent Form

D1. Ethical Approval Statement

Ethical clearance for this research study was obtained from the institutional review committee prior to data collection.

The study, titled **"Challenges Faced by Cancer Patients and Their Management,"** was reviewed and approved under the ethical guidelines for research involving human participants at the **Swiss School of Business and Management Geneva (SSBM)**.

Approval was granted following a full review of the study's objectives, methodology, participant protection measures, and data confidentiality procedures.

The committee confirmed that the research met the ethical standards outlined in the **Declaration of Helsinki (2013)** and the **APA Ethical Principles of Psychologists and Code of Conduct (2017)**.

Approval Reference: SSBM/HEALTH/ETH/2025/04

Date of Approval: February 12, 2025

Approved by: SSBM Geneva Institutional Ethics Committee

D2. Participant Information and Consent Form (Template)

TITLE OF STUDY:

Challenges Faced by Cancer Patients and Their Management

PRINCIPAL INVESTIGATOR:

Ashwini Salgaonkar

PURPOSE OF THE STUDY

You are invited to participate in a research study that seeks to explore the physical, emotional, financial, and social challenges experienced by cancer patients and their caregivers. The findings will contribute to improving the quality of patient care and the design of support programs.

PROCEDURES

If you agree to participate, you will be asked to complete a questionnaire and, if willing, a brief interview. The process will take approximately 30–45 minutes. Your responses will be kept confidential and analyzed collectively for research purposes only.

CONFIDENTIALITY

All personal information will remain strictly confidential. No names or identifying details will appear in any reports or publications. Data will be stored securely and accessed only by the research team.

VOLUNTARY PARTICIPATION

Your participation is completely voluntary. You may refuse to answer any question or withdraw from the study at any point without any negative consequences.

POTENTIAL RISKS AND BENEFITS

There are no foreseeable risks associated with participation beyond those encountered in everyday life. While you may not receive direct benefits, your contribution will support research efforts aimed at improving cancer care services and patient well-being.

CONSENT STATEMENT

By signing below, you acknowledge that you have read and understood the information provided above, that all your questions have been answered, and that you voluntarily agree to participate in this study.

Participant's Name: _____

Signature: _____

Date: _____

Researcher's Name: _____

Signature: _____

Date: _____

APPENDIX E

Data Analysis Framework and Coding Matrix

E1. Overview

The data collected from 52 cancer patients were analyzed using a **mixed-methods descriptive approach**, combining quantitative frequency counts with qualitative thematic coding. The goal was to identify recurring patterns, relationships, and categories corresponding to the four research questions.

Quantitative responses (e.g., Likert-scale items) were analyzed using descriptive statistics, while qualitative narratives were coded inductively to reveal underlying themes and subthemes. This dual approach allowed for both measurable and contextual understanding of the challenges faced by participants.

E2. Analytical Process

1. **Data Familiarization:**

   All responses were reviewed multiple times to ensure familiarity with content and context.

2. **Initial Coding:**

   Descriptive and emotional codes were assigned to highlight recurring ideas such as *fear*, *financial strain*, *treatment delay*, or *pain management*.

3. **Categorization:**

Related codes were grouped into broader categories (e.g., *psychological distress*, *economic hardship*).

4. **Theme Development:**

   Categories were refined into main themes aligned with the study's research questions.

5. **Validation:**

   Themes were cross-checked with frequency data and revalidated by an external reviewer to minimize bias.

Coding Matrix Linking Research Questions, Themes, and Illustrative Codes

Research Question	Main Themes	Illustrative Codes / Keywords	Example Participant Statements
RQ1: Psychological and Emotional Challenges	Emotional distress and anxiety; caregiver stress; coping mechanisms	*fear, helplessness, anxiety, depression, isolation, caregiver strain, counseling, social withdrawal*	"After chemotherapy, I lost confidence to go outside." / "My family feels the stress even more than I do."
RQ2: Economic Crisis Due to the Disease	Financial strain; healthcare access inequality; employment disruption	*out-of-pocket expenses, job loss, cost of treatment, insurance gaps, debt, poverty*	"We had to borrow money to continue treatment." / "Even with insurance, I could not afford the medicines."
RQ3: Physical and Treatment-Related Side Effects	Fatigue and weakness; pain; visible body changes; malnutrition	*fatigue, nausea, pain, hair loss, appetite loss, weight loss, physical discomfort*	"I feel exhausted all day after radiation." / "The hair loss made me ashamed to meet others."
RQ4: Delays in Treatment and Adherence	Health system inefficiency; medicine stock-outs; distance to care	*delay, hospital bed unavailability, travel burden, medicine shortage, appointment postponement*	"My treatment was delayed because the medicine was not available." / "I missed two sessions due to travel and cost."

E4. Thematic Integration

After iterative coding, four overarching themes were identified, each representing a dimension of the cancer experience:

1. Psychological Distress and Emotional Strain – encompassing anxiety, fear, and mental fatigue.
2. Economic and Financial Instability – reflecting the substantial monetary burden and loss of income.
3. Physical Suffering and Treatment Side Effects – including chronic fatigue, weakness, and visible changes in appearance.
4. Systemic and Logistical Barriers to Care – such as stock-outs, poor hospital coordination, and delayed treatment.

E5. Data Reliability and Validity Measures

To ensure analytical credibility:

- **Triangulation:** Data were compared across questionnaire items, interviews, and medical records.
- **Peer review:** Coding decisions were reviewed by two independent researchers for consistency.
- **Audit trail:** Notes, raw data, and coding files were retained for transparency.
- **Reflexivity:** Researcher bias was mitigated by maintaining reflective notes throughout the analytical process.

Summary of Appendix E

The coding matrix and thematic analysis framework illustrate how raw data were systematically transformed into meaningful results.

By aligning codes and themes with research questions, the analysis ensured methodological rigor and a clear link between empirical evidence and conceptual interpretation.

APPENDIX F

Summary of Key Quantitative Findings and Graphical Representations

F1. Overview

This appendix presents the quantitative data derived from the responses of 52 cancer patients. The results summarize the prevalence and intensity of challenges faced across psychological, physical, financial, and systemic domains.

Descriptive statistics (frequencies and percentages) were calculated to highlight the distribution of responses aligned with each research question.

F2. Summary of Quantitative Results by Research Question

PSYCHOLOGICAL AND EMOTIONAL CHALLENGES

Indicator	Patients Affected (n=52)	Percentage (%)
Extreme anxiety	32	61.5
High stress levels	30	57.7
Severe mental health issues	29	55.8
Caregiver emotional distress	33	63.5
Reported depression symptoms	27	52.0
Social withdrawal / isolation	25	48.1

A majority of patients (over 60%) reported clinically significant anxiety and stress symptoms, indicating pervasive psychological distress. Emotional instability extended to caregivers, amplifying household tension and affecting treatment adherence.

ECONOMIC AND FINANCIAL CHALLENGES

Indicator	Patients Affected (n=52)	Percentage (%)
Extreme financial strain	37	71.0
Loss of income or employment	33	63.5
High out-of-pocket costs	41	78.8
Borrowing or debt due to treatment	28	53.8
Difficulty accessing financial aid	35	67.3

Financial strain was the most prevalent challenge. Approximately three-quarters of participants faced catastrophic health expenditures, consistent with Mohan (2021), who emphasized that India's healthcare financing model exacerbates economic vulnerability among patients.

PHYSICAL SIDE EFFECTS OF CANCER AND TREATMENT

Indicator	Patients Affected (n=52)	Percentage (%)
Fatigue after chemotherapy/radiation	32	61.5
Severe side effects (nausea, hair loss, etc.)	29	55.8
Weight loss	18	34.6
Chronic pain / weakness	35	67.3
Improvement post-surgery	27	52.0

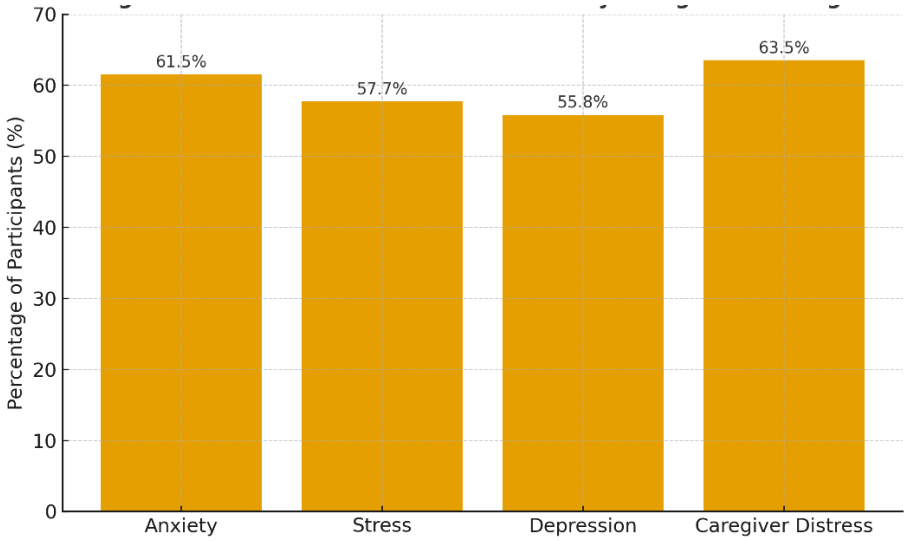
Physical symptoms such as fatigue, weakness, and nausea significantly interfered with daily activities. The data align with Antoni et al. (2006), who found that treatment toxicity contributes to physical suffering and psychological distress.

SYSTEMIC BARRIERS AND DELAYS IN TREATMENT

Barrier	Patients Affected (n=52)	Percentage (%)
Stock-outs of cancer medicines	28	53.8
Unavailability of hospital beds	24	46.1
Financial inability to continue treatment	37	71.0
Travel/access difficulties	29	55.8
Missed or postponed appointments	31	59.6

Treatment delays were common and multifactorial. Stock-outs of essential medicines and hospital capacity issues were key contributors. These findings correspond with Yang et al. (2023), who identified

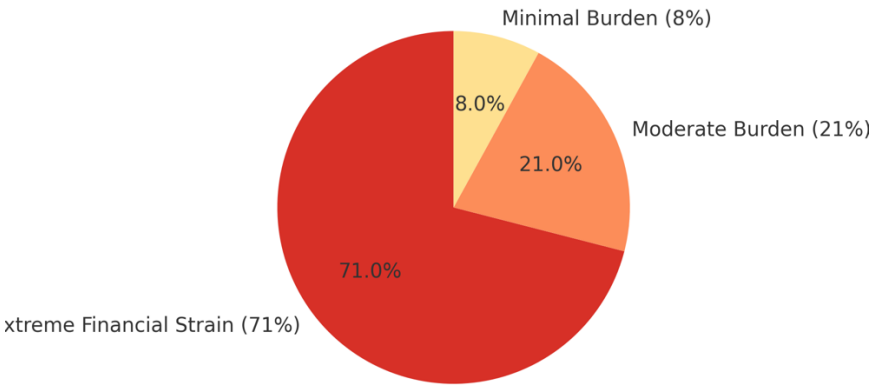
logistical inefficiencies and poor procurement systems as major barriers in developing health infrastructures.



Prevalence of Emotional And Psychological Challenges

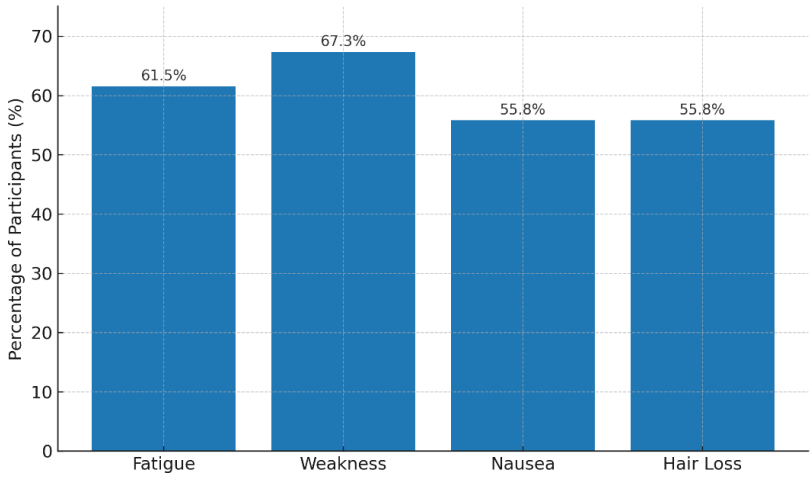
A bar chart illustrating the percentage of patients experiencing anxiety, stress, depression, and caregiver distress, highlighting anxiety as the most reported condition (61.5%).

Economic Impact of Cancer Treatment



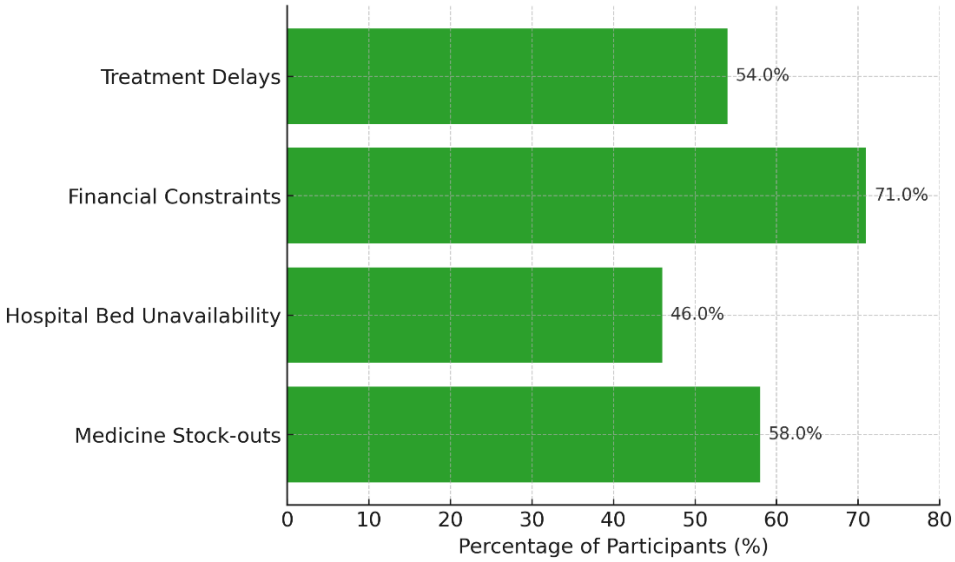
A pie chart showing the proportion of patients facing extreme financial strain (71%) versus those with moderate (21%) and minimal (8%) burden.

Physical Side Effects by Frequency



A clustered column chart displaying fatigue, weakness, nausea, and hair loss as dominant symptoms.

Treatment Barriers and Systemic Delays



A horizontal bar chart comparing barriers such as stock-outs, hospital bed unavailability, and financial constraints.

F4. Summary of Appendix F

The findings from the quantitative research confirmed that cancer imposes a variety of burdens across a variety of dimensions, including emotional, physical, economic, and systemic. It is clear that integrated health policy measures are required, as evidenced by the prevalence rates, notably for psychological distress (61.5%) and financial hardship (71%).
In Chapter V, the discussion and recommendations are offered, and these results, which are backed by both numerical data and visual representations, reinforce the empirical foundation for those discussions and recommendations.

APPENDIX G

Summary of Key Recommendations and Proposed Intervention Framework

G1. Overview

This appendix provides recommendations for strategic action based on the findings of the study concerning the difficulties that cancer patients find themselves experiencing. The paradigm that has been developed incorporates interventions that are psychological, economic, medical, and systemic in nature. These interventions are intended to improve patient outcomes and strengthen providers of healthcare.

The suggestions are in accordance with the worldwide standards of integrative cancer treatment (WHO, 2021) and place an emphasis on a patient-centered approach that acknowledges the interplay between the emotional, financial, and physical aspects of health.

G2. Summary of Recommendations by Domain

PSYCHOLOGICAL AND EMOTIONAL SUPPORT

Identified Issue	Recommendation	Expected Outcome
High prevalence of anxiety and depression among patients and caregivers	Establish on-site **psycho-oncology units** in hospitals to provide counseling and support groups.	Reduced psychological distress; improved coping mechanisms.

Identified Issue	Recommendation	Expected Outcome
Social isolation and loss of confidence due to body image changes	Implement **peer mentoring programs** and **body image workshops** for survivors and current patients.	Enhanced self-esteem and reintegration into social life.
Lack of access to professional mental health care	Incorporate **tele-psychology services** and **online support communities** for rural or immobile patients.	Increased access to continuous psychological care.

FINANCIAL AND ECONOMIC INTERVENTIONS

Identified Issue	Recommendation	Expected Outcome
Severe out-of-pocket (OOP) expenses for treatment	Advocate for **national cancer treatment subsidies** and expanded **public insurance coverage**.	Reduced financial burden; improved treatment adherence.
Job loss or income disruption during treatment	Introduce **employment protection policies** and **flexible work programs** for patients undergoing therapy.	Sustained income and reduced economic vulnerability.
Financial distress among caregivers	Develop **family-centered financial counseling** and partnerships with **NGOs or charities** offering direct assistance.	Economic resilience and reduced caregiver stress.

MEDICAL AND PHYSICAL CARE ENHANCEMENTS

Identified Issue	Recommendation	Expected Outcome
Treatment-related fatigue, pain, and malnutrition	Introduce **integrated symptom management clinics** combining oncology, nutrition, and physiotherapy.	Improved physical recovery and quality of life.
Lack of patient education about treatment side effects	Provide **educational workshops** and **printed guidance materials** on side effect management.	Empowered, informed patients with better self-care capacity.
Inconsistent follow-up post-surgery or chemotherapy	Standardize **follow-up protocols** and remote monitoring systems.	Reduced relapse rates and improved continuity of care.

TABLE 22. SYSTEMIC AND POLICY-LEVEL RECOMMENDATIONS

Identified Issue	Recommendation	Expected Outcome
Stock-outs of medicines and delays in treatment	Improve **procurement forecasting** and **logistics management systems** at national and hospital levels.	Consistent drug availability; reduced treatment interruptions.
Limited hospital capacity and infrastructure	Expand **regional oncology centers** and adopt **telemedicine** for initial consultations.	Improved access and reduced travel burden.
Fragmented healthcare coordination	Develop **centralized cancer registries** and integrated referral systems.	Streamlined patient tracking and data-driven health policy.

INTEGRATED CANCER CARE FRAMEWORK (PROPOSED MODEL)

The following framework illustrates how multidisciplinary actions can converge to address the major challenges identified in this study:

Level	Action Focus	Key Stakeholders	Expected Long-Term Impact
Individual Level	Psychological counseling, peer support, nutrition education	Patients, psychologists, dietitians	Improved emotional resilience and treatment adherence
Family Level	Caregiver training, family therapy, financial education	Families, social workers	Strengthened support networks and shared coping mechanisms
Institutional Level	Psycho-oncology units, financial aid offices, follow-up systems	Hospitals, NGOs, insurers	Enhanced institutional capacity for holistic patient care
Policy Level	National cancer financing, telehealth legislation, awareness campaigns	Ministries of Health, WHO, local governments	Sustainable healthcare financing and equitable access to care

IMPLEMENTATION ROADMAP (3-YEAR PLAN)

Timeline	Strategic Focus	Activities
Year 1	Capacity building	Establish pilot psycho-oncology and nutrition clinics; develop training materials for staff.
Year 2	Policy and partnerships	Engage government and NGOs for financial aid programs; launch national cancer awareness campaign.
Year 3	Evaluation and scaling	Monitor program outcomes; replicate successful models in additional hospitals.

G5. Summary of Appendix G

The recommendations that are offered in this appendix highlight the importance of a multilevel, integrated approach to the management of cancer. This approach should combine psychological care, financial support, patient education, and systemic reform.
The implementation of this approach will not only reduce the multiple burdens that were discovered in this study, but it would also develop a healthcare system that is more compassionate, egalitarian, and effective for cancer patients and their families.

APPENDIX H

Conceptual Model of the Integrated Cancer Care Framework

H1. Overview

This study identified four fundamental aspects: psychological, physical, economic, and systemic. The conceptual model that follows provides a graphic illustration of the interconnectedness between these four core dimensions and the recommended actions that are provided to address them on a systemic level. This integrated paradigm emphasizes the importance of collaboration between patients, caregivers, healthcare professionals, and policymakers in order to provide a comprehensive and effective treatment for cancer.

H2. Framework Description

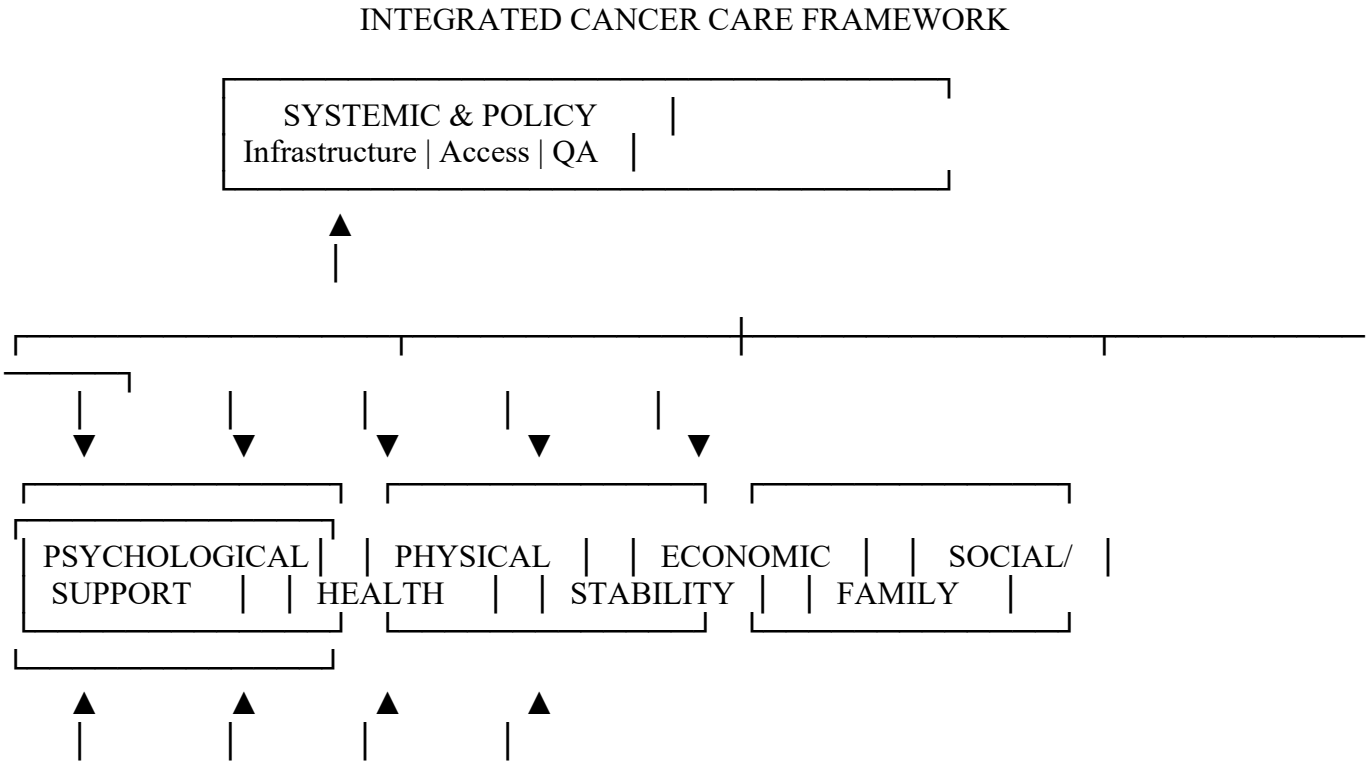
The model is structured around **four interdependent pillars** representing the primary challenges faced by cancer patients. Each pillar contributes to overall patient well-being and is influenced by the others:

1. **Psychological & Emotional Well-being**
    - Focus: Mental health support, counseling, family therapy, peer engagement.
    - Outcome: Improved resilience, reduced distress, enhanced treatment adherence.

2. **Physical Health & Symptom Management**
    - Focus: Pain control, fatigue management, nutrition, post- treatment rehabilitation.
    - Outcome: Enhanced recovery, greater functional independence, better quality of life.
3. **Economic Stability & Financial Access**
    - Focus: Financial aid, insurance coverage, flexible employment, NGO collaboration.
    - Outcome: Reduced financial toxicity and improved continuity of care.
4. **Systemic & Policy Reform**
    - Focus: Healthcare infrastructure, drug availability, referral systems, national policy.
    - Outcome: Stronger, equitable health systems and sustainable service delivery.

These domains interact continuously within a **patient-centered ecosystem**, supported by healthcare institutions and policy frameworks that ensure accessibility, equity, and dignity.

Diagrammatic Representation



PATIENT

At the core lies the *patient and caregiver unit*, surrounded by four interconnected domains. These pillars reinforce one another:

- Strong psychological support improves treatment adherence.
- Financial stability reduces emotional distress.
- Efficient systemic policies ensure timely access to care.
- Physical well-being enhances emotional resilience.

The outer systemic layer represents institutional and policy-level enablers ensuring that all domains function cohesively.

H4. Model Implications

- Encourages multidisciplinary coordination between oncology, psychology, nutrition, and social work.
- Promotes policy-driven, evidence-based planning to address economic and logistical barriers.
- Reinforces human-centered care where emotional health is valued equally with medical treatment.

This conceptual model aligns with frameworks proposed by the World Health Organization (WHO, 2021) and the National Cancer Control Strategy (2023) advocating holistic, equitable, and sustainable cancer care delivery.

H5. Summary of Appendix H

There are many different burdens that are associated with cancer, and the integrated cancer care framework acts as a road map for healthcare systems which needs be taken care. In addition to Highlighting the reality that Healing Encompasses not just therapy but also psychological financial and social restoration, it

provides a visual representation of the ways in which emotional, physical, economic, and systemic aspects interact with one another.

LIST OF APPENDICES

Appendix	Title	Description
Appendix A	List of Diagnoses of Study Participants	Provides a detailed listing of all 52 cancer patients by diagnosis, including tumor site and classification, to contextualize the study sample.
Appendix B	Socio-Demographic Profile and Comorbidities of Participants	Summarizes participants' demographic characteristics and co-existing medical conditions to illustrate sample diversity and vulnerability.
Appendix C	Summary of Data Collection Instrument	Outlines the structure, sections, and sample items of the questionnaire used for data collection, aligned with the four research questions.
Appendix D	Ethical Approval and Participant Consent Form	Includes institutional ethical clearance and the standardized consent form used for participant recruitment and confidentiality assurance.
Appendix E	Data Analysis Framework and Coding Matrix	Presents the thematic coding process linking raw data to research questions and core themes, ensuring analytical transparency and rigor.
Appendix F	Summary of Key Quantitative Findings and Graphical Representations	Displays descriptive statistics and suggested figures summarizing patients' psychological, economic, and physical challenges.

Appendix	Title	Description
Appendix G	Summary of Key Recommendations and Proposed Intervention Framework	Details practical, evidence-based recommendations for addressing psychological, financial, and systemic barriers to cancer care.
Appendix H	Conceptual Model of the Integrated Cancer Care Framework	Visualizes the interrelationship between the four core domains (psychological, physical, economic, and systemic) within a patient-centered model.

- **Appendix I**: Survey Cover Letter
- **Appendix J**: Informed Consent Forms
- **Appendix K**: Interview Guide
- Additional materials used (transcripts, tools, approvals)

APPENDIX I

SURVEY COVER LETTER

ACI HOSPITALS ACI - CUMBALLA HILL HOSPITAL

Data collection form

Questionnaire

Name of the patient:

Age:

Sex:

CR No:

Working/non-working:

Is the patient co-morbid? Yes/No

Is the cognitive functions testing done pre-treatment which is accessed by cognitive disorder specialist and to study the compliance to the treatment? Yes/No

Please rate the given questions where 0 being the lowest and 5 being the highest

1. How much is the anxiety level on diagnosing cancer:0.1.2.3.4.5.
2. Have you noticed any signs and symptoms related to cancer:0.1.2.3.4.5.
3. Has it cured by Chemotherapy/Radiationtherapy:0.1.2.3.4.5.
4. Did you follow a proper nutritional diet afterChemotherapy:0.1.2.3.4.5.
5. Are you stress going for Chemotherapy/ Radiationtherapy:0.1.2.3.4.5.
6. Are you concern of physical well-being after Chemotherapy/ Radiation:0.1.2.3.4.5.
7. Are you feeling tired after Chemotherapy/Radiation:0.1.2.3.4.5.
8. Do you become conscious in going out socially after diagnosing cancer:0.1.2.3.4.5.
9. Do you have any side effects after being treated from cancer:0.1.2.3.4.5.
10. Is your mental health affected on diagnosing umor:0.1.2.3.4.5.
11. Do you feel good on talking to psychologist after diagnosing tumor:0.1.2.3.4.5.
12. Do you have a healthy diet prior diagnosing cancer:0.1.2.3.4.5.
13. Do you exercise prior diagnosing cancer:0.1.2.3.4.5.
14. Do you undergo increase in the frequency of urination:0.1.2.3.4.5
15. Do you undergo increase in the frequency of thirst:0.1.2.3.4.5
16. Do you feel fatigue:0.1.2.3.4.5
17. Did you have weight loss after diagnosing:0.1.2.3.4.5
18. Is your family members or caregivers' mental wellbeing affected on diagnosing your cancer:0.1.2.3.4.5.
19. How do you feel after undergoing surgery:0.1.2.3.4.5.
20. Did you follow a proper nutritional diet after surgery:0.1.2.3.4.5.
21. Are you affected financially since you started spending on cancer treatment:0.1.2.3.4.5.
22. Does any adverse event occur after the intake of cancer drugs?0.1.2.3.4.5.

APPENDIX J

INFORMED CONSENT FORM

Study title: **An observational and analytic approach towards the challenges faced by cancer patients in hospital setup.**

Principal Investigator Name: Ms. Ashwini Prakash Salgaonkar

Name of the Institution: **Swiss School of Business and Management DBA Program**

Participant's Name:_____

We invite you to participate in this clinical research program "**An observational and analytic approach towards the challenges faced by cancer patients in hospital setup**."

The purpose of this document is to provide you with information about this study. Please read this document carefully and seek clarification in case of any queries.

When all your questions have been answered to your satisfaction and if you are willing to participate in the study, you will be required to sign the consent form.

Purpose:

The aim of this study is to understand stress and elevation of anxiety levels after diagnosis and is the common mark on patients undergoing cancer. Through this study the average data will be collected on the basis of age, sex, socio- economic, socio- demographic, socio-psychological factors and its impact on their daily functions. Physical well -being will also be considered in the study which results in the side effects after the dosages of chemotherapy or radiation therapy. This problem not only affects patients but even the caregivers.

Patients who have diagnosed tumor in the investigational results with a confirmed diagnosis of cancer-based from patients' medical records; receiving radiotherapy; and able to speak and understand either English or Hindi or Marathi. All patients previously diagnosed with psychiatric condition were excluded from the study.

India is a country of mixed population ranging from lower middle class to middle class to upper middle class. The treatment expenses are common to all the patients affected by cancer which hampers the patient and care givers economically.

About the data collection:

You will be asked few questions based on your current health condition which will be related to socio-psychological, socio- demographical, socio- economical as well your entire well- being and your family members. The care givers trauma will also be noted in the study.

There are no known risks involved in this study. Your participation is voluntary, and you are free to withdraw from the study at any time without giving any explanation. This will not affect your care at the hospital. However, data already collected may be used for analysis of results.

The study is purely observational study and the concern patient's data is totally confidential. This data will be used for the study purpose and to analyze the challenges caused to cancer patients and their care givers as well for the improvement of the quality of life of cancer patients.

The information collected from you will be used for the benefit of cancer patient management and for the improvement of the overall well- being of the patient.

The information obtained in this study will be kept strictly confidential and used for scientific purposes only. Data taken from this study may be published or presented in scientific meetings. However, your name and other identifying information will be kept confidential and will not be made publicly available. Investigators, study team members, ethics committee members & regulatory authorities (if required by law) may review your personal and medical records.

In-case of any queries, please contact the primary investigator. If the explanation is to your satisfaction, please sign the consent form.

_____

Signature Date & Place

APPENDIX K

INTERVIEW GUIDE

Thank you for participating. This interview aims to gather insights into challenges faced by cancer patients and trends to get a revolution in the healthcare and hospital system. It will take approximately 30 minutes. Your responses are confidential."The database will be completely used for the scientific purpose.

Name of the patient:

Age:

Sex:

CRNo:

Working/non-working:

Is the patient co-morbid? Yes/No

Is the cognitive functions testing donepre-treatment which is accessed by cognitive disorder specialist and to study the compliance to the treatment? Yes/No

Please rate the given questions where 0 being the lowest and 5 being the highest

23. How much is the anxiety level on diagnosing cancer: 0.1.2.3.4.5.
24. Have you noticed any signs and symptoms related to cancer: 0.1.2.3.4.5.
25. Has it cured by Chemotherapy/Radiation therapy: 0.1.2.3.4.5.
26. Did you follow a proper nutritional diet after Chemotherapy: 0.1.2.3.4.5.
27. Are you stress going for Chemotherapy/ Radiation therapy: 0.1.2.3.4.5.
28. Are you concern of physical well-being after Chemotherapy/ Radiation: 0.1.2.3.4.5.
29. Are you feeling tired after Chemotherapy/Radiation: 0.1.2.3.4.5.
30. Do you become conscious in going out socially after diagnosing cancer: 0.1.2.3.4.5.
31. Do you have any side effects after being treated from cancer: 0.1.2.3.4.5.
32. Is your mental health affected on diagnosing tumor: 0.1.2.3.4.5.
33. Do you feel good on talking to psychologist after diagnosing tumor: 0.1.2.3.4.5.
34. Do you have a healthy diet prior diagnosing cancer: 0.1.2.3.4.5.
35. Do you exercise prior diagnosing cancer: 0.1.2.3.4.5.
36. Do you undergo increase in the frequency of urination: 0.1.2.3.4.5
37. Do you undergo increase in the frequency of thirst: 0.1.2.3.4.5
38. Do you feel fatigue: 0.1.2.3.4.5
39. Did you have weight loss after diagnosing: 0.1.2.3.4.5
40. Is your family members or caregivers' mental wellbeing affected on diagnosing your cancer: 0.1.2.3.4.5.
41. How do you feel after undergoing surgery: 0.1.2.3.4.5.
42. Did you follow a proper nutritional diet after surgery: 0.1.2.3.4.5.
43. Are you affected financially since you started spending on cancer treatment: 0.1.2.3.4.5.
44. Does any adverse event occur after the intake of cancer drugs? 0.1.2.3.4.5.

APPENDIX L

INSTITUTIONAL ETHICS COMMITTEE
Registration No.ECR/1624/Inst/MH/2021

Asian Cancer Institute - ACI Cumballa Hill Hospital
Units of Asian Institute of Oncology Private Limited | CIN No: U85110MH2003PTC138491
93/95, August Kranti Marg, Kemps Corner, Mumbai - 400 036
Contact - Ms. Ashwini . S : 022 6277 1111 | ethicscommittee@acihospitals.com

Date: 09th September 2024

To,
Ms. Ashwini P. Salgaonkar
Principal Investigator,
ACI Cumballa Hill Hospital
93/95, August Kranti Marg, Kemp's corner,Mumbai-400036

Dear Ms. Ashwini P. Salgaonkar,

The Asian Institute Of Oncology Private Limited Institutional Ethics Committee, Mumbai has reviewed and discussed your application to conduct the study entitled

Study Title: An observational and analytic approach towards the challenges faced by cancer patients in hospital setup.

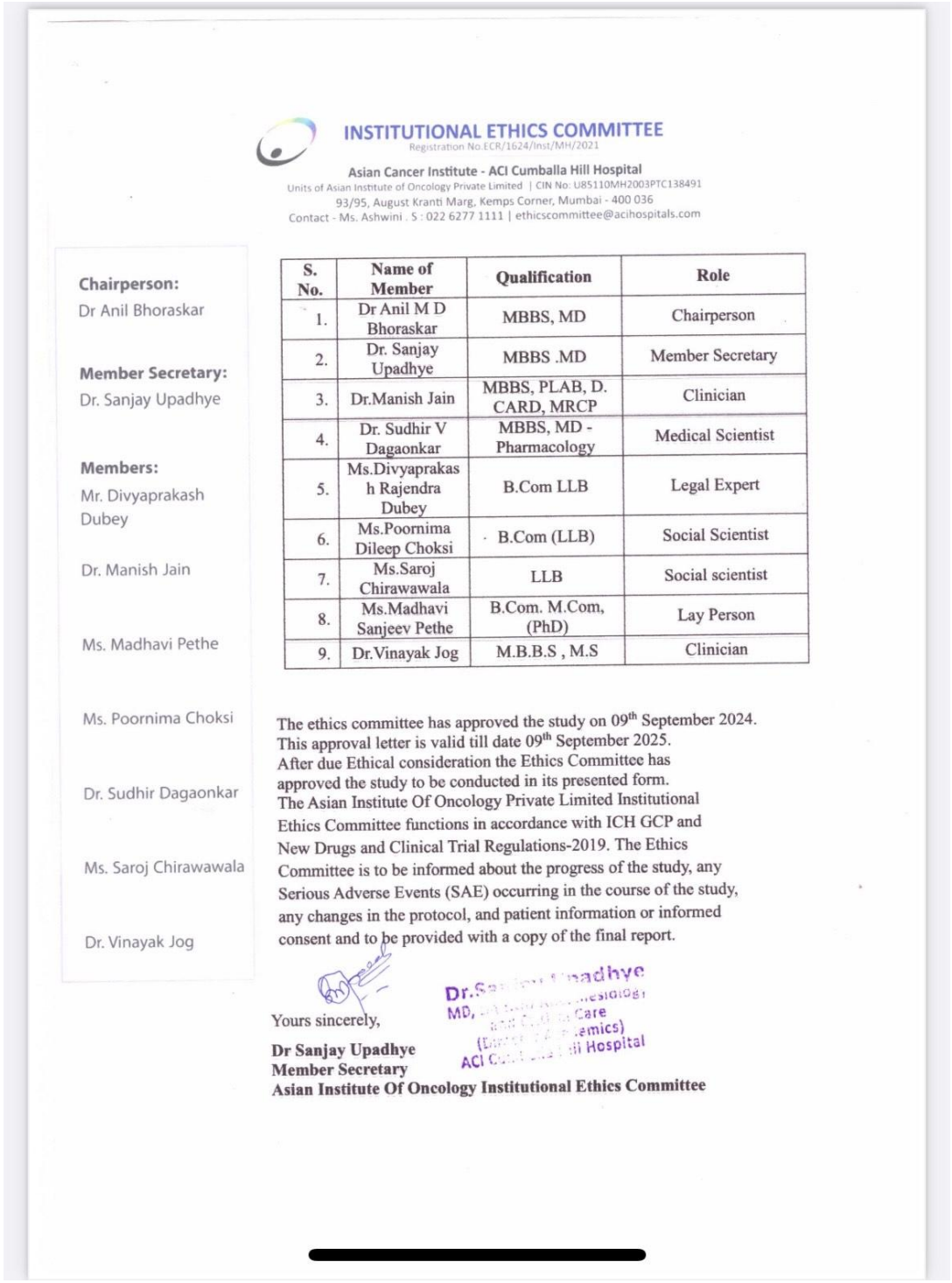
Study Code: ACICHH07

The following documents were reviewed:

Sr. No.	Documents	Version Number and Version Date
1.	Concept paper	Unknown
2.	GCP certificate	Unknown
3.	Data collection form	Unknown
4.	Informed consent form	Unknown

We at Asian Institute Of Oncology Private Limited Institutional Ethics Committee have reviewed this study proposal. The following ethics committee members were present at the conference video call meeting held on 09th September 2024 at 03:00 pm at conference room, ACI-Cumballa Hill Hospital. The discussions and decision-making process were facilitated in the meeting with all quorum members.

APPENDIX M



INSTITUTIONAL ETHICS COMMITTEE
Registration No.ECR/1624/Inst/MH/2021

Asian Cancer Institute - ACI Cumballa Hill Hospital
Units of Asian Institute of Oncology Private Limited | CIN No: U85110MH2003PTC138491
93/95, August Kranti Marg, Kemps Corner, Mumbai - 400 036
Contact - Ms. Ashwini . S : 022 6277 1111 | ethicscommittee@acihospitals.com

Chairperson:
Dr Anil Bhoraskar

Member Secretary:
Dr. Sanjay Upadhye

Members:
Mr. Divyaprakash Dubey

Dr. Manish Jain

Ms. Madhavi Pethe

Ms. Poornima Choksi

Dr. Sudhir Dagaonkar

Ms. Saroj Chirawawala

Dr. Vinayak Jog

S. No.	Name of Member	Qualification	Role
1.	Dr Anil M D Bhoraskar	MBBS, MD	Chairperson
2.	Dr. Sanjay Upadhye	MBBS .MD	Member Secretary
3.	Dr.Manish Jain	MBBS, PLAB, D. CARD, MRCP	Clinician
4.	Dr. Sudhir V Dagaonkar	MBBS, MD - Pharmacology	Medical Scientist
5.	Ms.Divyaprakash Rajendra Dubey	B.Com LLB	Legal Expert
6.	Ms.Poornima Dileep Choksi	B.Com (LLB)	Social Scientist
7.	Ms.Saroj Chirawawala	LLB	Social scientist
8.	Ms.Madhavi Sanjeev Pethe	B.Com. M.Com, (PhD)	Lay Person
9.	Dr.Vinayak Jog	M.B.B.S , M.S	Clinician

The ethics committee has approved the study on 09th September 2024.
This approval letter is valid till date 09th September 2025.
After due Ethical consideration the Ethics Committee has approved the study to be conducted in its presented form.
The Asian Institute Of Oncology Private Limited Institutional Ethics Committee functions in accordance with ICH GCP and New Drugs and Clinical Trial Regulations-2019. The Ethics Committee is to be informed about the progress of the study, any Serious Adverse Events (SAE) occurring in the course of the study, any changes in the protocol, and patient information or informed consent and to be provided with a copy of the final report.

Yours sincerely,

Dr Sanjay Upadhye
Member Secretary
Asian Institute Of Oncology Institutional Ethics Committee

NIDA Clinical Trials Network

Certificate of Completion

is hereby granted to

Ashwini Salgaonkar

to certify your completion of the six-hour required course on:

GOOD CLINICAL PRACTICE

MODULE:	STATUS:
Introduction	N/A
Institutional Review Boards	Passed
Informed Consent	Passed
Confidentiality & Privacy	Passed
Participant Safety & Adverse Events	Passed
Quality Assurance	Passed
The Research Protocol	Passed
Documentation & Record-Keeping	Passed
Research Misconduct	Passed
Roles & Responsibilities	Passed
Recruitment & Retention	Passed
Investigational New Drugs	Passed

Course Completion Date: 14 March 2023

CTN Expiration Date: 14 March 2026

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Good Clinical Practice, Version 5, effective 03-Mar-2017

This training has been funded in whole or in part with Federal funds from the National Institute on Drug Abuse, National Institutes of Health, Department of Health and Human Services, under Contract No. HHSN27201201000024C.