

**EFFICACY OF POSITIVE PSYCHOLOGY ON
QUALITY OF LIFE (QOL), FEAR OF RECURRENCE (FOR)
AND ANXIETY IN HEAD AND NECK CANCER PATIENTS**

Thesis Submitted for the Award of the Degree of

**DOCTOR OF PHILOSOPHY
in
Psychology**

By

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2024**

DECLARATION

I the undersigned solemnly state that the thesis entitled “Efficacy of Positive Therapy on Quality of Life (QOL), Fear of Recurrence (FOR) and Anxiety in Head and Neck Cancer Patients” has been prepared and compiled by me under the guidance of **Dr. Vijendra Nath Pathak**, Associate Professor, School of Social Sciences and Languages, Lovely Professional University, Phagwara, Punjab, as per the full requirement for the award of the degree of Doctor of Philosophy (Ph.D.) in Psychology is entirely my original work and all ideas and references have been duly acknowledged. I would also likely to assure that no part of the thesis has ever been submitted for basis of the award of any PhD degree.



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CERTIFICATE

This is to certify that **Ms. Kavita Shankar Gadade** has completed Doctor of Philosophy (Ph.D.) in Psychology thesis entitled “Efficacy of Positive Therapy on Quality of Life (QOL), Fear of Recurrence (FOR) and Anxiety in Head and Neck Cancer Patients” under my supervision and guidance. To the best of my knowledge, the present work results from her original investigation and study. No part of the thesis has ever been submitted for any other degree or diploma to any other university. The thesis is fit for the award of Doctor of Philosophy Degree (Ph.D) degree.



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Abstract

Head and neck cancer patients often encounter daunting challenges throughout their treatment journey, marked by profound psychological and emotional turmoil. Despite the pressing need for tailored psychological interventions, the literature review reveals a glaring gap: a dearth of therapeutic approaches specifically designed for this demographic. Thus, this study endeavours to introduce a novel intervention, Positive Therapy, tailored to the unique needs of head and neck cancer patients undergoing chemotherapy, pre- and post-surgical procedures, and radiation treatment. This research aims to evaluate the efficacy of Positive Therapy in mitigating psychological distress and enhancing overall well-being in this vulnerable population. The objective of this present study is to investigate the psychological constructs of quality of life, fear of recurrence, and anxiety among head and neck cancer patients with the help of positive therapy.

Bearing in mind the gaps and limitations mentioned in the review, the existing research puts forward the following major objectives to attain: -

1. To investigate the effect of positive therapy on quality of life (QOL) among head and neck cancer patients.
2. To investigate the effect of positive therapy on anxiety among head and neck cancer patients.
3. To investigate the effect of positive therapy on fear of recurrence (FOR) among head and neck cancer patients.
4. To examine the relationship among quality of life (QOL), anxiety, and fear of recurrence (FOR) in head and neck cancer patients.

In this study, we deeply discussed the challenges faced by head and neck cancer patients we had seen during the intervention and during the journey of cancer treatment even after the treatment, it was so challenging in all the factors like day to day leaving struggle, fear about the disease worry about the financial management, social situation, adjustment to the medicine and pain tolerance. The present study collected samples from the HCG Manavata Cancer Centre, Nashik, Maharashtra, India. We have a patient population from all over Maharashtra and states other than Maharashtra; for measuring, we used the NCCN Distress Thermometer (DT) by the National Comprehensive Cancer Network in 1997. This is a screening tool's purpose. Purposive sampling (pre-test) and simple random sampling (Post-test) methods were used for the experimental group and control group. Participants were personally distributed questionnaires, fear of progression questionnaire short form (FOP-Q-SF12), hospital anxiety

and depression (HAD) scale, functional assessment of cancer therapy (FACT H&N), and clinical interview process were also followed to conduct the study. Participants were provided with a consent form explaining the nature of the study. The questionnaires were then collected there and then. Then, an intervention-positive therapy was administered for 8 weeks to the experimental group only, the control group was not given any therapy sessions. Analysis of the completed questionnaires was conducted. Before and after positive therapy intervention, the same procedure was performed twice.

The data was statistically analyzed, and conclusions were drawn. In statistical analysis, all data were coded and entered into the SPSS-22 version following their collection with the above-mentioned tool. It was assumed that total scale scores behaved as interval scales. Paired Sample t-tests were used. For comparisons of means, t-tests were applied, and product-moment correlation and simple linear regression were used to find any relationship between variables.

The major finding of the study was the implementation of positive therapy intervention; a notable variance was observed between the experimental and control groups concerning quality of life (QOL), anxiety, and fear of recurrence (FOR) among head and neck cancer patients. Independent t-test results revealed statistically significant differences between pre and post-quality of life (QOL), anxiety, and fear of recurrence (FOR) among head and neck cancer patients. However, following a meticulous examination through paired sample t-tests, it was revealed that there were statistically significant differences between the experimental and control groups before the positive therapy intervention. Hence, 1st hypothesis was accepted. The subsequent analysis aimed to ascertain whether there would be a substantial disparity between the experimental and control groups following the intervention concerning head and neck cancer patients' quality of life (QoL). The results decisively affirm the acceptance of the second hypothesis, as a statistically significant difference was observed between the two groups post-intervention. The third significant finding delved into the potential variance between the experimental and control groups regarding anxiety levels among head and neck cancer patients post-intervention. Through meticulous analysis, the study unequivocally supports the acceptance of the third hypothesis. It is demonstrated that a notable discrepancy exists between the two groups following the intervention, affirming the efficacy of the positive therapy approach in mitigating anxiety levels among this patient demographic. This finding underscores the pivotal role of tailored psychological interventions in addressing the multifaceted challenges faced by individuals undergoing treatment for head and neck cancer. The fourth pivotal finding examines the discernible differences between the experimental and control groups concerning the fear of recurrence (FOR) among head and neck cancer patients

post-intervention. Upon rigorous examination, the study decisively validates the acceptance of the fourth hypothesis. Notably, a statistically significant distinction emerges between the two groups after the intervention, affirming the efficacy of the positive therapy approach in assuaging the fear of recurrence within this patient cohort. This result underscores the invaluable contribution of targeted psychological interventions in ameliorating the complex emotional landscape experienced by individuals navigating the challenges of head and neck cancer treatment. The fifth critical finding delves into the intricate interplay between quality of life (QoL), anxiety, and fear of recurrence (FOR) among head and neck cancer patients. Through meticulous analysis, the study robustly corroborates the acceptance of the fifth hypothesis. It unequivocally demonstrates a significant relationship between QoL, anxiety, and FOR within this patient cohort. This revelation underscores the interconnectedness of psychosocial factors in influencing the well-being and emotional resilience of individuals grappling with head and neck cancer. By elucidating these complex dynamics, the study sheds light on the imperative of comprehensive, multidimensional interventions that address physical symptoms and psychological and emotional distress, enhancing the holistic care and support provided to patients throughout their treatment journey. The sixth pivotal hypothesis explores the predictive relationship between fear of recurrence (FOR) and anxiety among head and neck cancer (HNC) patients. Through rigorous examination, the study unequivocally affirms the acceptance of this hypothesis. Notably, it establishes that fear of recurrence significantly predicts anxiety levels within this patient population. This finding underscores the profound impact of fear of recurrence on the psychological well-being of HNC patients, highlighting the need for targeted interventions aimed at mitigating both FOR and associated anxiety. By elucidating this predictive relationship, the study contributes valuable insights into the intricate interplay between psychological factors in the context of HNC, thereby informing the development of tailored intervention strategies to address the holistic needs of patients undergoing head and neck cancer treatment. The culmination of this research study reveals a compelling narrative wherein all hypotheses are upheld and validated with significant findings. Through meticulous inquiry and methodical analysis, each hypothesis emerges as a robust pillar supporting the study's overarching aim.

From the initial exploration of the variance between the experimental and control groups pre-intervention to the subsequent examination of post-intervention outcomes, the study meticulously navigates the intricate landscape of psychosocial dynamics among head and neck cancer (HNC) patients. The acceptance of hypotheses underscores the efficacy of the positive

therapy approach in addressing the multifaceted challenges faced by this patient population, ranging from quality of life (QoL) to anxiety and fear of recurrence (FOR).

Moreover, the elucidation of the predictive relationship between FOR and anxiety sheds light on the nuanced interplay of psychological factors within the context of HNC. This revelation deepens our understanding of the complex emotional journey traversed by patients and underscores the imperative of holistic care approaches that address both physical and psychological dimensions.

In essence, this research study stands as a testament to the transformative potential of targeted psychological interventions in enhancing the well-being and resilience of HNC patients. By affirming the validity of all hypotheses, it contributes to the academic discourse. It holds profound implications for clinical practice, paving the way for more comprehensive and tailored approaches to care in the realm of head and neck cancer treatment.

In conclusion, this research underscores the pivotal role of psychological interventions in the treatment plan for head and neck cancer (HNC) patients. The discerned patterns of results emphasize the significance of integrating such interventions into the holistic care framework for these patients. Beyond its immediate impact on patients' well-being, this study illuminates how psychological interventions can benefit medical practitioners across disciplines, including oncologists, physicians, and healthcare providers. By acknowledging and addressing the psychological aspects of HNC treatment, we enhance patient outcomes and the quality of care provided by healthcare professionals.

However, it's crucial to acknowledge the limitations of this study. While the positive therapy intervention yielded promising results, further research is warranted to explore its efficacy across various cancer types and in managing specific treatment-related side effects. This avenue of inquiry holds the potential to advance our understanding of how psychological interventions can be tailored to meet the diverse needs of cancer patients.

Moving forward, it is imperative to translate the insights from this research into actionable strategies within clinical practice. By advocating for integrating psychological interventions into standard treatment protocols, we can foster a more holistic and patient-centered approach to cancer care. Additionally, ongoing collaboration between researchers, clinicians, and policymakers is essential to ensure that psychological support remains a cornerstone of cancer care delivery.

In essence, this research not only underscores the importance of psychological interventions in enhancing the well-being of HNC patients but also paves the way for broader discussions and initiatives to improve cancer care outcomes globally. Through continued exploration and innovation in this field, we can strive towards a future where comprehensive support is readily available to all individuals navigating the challenges of cancer diagnosis and treatment.

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LIST OF ABBREVIATIONS

H&N	Head And Neck
HNC	Head and Neck Cancer
HNCP	Head and Neck Cancer Patients
QoL	Quality of Life
HRQL	Health Related Quality of Life
HRQOL	Health Related Quality of Life
FOR	Fear of Recurrence
FOP	Fear of Progression
FCR	Fear of Cancer Recurrence
HADS	Hospital Anxiety and Depression Scale
DT	Distress Thermometer
NCCN	National Comprehensive Cancer Network
FACT	Functional Assessment of Cancer Therapy
PCI	Prophylactic Cranial Irradiation
IMRT	Intensity-Modulated Radiotherapy
OSG	Online Support Group
APA	American Psychological Association
SD	Standard Deviation
T- test	Analysis of Covariance
Q-Q Plot	Quantile-Quantile Plot
P-P Plot	Probability-Probability Plot
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization
HPV	Human Papillomavirus

CT Scan	Computed Tomography Scan
ICD	International Classification of Diseases
MRI	Magnetic Resonance Imaging
CT	Chemotherapy
RT	Radiation Therapy
CBT	Cognitive Behavioural Therapy
LOC	Locus of Control
EMDR	Eye Movement Desensitization and Reprocessing

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Chapter 1

1. Introduction

Background

1.1 Head and Neck Cancer (HNC)

People today face many crises, and many health-related concerns increase daily. As we see, we face one or another health-related problem; among those, cancer is one of the concerns that is making people challenging to accept and face it. There are many different site-specific types of problems among cancer patients. A total of 5% of new cancers are HNC, number sixth on the list in the world (Gerald M, 2010). Cancers which are affecting tissues and organs in the region of the head and neck are called HNC. There are approximately 250,000 deaths caused by squamous cell carcinoma per year worldwide (Davies et al., 2006). There are many psychological challenges and adaptive demands associated with this type of cancer. HNC are primarily caused by factors associated with behaviour and lifestyle. It has been reported that approximately 85% of cases of squamous cell carcinoma in the head and neck can be attributed to tobacco use. (Licitra, et.al., 2006). Inhalation of wood or nickel dust is also associated with paranasal sinus cancer, and A connection has been found between chewing betel nuts and oral squamous cell carcinoma. Sexual activity and the number of partners are associated with the development of oral cavity and oropharynx squamous cell carcinomas. The majority of HPV-associated cancers occur in younger individuals, who generally have a better response to treatment and prognosis than the other types of patients with HNC (Schantz et al., 2006). In HNC, the majority of the population is over 50, and it is found more commonly in men than women. Some factors cause head and neck cancer use of alcohol and tobacco, as well as exposure to HPV (human papillomavirus), weak immunity system of the individual, a family history of the disease, and exposure to certain chemicals and toxins (American Cancer Society, 2021). Millions of people are affected each year by HNCs in the world. In 2020 alone, it is stated that approximately 890,000 new cancer cases of HNC and 450,000 deaths are due to the disease, according to the latest statistics from the World Health Organization (WHO, 2020). In the last few years, HNC incidence and mortality have increased substantially, which highlights the need to take urgent action to improve the health of these populations. HNC can be categorized into several categories. HNC is classified into the following types:

1. Oral cavity cancer: This type of cancer mostly affects the mouth, lips, tongue, gums, and lining.

2. Oropharyngeal cancer: the cancer that affects mostly the tonsils, the base of the tongue, and the back of the throat.
3. Nasopharyngeal cancer: This type of cancer mainly affects the nasopharynx area, which is the throat behind the nose, especially the upper part of the throat.
4. Laryngeal cancer: Laryngeal cancer mostly affects the voice box, also known as the larynx.
5. Hypo-pharyngeal cancer: This type of cancer is impacted mostly on the bottom part of the throat, just above the oesophagus.

HNC diagnosis typically involves a physical exam, imaging tests such as CT scans or MRIs, and a biopsy, in which they evaluate the tissue removed from the infected body part as a sample and use a microscope to see whether cancer cells are present. Once a diagnosis is made, the cancer is staged, which determines how advanced it is and how likely it is to involve multiple body parts. A patient's overall health, as well as the location and stage of the tumour, determine how HNC will be treated. There are multiple treatment options available according to the requirement of the disease like, the surgical procedure followed for the removal of the tumour, to kill the cancer cells, radiation therapy is more convenient, and chemotherapy to shrink the tumour or stop the growth of cancer cells, targeted therapy to attack specific molecules that help cancer cells grow, or a combination of these treatments.

In addition to medical treatments, lifestyle changes can help decrease the risk of HNC. These comprise avoiding tobacco products, restricting alcohol intake, eating a maximum number of fresh vegetables and fruits as a healthy diet, committing to a healthy sex life, and protecting the skin from excessive sun exposure.

1.1.1 Medical and Surgical Treatment

Various treatment options depend on the subsite; however, form and function must be preserved while achieving the best possible oncologic control. To preserve organ function, radiation therapy (or radiation combined with chemotherapy) may be used to treat pharyngeal and laryngeal cancers. When nonsurgical treatment fails, surgical treatment is often used as a salvage procedure. The most common method of treating subsites, such as the sinuses, the salivary glands, and the oral cavity, is surgery. Radiation is frequently administered postoperatively to enhance tumour control. Even though treatment varies according to the subsite, it is always imperative to preserve organ function because processes, for example, speaking and swallowing, are the challenging factors. Quality of life (QOL) may be significantly affected by these effects and by the cancer itself. Surgical reconstruction techniques, including microvascular free tissue transfer, have evolved over the past 30 years,

significantly improving postoperative functionality and cosmetic results. Many subsites of squamous cell carcinoma have been successfully treated surgically using this technique. Since the turn of the century, the 5-year survival rates for HNC have remained relatively unchanging. Although survival rates are generally expected to be 50% for five years, the likelihood of survival depends greatly on tumour stage and subsite, comorbid medical conditions, tolerance of prime treatment regimes, alcohol and tobacco usage, and malignancies of second primary. The current standard of care is to preserve organs through radiation therapy (or concurrent radiation and chemotherapy). However, intensity-modulated radiation has improved targeted radiation delivery, reducing collateral damage to normal tissues while increasing the dose to the tumour area.

Treatment adverse effects may be amplified when certain factors interact. Like, side effects may intensify and last longer during chemotherapy and radiation treatments. There is an estimated one-third of people are dependent on gastrostomy tubes for an extended period of time, and long-term complications are associated with surgical therapy. Several different types of cosmetic outcomes can result in significant changes to the quality of life, such as chronic tracheostomy or dependence on a tracheostomy, openings on the face and neck, and extirpations of entire body parts (e.g., eyes, noses, larynx, tongue, and mandible). A disfiguring condition can lead to embarrassment and social escaping, negatively affecting one's quality of life.

1.1.2 Psychosocial and psychiatric outcomes:

Many risk factors and protective factors act together; distress is a common symptom of cancer and is typically a final common pathway by which multiple factors exert the effects. There are numerous psychosocial consequences associated with HNC, like anxiety, depression, suicide, as well as impaired marital functioning. As a result of numerous stressors and encumbrances related to cancer as well as its management, depression is most often a cumulative and delayed response. A person who is suffering from cancer or another major medical condition is twice as likely to experience clinically significant depressive symptoms as someone who does not have a major medical condition. An estimated 16% to 20% of individuals with HNC meet the conditions in systematic studies similar to other medical conditions; there are rates associated with adjustment disorder, minor depression, and major depression. Research indicates that depressive symptoms are strongly correlated with physical distress and dysfunction. Several factors determine the outcome of cancer patients, including individual, social, and contextual factors. An example of these factors is the lack of social support, the insecurity of attachment, the lack of spiritual well-being, and the young age. Comparatively, the general population has

been reported to have gender differences; head and neck cancers (as well as other cancers) do not show constant gender dissimilarities in emotional misery or depressive indications. An association exists between depression and the stage of the tumour, the number of physical symptoms, and the avoidant coping style before treatment, when radiotherapy and surgery are unavoidable aspects of treatment in HNC. It is possible that patients with HNC will know the symptoms of anxiety and depression at the same level. Various threats and concerns related to diseases and treatments may trigger anxiety symptoms. Face masks are used to deliver radiation treatment to patients with head and neck carcinomas, which may trigger in some patients panic attacks or anxiety as a result of claustrophobia. It may be necessary to treat such symptoms with anxiolytic medication or relaxation techniques to move forward with treatment. Individual premorbid behaviour and characteristics, as well as the impact of disease and management, may influence the predominance of psychological suffering in patients with HNC. There is no consistent association between disfigurement and suffering in HNC patients, contrary to what was expected. Cancer-induced intrusiveness, social isolation, and lack of community backing all increase the likelihood of an adverse emotional impact due to disfigurement. Individuals with HNC are more having more probability to suffer from depression when they consume alcohol and tobacco. HNCs are linked with a higher suicide rate than many other types of cancer, but are barely elevated in individuals with cancer. According to a study of 1572 suicides in cancer patients, HNC, myeloma, advanced disease, limited treatment options, and low social or cultural support are concomitant with an amplified risk of suicide. HNC patients are further expected to experience distress and suicide than anyone else. This suggest the recommendation that routine screening for suffering should be performed in this population.

1.1.3 Impact on Couples:

There is often a reflective impression on the spouse or partner of a person suffering from HNC. HRQL is commonly reported to be extreme in the literature; although partners report lower QOL on average, overall, the healthcare experience is similar for patients and their partners. Most of the "partners" participating in this experiment study are female, making gender confusion with patient-partner status difficult to distinguish. There is a higher incidence of anxiety disorders among the spouses of men with HNC than among those without cancer. Men and their wives appear to differ in their perception of the importance of marital satisfaction. For wives with HNC, the worth is considered in the nuptial relationship, which is a further influential factor in determining QoL, whereas, for their husbands with HNC, the complaints related to the physical condition have a greater impact on quality of life. Women are more

likely to adopt the psychosocial liability of their sick partners, in part because of their tendency to assume the psychological burden of their partners' illness.

1.2 Biopsychosocial Model in Head and Neck Cancer Patients:

Head and neck cancer (HNC) presents significant health challenges, impacting many facets of life, particularly for individuals who are active in their careers. The biopsychosocial model provides a comprehensive framework for understanding these impacts by considering biological, psychological, and social factors. This model is especially relevant for working professionals dealing with HNC, as it highlights the need for a holistic approach to their care.

Biological Considerations

The biological aspect includes the physical manifestations of the disease and its treatment. For HNC patients, this encompasses the characteristics of the tumour, the stage of the cancer, and the effects of treatments like surgery, radiation, and chemotherapy. These treatments often lead to serious functional impairments, such as difficulties with speech, swallowing, and breathing, which can severely affect job performance. Addressing these biological challenges through a comprehensive medical approach is essential for maintaining the patient's quality of life and ability to work.

Psychological Impact

Psychologically, a cancer diagnosis can be daunting, often bringing about feelings of fear, anxiety, and depression. For professionals, these psychological issues are intensified by worries about their ability to continue working, potential financial loss, and the social stigma associated with visible changes due to the disease. Psychological support, including counselling and therapy, is vital in helping patients manage these mental health challenges. Developing resilience and effective coping mechanisms is crucial for maintaining psychological well-being and work efficiency.

Social Dynamics

The social dimension includes the effects on personal relationships and professional interactions. Support from family, friends, and coworkers is critical during recovery. However,

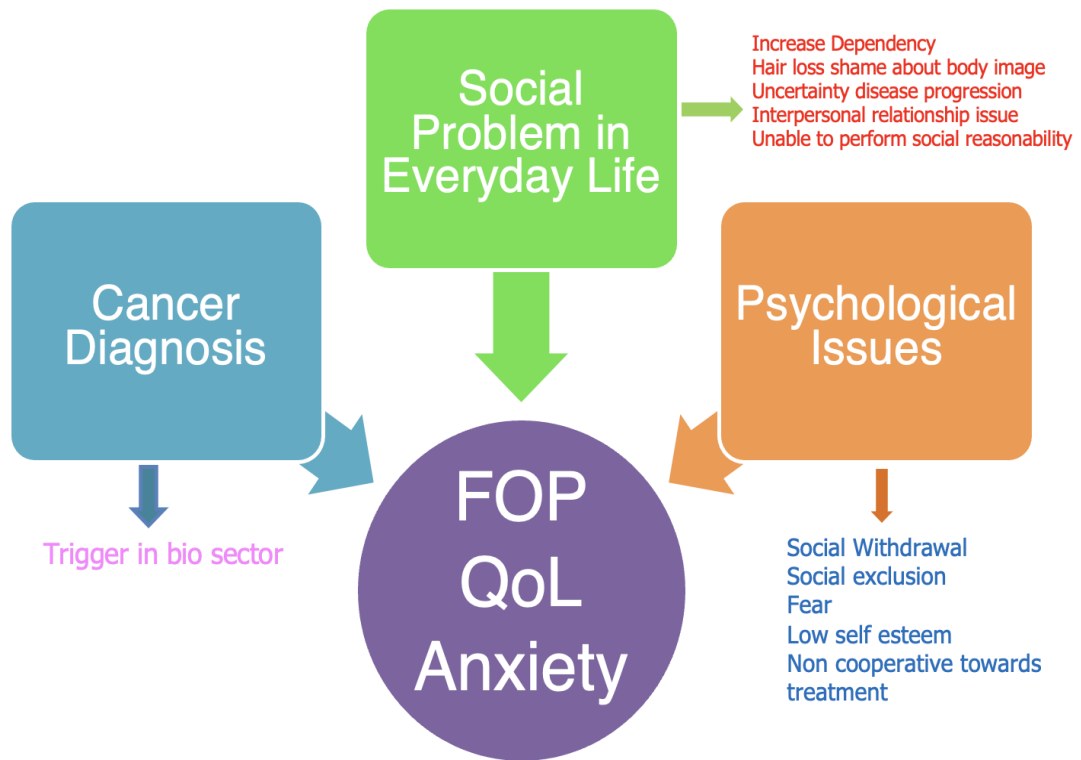
the rigors of treatment and recovery can place a strain on these relationships, and visible symptoms may lead to social isolation. In the workplace, professionals may face challenges related to job performance, possible discrimination, and the need for accommodations. Employers can assist by creating an inclusive work environment, offering flexible work schedules, and making necessary adjustments to support the physical and emotional needs of HNC patients.

Holistic Integration

A collaborative approach is necessary to effectively apply the biopsychosocial model. Healthcare providers should coordinate with psychologists, social workers, and employers to meet the diverse needs of these patients. Customized care plans that incorporate medical treatment, psychological support, and social services can significantly enhance the overall well-being and productivity of HNC patients.

The biopsychosocial model is essential for understanding and addressing the multifaceted needs of professional head and neck cancer patients. By integrating biological, psychological, and social considerations, we can develop more effective and compassionate strategies to support these individuals throughout their treatment and beyond. This holistic approach not only improves patient outcomes but also helps them maintain their professional lives, fostering a more supportive and inclusive society.

Figure 1 Conceptual Framework-Bio-Psycho-Social Model



Biopsychosocial Model developed by George Engle (Richard et al., worth publishers 2001)

1.3 Quality of Life

Quality of life is an essential and major characteristic that we consider whenever we are facing life-changing situations or life challenges. When we talk about the same term while taking cancer treatment, particularly in HNC, it shows a significant change in daily functioning activity. The World Health Organization (WHO) describes QOL as "an individual's perception of life and the culture and values in which they live, as well as their goals, expectations, and concerns." (WHO, 1997). This definition helps us to understand the multifaceted nature of QOL, which includes physical health, psychological well-being, social relationships, and ecological factors.

QOL is a concept that has been discussed and criticized for many years and has been studied extensively by many researchers and healthcare professionals. In the early period of the 1960s, researchers tried to explore the concept of health-related QOL, which emphasizes the outcome of health on an individual's quality of life (Patrick & Erickson, 1993). Quality of life This research helped highlight the importance of considering subjective health measures, such as pain and functional limitations, in addition to objective measures, such as laboratory results and diagnostic tests.

In the 1970s, the WHO began to develop its own framework for understanding quality of life, initially focusing on the depth of health-related QOL (WHO, 1984). This framework, updated several times over the years, includes physical, psychological, and social domains of QOL and an overall assessment of an individual's QOL (WHO, 1997). Since the development of the WHO framework, there has been an increasing recognition of the importance of subjective well-being in understanding QOL. This concept has been incorporated into the WHO framework, which now includes a subjective component in supporting the objective measures of health-related QoL.

Many studies have used the WHO framework to measure QOL in different populations and contexts. For example, researchers have used the framework to assess the QOL of individuals with chronic illnesses, such as cancer (Fayers et al., 2001) and diabetes (Redekop et al., 2002). The framework has also been used to compare the quality of life across different countries and cultures (Skevington et al., 2004).

There has been growing attention to using technology to measure and develop QOL in recent centuries. For example, researchers have developed mobile apps and wearable devices that track an individual's physical activity, sleep patterns, and other health-related behaviours (Burke et al., 2019). These technologies can provide real-time feedback and support for individuals to improve their health and well-being, ultimately improving their overall QoL.

In conclusion, the perception of QOL is multidimensional and encompasses physical, psychological, social, and environmental factors. The WHO framework provides a useful tool for measuring and understanding quality of life and has been used extensively in research and healthcare practice. As technology advances, there is a growing opportunity to use technology to improve the quality of life for individuals and communities worldwide.

The World Health Organization (WHO) (1997) debatably delivers the most commonly quoted definition of QoL. WHO defines Quality of Life as a person's awareness of their locus in relation to their objectives, beliefs, values, and worries in the context of the society and culture that they live in. An individual's intelligence, self-esteem, and QoL are affected in a wide-ranging manner by a variety of elements, including their physical health, psychological state, level of freedom, communal relationships, and personal beliefs, and it is important to understand how they relate to significant structures of their surroundings (p.1). Hence, the WHO's classification is not intended to be interpreted as inflexible or fixed. It is intended to guide the interpretation of QoL as a concept. The concept of quality of life is, by definition, an extremely individualistic and vibrant paradigm that cannot be defined equivalently across the

board. Quality of life as it relates to health, illness, disease entities, or conditions is influenced by both personal and contextual factors. Morton and Izzard (2003) it has been suggested that quality of life can be defined more flexibly “encompasses an extensive range of physical and psychological characteristics and limitations that describes ability to function and derive satisfaction in doing so” (p884). According to this definition, QoL may be best viewed as the perceived discrepancy between what is actually available and what people think they need, want, or expect to be available to them. (Morton & Izzard, 2003, p. 884).

Life satisfaction is explained here as the level to which an individual is satisfied with their life. A good quality of life depends on the following factors: It is important to maintain physical, social, and emotional well-being; engage in interpersonal relationships; the opportunity for the development of a person's skills; exercise their rights; and the right to make an independent lifestyle choice. Individuals with chronic diseases, developmental disabilities, and those undergoing medical or psychological treatment, as well as those who are elderly, should strive to enhance their quality of life (APA Dictionary of Psychology).

To be considered a quality of life, one must consider the totality of human well-being, including physical, psychological, social, economic, and spiritual welfare. It is important to note that the HRQOL (Health-Related Quality of Life) is intended to examine QOL concerning disease and treatment. The preservation of HRQOL is important to the successful outcome of oncology treatments because these interventions aim to restore health and well-being. Achieving palliative outcomes is impossible without preserving HRQOL, so it is crucial to protect it when the treatment objective is palliative. In addition to influencing treatment selection and decision-making, HRQOL can also help to understand in relation to informing health policy and decision-making.

1.3.1 Head and Neck (HNC) Cancer and Quality of Life (QoL):

Quality of life (QOL) refers to the person's perception of their overall happiness, including physical, emotional, social, and functional aspects. In the framework of HNC, QOL has become an increasingly important outcome measure, as survival rates have improved with advances in treatment, and patients are now living longer with the disease. HNC treatment can add up to dysphagia, which is a common side effect, or difficulty swallowing, which can significantly impact a patient's capability to eat and drink. This can lead to a reduction in weight, malnutrition, and dehydration, which can further impact a patient's physical and emotional well-being. As a result, interventions to manage dysphagia, such as swallowing therapy and nutritional support, have been shown to improve QOL in HNC cancer patients (Chen et al., 2019).

Moreover, due to physical side effects, head and neck cancer treatment can also impact a patient's emotional and social well-being. For example, changes in speech and appearance can impact a patient's capability to communicate effectively and participate in community events. As a result, interventions to manage these changes, such as speech therapy and psychosocial support, have also been shown to improve QOL in HNC patients (Murphy et al., 2019). Overall, QOL has become an important outcome measure in head and neck cancer treatment, as it reflects the individual suffering from cancer, his/her perspective on the impact of the complaint and its management on their overall well-being, and the impact of treatment on that well-being. As a result, interventions to manage the physical, emotional, and social ramifications of treatment have become increasingly important in improving QOL in HNC patients.

1.4 Fear of Cancer Recurrence or Progression (FOR/FOCP):

Individuals who have been identified with cancer or other chronic diseases often experience the fear of recurrence or progression. This refers to the feeling of anxiety or apprehension associated with the possibility of a recurrence of cancer or worsening of the condition. Simard and Savard (2009), an individual suffering from fear of cancer recurrence is concerned that it may return or advance in the same organ or another body part. There is no doubt that many patients suffering from physical illness suffer from fears related to the actual illness itself. The fear of progression was the name we used for these illness-related fears (Dankert et al., 2003). In contrast to anxiety disorders in psychiatry, FoP should be distinguished from them. Neurotic anxiety disorders are characterized by the following characteristics: such as panic disorder, agoraphobia, and generalized anxiety disorder. This problem is not real or irrational. It is, however, significant to note that cancer patients are faced with several real risks; It is not unreasonable or inappropriate for them to react in this manner. It should be noted, however, that patients may go through long-term and excessively genuine fears that can adversely impact their quality of life and well-being. In this sense, we consider FoP to be the fear of patients that the disease will advance with all its biopsychosocial significances or that it will relapse in the future.

This is an instinctive, non-compulsive fear response that is fully understood by the patient. An individual fears an imminent or devastating illness based on his or her own experience. The symptoms of FoP correspond to those of other anxiety disorders in terms of emotion, cognition, behaviour, and physiological characteristics. Generally, FoP is a good rejoinder to the real ultimatum associated with diagnosing, treating, and managing illness. Depending on the state of FoP, it can be varied from functional to dysfunctional. Treatment should be provided to

patients with elevated FoP levels that become deteriorated, i.e., impacting their ability to cope, to adhere to treatment, to maintain their quality of life, or to function socially. Northouse (1981) considered one of the earliest empirical accounts of the fear of recurrence experienced by cancer patients. Lee-Jones et al. (1997) investigated the cognitive model. A cognitive-behavioural model for explaining the aggravating and management of cancer patients' uncertainties of recurrence was developed following a review of the accessible but still infrequent literature on this topic. Cancer patients have expressed realistic, illness-related fears when describing their fear of recurrence, as well as others. Does fear of progression differ from fear of recurrence in any way? There are many similarities between the two concepts. Researchers have examined fears associated with illness in a variety of settings, not just in patients with cancer. FoP is present in cancer sufferers and survivors, rheumatoid arthritis, and diabetes mellitus, as evidenced by our early studies (Dankert et al. 2003). A further finding came to the conclusion that disease-related concerns and worries are almost similar across the other examined illnesses. However, minor distinctions were found regarding the predominant fears of almost all illnesses-related groups (Dankert et al. 2003). Our conceptualization of FoP is based on a common approach. Fear of progression was used because it applies to various chronic diseases. A label such as this allows for the appropriate inclusion of various diseases with various disease courses, such as chronic remitting or increasingly progressive diseases. Psychology and oncology have largely underwritten the advancement of this concept of fear of recurrence. Throughout history, this phrase has mainly been used to describe cancer patients who are in diminution or who are illness-free and who are concerned that cancer will return (Northouse 1981). The term recurrence fear describes the fear that the tumour will return, progress, or spread to other organs. (Crist and Grunveld 2013, p. 978). In the work of Vickberg (2003), the definition in her paper was not provided verbatim. The article describes that FOP is defined as "the fear of cancer returning or progressing in the same or another part of the body" (Koch et al. 2013 & Thewes et al. 2012a, b). However, as evident from their different labeling, fear of recurrence and fear of progression reveal significant essential characteristics and are similar.

1.5 Positive Therapy

The goal of positive therapy is to help clients confront their psychological, emotional, and behavioural challenges by using a combination of Indian and Western techniques. Positive Therapy (Hamaltha Natesan, 2002), In this package, Western Cognitive Behavioural Therapy is combined with Eastern Yoga techniques to help people develop a pleasing personality and a positive perception of life. Physical as well as mental health is improved as a result of it.

Positive emotions such as anger, worry, anxiety, etc. can be managed through the use of this technique. It also enhances the individual's overall personality. Four approaches are employed by it:

- Relaxation Therapy
- Exercises
- Counselling and
- Behavioural assignments.

Techniques based on yoga Relaxation Therapy:

Relaxation Therapy consists of three phases:

- Deep Breathing Practice
- Relaxation Training
- Auto Suggestions

Deep breathing practice

Instruction given here during the deep breathing practice to the subject was to take a breath very slowly, and the individual needed to count four seconds while inhaling and exhaling with six seconds counting. The individual was instructed to repeat the same breathing type five times with open eyes and five times with closed eyes

Relaxation therapy

After Deep Breathing Practice, during the experiment, participants were instructed to gently close their eyes and wear a pleated hankie or band over the eyes to confirm that they were completely in the dark (The nose should not be covered). Then, I need to follow the instructions given by the therapist.

- **Auto suggestions**

The subjects were asked to continue deep breathing and enjoy the relaxed state, and auto suggestions were given (three times each).

- **Exercises**

Positive Therapy involves three exercises, namely,

- Tension Releasing Exercise
- Smile Therapy and
- Laugh Therapy

All the exercises were given to the subjects to help them develop a cheerful mind by releasing their tension.

- **Smile therapy**

Nowadays, many people have forgotten how to smile as life has become increasingly mechanical. The power of a smile is not just to alter facial expressions but also to change a person's mood from sadness to happiness. Thus, it is possible to replace negative emotions with positive ones by developing the smiling habit.

As a result, when someone smiles, they cannot experience undesirable feelings such as anger, worry, fear, anxiety, and fear.

Laugh therapy

When compared to smiles, laughing has become rarer. Cardiologists maintain that laughing can prevent heart disease. Laugh Therapy can be practiced in groups, preferably with family members or friends.

30 Second Laughter: Take 30 seconds to laugh nonstop. You may shrug your shoulders as if to express your disapproval, "*I don't know why I am laughing.*"

Gradient Laughter: Begin by smiling, then move to a lightly laughing state, and eventually begin to laugh. The tempo and volume of your laughter should gradually increase.

Happy Memories Chuckle: Here, the participants are instructed to recall their old memories. It normally takes 90-120 seconds.

Techniques based on (CBT)

- **Counselling**

The subjects' personal, social, occupational and emotional problems were solved through counselling. In Positive Therapy, Counselling involves below therapies and trainings:

- Rational Emotive Therapy

- Cognitive Restructuring
- Assertiveness training.
- Rational emotive therapy

The unreasonable beliefs and thoughts of the subjects is addressed here. For example- as "I am not worthy", "I am used", etc., which were treated here with the help of rational thinking process.

- **Cognitive restructuring**

This helps the subjects replace negative cognitions with positive self-enhancing thoughts and actions.

- **Assertiveness Training**

It is the ability to act in your own best interest that defines an assertive individual, Self-advocacy, self-expression, self-control, and self-choice are characteristics of an individual who stands up for themselves. An assertive person conveys the subsequent message: "I'm OK, and you're OK." Assertiveness is characterized by an Integrity, directness, self-expression, and self-improvement approach. During the course of his/her actions and even afterward, he/she feels confident and self-respecting.

- **Assertive Techniques**

Broken Record –here, it teaches the individual how to stick to your point.

Fogging – how to accept the criticism without denying it this was trained in this session.

- **Behavioural Assignment:**

The subjects will be asked to resort to the following healthy behaviours:

- Involve in some activity and adore it.
- Having your friends around is a pleasure; try to enjoy that moment.
- Have some recreation like playing games, reading books, etc.,
- Learn to laugh heartily, enjoy jokes, and develop a sense of humour.
- Develop the habit of breathing practice or deep breathing for five minutes in the early morning, facing towards the east, and five minutes at sunset, facing towards the west.

- Have deep breathing as and when possible, throughout the day.

In conclusion, we can learn the major factors regarding the HNC with the help of literature, which is a great source of knowledge and information. It also provides us with a valid source of upcoming changes and deletions regarding psychosocial oncology regarding the HNC and QoI in that particular area.

Chapter 2

Literature Review

A valid source of knowledge is obtained through the literature available and is an essential component of any research. Whenever a study is conducted, a literature review plays an important role. We will discuss the research literature in this study, which contributes to the field of positive therapy, QOL, anxiety, and FOR and progression of HNC. These variables are primarily discussed in the areas of health psychology and psych-oncology. Positive therapy is still at an embryonic stage when compared with other Western-based psychotherapies. Even though positive therapy still has much room for development in many fields of human existence, it has also been demonstrated at a very minimal level that psychotherapy is effective with various populations.

This literature review is focused on getting some that are shedding light on the quality of life, one of the major aspects that are given more importance nowadays in medicine. As far as quality of life is concerned, it has been shown by numerous studies that it primarily affects populations suffering from chronic illnesses such as cardiovascular disease, diabetes, mental health diseases, and cancer. Regardless of the type of cancer, quality of life is compromised; however, we see that people who are suffering from HNC are frequently highly vulnerable in terms of their daily functioning. A common form of psychological concern for cancer patients is the fear of recurrence or progression. This is not an irrational fear. It is a real one. Patients with cancer are forced to face these challenges with a great deal of sadness. It has been observed that many cancer patients are not even aware that they are experiencing such fear, as they are unable to recognize that they are feeling these emotions and are even unable to express the same at times. Anxiety in cancer patients' experience is not always clinical. It may occur in conjunction with the diagnosis of the disease, or when they are informed about the treatment procedures. At the same time, they are concerned about their economic well-being due to the expense of their treatment, social commitment, and situations.

2.1. Head and Neck Cancer

Albert et al. (2022) analysed the determinants of body image dissatisfaction and its longitudinal course in patients with HNC. Among patients with HNC and its biopsychosocial determinants, body image concerns are multifaceted. To predict the height of body image concerns, clinicians should pay particular consideration to these biopsychosocial markers in their clinics and tailor communication or referrals for support based on these findings.

Cherba et al. (2022) conducted a qualitative study that looked at the recordings of 88 pre- and postoperative sessions with 20 patients and aimed to address the need for experiential studies on patients with the disease and provider consultations about body image issues. As a result, it seems that clinical consultations may focus more on issues related to physical recovery, cure, and survival, which could leave unanswered questions concerning how the surgery will affect appearance and function. The findings of this study might help surgeons comprehend their patients' interactions with them more fully during clinical consultations.

Esther Deuning et al. (2022) intended to investigate patient FCR following a diagnosis of HNC, identifying the trajectory of these fears and the trajectory of FCR as influenced by several factors. Approximately one in five patients with HNC experiences persistently high FCR six months after treatment, but most have low or declining FCR after diagnosis.

Henry et al. (2022) aim to find out about the newly diagnosed patients with HNC: (1) Concerns regarding body image, their prevalence, and their course; (2) A correlation between body image concerns and cancer diagnosis (pre-treatment); (3) Body image concerns following treatment: predictors; and (4) About anxiety, depression, suicidal ideation, and support related to body image concerns (i.e., Whether the patient is satisfied with the support provided by the physician, their social/family wellbeing, and the need for unmet support), As well as the misuse of alcohol and drugs. After being diagnosed with HNC, this longitudinal study assists in identifying patients who are more likely to experience body image disturbances. When a cancer diagnosis is made, clinicians should be particularly attentive to concerns about body image and physical symptom burden, as well as neuroticism, and they may wish to focus on these features in imminent defensive mediations.

Nikita et al. (2022) examined HNC patients undergoing follow-up care at a primary care hospital based on their body image distress. Due to variations in body appearance, HNC patients reported significant distress regarding their body image. The number of female patients who experienced distress regarding their body image increased following surgery at a young age. Another potential strategy for improving facial appearance to overcome the negative effects of body image is to recommend cosmetic surgery and nurse-led psychosocial nursing interventions at repetitive check-ups.

Silvia Cerea et al. (2022) determined the relationship between QOL and body image distress among HNC patients. Moreover, it examined gender differences among patients with HNC based on relevant psychological variables. Several psychological variables were significantly different between genders, including body image distress and pain, which were negatively correlated with quality of life. Patients with HNC should be offered psychological interventions

that target body image distress and pain to enhance their QOL while taking gender differences into account.

Zhang Xu et al. (2022) aimed to synthesize indications of features concomitant with FCR. Based on the results of this study, precise interventions can be designed for cancer survivors with FCR. A theoretical framework relating to FCR in nursing will be developed based on the findings of this study.

Melissa Henry (2020) designed a study to identify the supportive care needs of patients who have HNC immediately following treatment, analysing the predictors of unmet needs before and after treatment and comparing immediate post-treatment needs with those in long-term survivorship. To improve the excellence of caution for patients with HNC-P following treatment, this study identifies areas that require further development and unmet needs as determined by early determinants. To alleviate the burden associated with the disease and to proactively address patients' needs, HNC clinics may wish to perform routine assessments of anxiety, neuroticism, and burden from other life events.

Marianne Boll Kristensen (2019) According to the study, head and neck cancer patients have many difficulties eating, making them vulnerable to malnutrition. Speech pathologists can improve swallowing function through pre-habitation swallowing exercises. Improvements in outcomes have been demonstrated with a multidisciplinary approach to care, which encompasses nutritional screening, assessment, and intervention in terms of Enhancing the quality of life and nutritional status by meeting nutritional requirements. HNC has increased in incidence rather than as a result of heavy alcohol and smoking consumption, NIS is often experienced by patients with HNC, requiring nutritional support. To detect nutritional risks, there are valid screening tools on the market, including electronic triage systems, but additionally, patients should automatically consult a registered dietitian with HNC, and A nutrition intervention should be provided to the patient. Exercises designed to improve swallowing outcomes before rehabilitation are effective, but exercise adherence declines during treatment. It is recommended that ongoing nutrition support be provided when dietary intake is insufficient. Patients' nutrition and swallowing outcomes have been improved through multidisciplinary teams and telehealth with HNC and in command. For the individual who is suffering from cancer to receive the best possible care, they need ongoing support after treatment has been completed.

Postone (1998) aims to review the importance of psychosocial interventions in cancer treatment and provide an explanation for the historically low utilization of long-term psychological interventions for medically ill patients. During the initial phase of treatment,

there are several issues related to the illness that stand out. Ongoing therapy has several special features, including setting, denial approach, goal-focused approach, and transference/countertransference field. An interpretive and supportive approach is employed in this approach.

2.2. Positive Therapy

Saranya et al. (2015) conducted a study on 50 teachers. They found that positive therapy intervention significantly impacts stress management and self-esteem enhancement. Before the intervention, all the teachers experienced high levels of stress and low levels of self-esteem. However, after the therapy, the mean stress score decreased to 4.38, whereas the mean self-esteem score increased significantly to 22.92. These findings indicate that positive therapy intervention can be a highly effective tool for improving the well-being of teachers and reducing their stress levels.

Thenu et al. (2013) identify that, according to research, the stress level among parents of special children is higher than average. However, positive therapy intervention has been proven to decrease stress levels in these parents. The study also found that worry was the most common negative emotion experienced by parents. Still, there were also other negative emotions identified, such as depression, fear, anxiety, irritation, guilt, hatred, and anger. In addition, the samples experienced physiological symptoms like fatigue, loss of appetite, sleep disturbance, weakness, body pain, and headache. Fortunately, after undergoing positive therapy intervention, the negative emotions and physical complaints significantly decreased in the selected sample group.

Rohini (2012) investigated a study focused on parenting children with special needs under positive therapy to manage anxiety and improve quality of life. A total of 45 samples were collected for this experimental research. The findings of the study showed that the level of anxiety was very high among the sample before the positive therapy intervention, with an average of 25.29. Additionally, the quality of life was moderately disturbed among the sample, with an average of 24.67. However, after the positive therapy intervention, it was observed that the level of anxiety decreased to a moderate level, with an average of 4.38. Furthermore, the quality of life improved significantly towards a high level, with an average of 35.31. These results suggest that the positive therapy intervention was effective among the population.

Rajalakshmi et al. (2012) that Recent research has revealed that positive therapy intervention can have a significant impact on reducing depression levels in cancer patients. Before undergoing this type of therapy, a study conducted on a sample group of 32 cancer patients revealed that nearly all subjects were experiencing high levels of depression, with the majority

also reporting negative emotions such as fear, anxiety, and anger. Following completion of the positive therapy intervention, the sample group showed a marked decrease in depression levels, with 37% of patients reporting no depression at all.

Rajalakshmi et al. (2012) conducted a study that found that positive therapy can help cancer patients develop positive character traits and gain confidence in confronting life problems. The study aimed to enhance cancer patients' general well-being through positive therapy intervention and involved a sample group of 32 individuals. Before undergoing the therapy, the entire sample showed poor general well-being and was affected by negative emotions such as fear, anger, and worry. However, after the therapy, 35% of the sample developed the best overall general well-being, while 65% achieved a moderate level of general well-being. None of the subjects showed poor general well-being anymore.

2.3 Quality of Life

Brennan et al. (2022) examined how attitudes, QoL, requirements, and preferences were assessed and described during the three years of HNC patient follow-up. It's crucial to remember that these fundamental needs still remain even though there haven't been any significant changes in patients' demands, preferences, or attitudes towards follow-up. The paper covers the difficulties in addressing prognostic expectations and determining the requirements of specific patients.

Van Beek (2020) associated anxiety and depression symptoms in HNC patients either pre-treatment or at the end of a 24-month follow-up after (chemo) radiation treatment based on population-based and clinical factors, HRQOL, and HNC symptoms. Patients frequently experience symptoms of anxiety and depression following an HNC diagnosis. Young age (anxiety), chemotherapy treatment, lower HRQL, and higher degrees of symptom load (both anxiety and depression) are some of the factors linked to this illness.

Diego Tetzner Fernandes (2020) intended to scrutinize the consequences of a patient education video on the patient's coping ability, understanding, satisfaction, quality of life, and emotional state at various points in the treatment process. In cancer centres, audio-visual tools have been shown to help improve patients' understanding of radiotherapy. Furthermore, patients must be informed regarding osteoradionecrosis and radiation-related caries.

Davies et al. (2020) investigated the significant burden of mortality and morbidity associated with HNC worldwide. Radical treatment options run the risk of causing facial deformity, functional issues, or other difficulties that might negatively impact cancer patients' quality of

life. According to guidelines, HRQoL should be assessed frequently during treatment to qualify for refinement of treatment protocols and custom-made continuation, however, questionnaires are often lengthy and inconvenient to complete. Individuals with this condition's HRQoL were evaluated using criteria that were both condition- and general-specific. Clinicians and researchers must be very clear about the objectives and results they are interested in before selecting HRQoL measurements. Additional research must ascertain whether these measurements can detect change over time.

Simon Dunne et al. (2019) examined how self-management practices impact quality of life after HNC treatment. The results suggest that cancer survivors might benefit from self-management strategies that encourage proactive problem resolution, self-talk, and skill development. More studies are necessary to determine whether higher self-monitoring in HNC is linked to worse outcomes.

Chindhu (2019) investigated how HNCs and their treatment affected facial function and appearance because these malignancies can damage anatomical locations near the face. Continuously evaluating the needs of HNC patients is essential to delivering high-quality care and advancing QOL for these patients. This study looked at the content and psychometric characteristics of available unmet needs assessments in the HNC setting. We suggest PCI to assess unmet requirements in HNC contexts since content validity is more significant than quantitative psychometric features.

Doyle and MacDonald (2019) recognized the QoL and WB built under the HNCa framework. It is also important to identify and describe the features of addiction that have an impact on the health and quality of life of people with cancer. Several approaches were examined regarding the present stance towards QoL methods and the theoretical underpinnings of identifying mistakes connected to them. The clinical implications of quality-of-life research in clinical practice and the clinician's role in this context were discussed. This chapter aims to promote the best results by analysing the management of HNCa and reflecting attention on combatants' quality of life.

Verdonck-de Leeuw's (2019) study examined the aims of advancing interdisciplinary research, emphasizing more focused work on enhancing the quality of care and quality of life in the patients suffering from the HNC, in addition to their informal caregivers. The NET-QUBIC data was made available to the researchers who had expressed an interest in it, enabling them to pursue new lines of inquiry in areas such as clinical research, liquid biopsy analysis, molecular digital pathology-based predictive biomarkers, patient quality of life, interdisciplinary research, and survival data-based studies.

Senchak (2019) studied the severe physical and psychological anguish that HNC patients feel and how it affects their quality of life (QOL). Only a few interventions have been looked at in this patient population to enhance the quality of life. Larger studies with more reliable randomization designs are necessary to determine the efficacy of therapies intended to improve QOL and/or mood in patients with HNC. To lessen the physical and psychological consequences related to HNC, future studies must also consider methods for implementing and distributing these therapies throughout the healthcare system.

Richardson (2019) study aims to identify psychological management that may enhance HNC patients' quality of life and lessen psychological distress (depression and anxiety). A long-term study and further funding were needed for this research. This would enable the formulation of recommendations based on empirical data regarding the interventions most appropriate for inclusion in clinical practice.

Nikolai (2019) assessed and identified patient suffering and QOL constraints in the treatment of HNC using intensity-modulated radiotherapy (IMRT). According to the study's findings, all measures deteriorated over the course of the treatment before returning to their pre-intervention or pre-management levels three months later.

Simon Dunne (2019) evaluated self-management practices and compared them to treatment recommendations for HNC based on functional outcomes (FoR) and quality of life (QoL), because studies that look at how cancer patients' QoL and FoR are affected by self-management practices are few. The results suggest that cancer survivors might benefit from self-management strategies that encourage proactive problem resolution, encouraging self-talk, and skill development. It is necessary to conduct more studies to determine whether higher self-monitoring in HNC is linked to worse outcomes.

Laura Isabel Lampert Bonzanini (2019) conducted a cross-sectional study of QoL for oral cancer patients undergoing 3-D conformal radiation; We assessed the association between clinical and sociodemographic factors and the oropharynx, hypopharynx, or larynx using multivariate analysis. In individuals with HNC, a variety of variables, such as trismus, hyposalivation, advanced tumor stages, and younger age at diagnosis, affect QoL. We need to apply a particular strategy that emphasizes these elements if we are to confirm improvement in QoL over a longer period of time.

Yu Lee (2018) conducted a six-month follow-up study. The patient's primary caregiver's partner or spouse was evaluated based on their quality of life (QoL) as opposed to non-spouse carers. In this study, a six-month observation and ongoing follow-up were conducted. Spouse caregivers of HNC patients experience more severe mental health impacts than by non-spouse

carers. The caregiver's psychological load should consequently receive additional or enough attention from the clinician throughout patient care, especially from the caregiver's spouse.

Calver (2017) conducted a study to determine the effectiveness of psychological intervention in improving QOL for those suffering from HNC. In July 2016, a systematic search across five databases was done. This review further emphasizes the small amount of evidence in this field. Very few studies currently use small samples and have discrepancies in the type, duration, and intensity of interventions, the duration and rigor of follow-up measures, and the caliber of methodologies employed. Additional research is required to discuss these shortcomings and come to more conclusive findings concerning psychological intervention and its effectiveness in this population.

Eamar Algtewi (2017) investigated a potential link between utilizing Online Support Groups (OSGs) and HRQOL for patients with H&N cancer. Future studies may examine various cancers and chronic health conditions, such as HNC and cancer of different site-specific types. As shown by both this study and earlier literature, the majority of people affected by H&N cancers and those using OSGs for H&N cancer are older.

Yi-Shan Wu (2016) conducted a study in which HNC patients had their psychological morbidities evaluated pre-treatment, three months after treatment, and six months after treatment. The distinction between patients with and without depressive disorders was also evaluated. Patients underwent varying degrees of anxiety and depression over the first six months of their HNC treatment. Abnormal salivation, dietary issues, and trouble maintaining social contact were among the top risk factors for depression.

Richardson (2016) studied the shifts in patients' and caregivers' perspectives of illness between the time of diagnosis and six months afterward. Additionally, the study looked at whether differences in perceptions between patients and their caregivers at diagnosis were related to better HRQL at six months. Over time, HNC is viewed differently by patients and their caregivers. A lower level of patient HRQL in the future is predicted by a larger gap between caregivers' and patients' assessments of illness at diagnosis.

Simon Dunne (2016) conducted a systematic review of the evidence about psychological factors that relate to the quality of life consequences for HNC fighters in the post-management period between 2004 and 2015. Numerous psychological traits that are predictive of quality of life are common among HNC survivors. By routinely screening and offering early therapies that target distress, HNC survivors may be able to enhance their quality of life after treatment.

Long-term, population-based research that uses more structured and uniform dimension methodologies will be necessary to advance intervention and reassurance care approaches.

Rogers (2015) aimed to develop a simple screening question about fear of recurrence that could be incorporated into the University of Washington Quality of Life Questionnaire (UW-QOLv4) for use in clinical practice. FoR affects younger patients who have recently undergone radiation or chemotherapy. UW-QOLv4 may be enhanced with a FoR screening question that may assist in identifying patients who require additional support due to significant FoR.

Maria Benedetta Ninu (2015) examined the posttreatment morbidity suffered by HNC patients, who typically face the highest levels of cancer patient morbidity. The objective is to provide insight into the quality of life and psychological suffering of HNC patients after experiencing various treatments throughout the first year after management. The DT and EORTC questionnaires were useful for tracking distress and QOL in patients with HNCS. Monitoring each patient's quality of life during treatment and follow-up visits may be beneficial.

Julia R Van Liew et al. (2014) conducted a study, and the findings suggest that HNC survivors who experience FOR may be at risk of decreased HRQOL and an increased likelihood of smoking.

2.4. Fear of Recurrence/Progression FOR/FOP

Nik Ruzyanei Nik Jaafar et al. (2022) examined patients within a year of receiving a diagnosis of HNC, and an inquiry into patients' PTG levels was done. In addition, it was examined whether PTG levels and unmet supportive care needs, cancer progression fear, and PTG levels are related. Within a year of diagnosis, PTG levels in HNC patients were reported to be high. However, to improve patients' psychological well-being, psychosocial interventions should place a strong emphasis on addressing their unmet needs in terms of daily living and physical quality of life, as well as lowering their anxiety about their illness progressing.

Riggauer et al. (2022) examined the study regarding the influence of fear of recurrence on patients' QoL. Recognizing the aspects that predispose patients to FoR may be essential for diagnosing and treating them. A history of recurrence or second primary malignancy and female sex are associated with FOR in HNC patients. Clinical practice and future research should address this disease due to its prevalence.

Dimelow et al. (2021) examined the COVID-19 pandemic patients who had survived HNC and were interviewed regarding their observations of FOCR and fear of COVID-19. It is

important to discuss the means and incidence of opd-based follow-up with patient groups and with specific individuals before making any changes in light of COVID-19.

Mirosevic (2019) study focused on assessing the prevalence of the elevation of FOCR and the demographic, mental, psychological, and therapeutic factors associated with this advancement before the start of treatment. 52.8% of individuals whose FOCR increased had a history of specific anxiety or severe depressive disorder-related worry dating back over a lifetime. Additionally, 21.1% of people claimed to be troubled by a history of anxiety or a serious depressive condition. According to the research, higher levels of FOCR did not correlate with any clinical traits, but anxiety-related symptoms, younger populations, a variety of anxiety-related worries, introversion as a personality trait, higher levels of sexual cooperation needed, and the fact that you were a former smoker all strongly correlated with higher levels of FOCR in people with newly diagnosed HNC.

Sharpe (2019) investigated a randomized controlled trial in which Conquer Fear proved to be more effective than attention control (relaxation training) for overcoming cancer recurrence fear (FCR). As part of this study, he examined the mediators and moderators contributing to the relative effectiveness of conquering Fear versus relaxation in treating fear. In subjects with higher levels of FCR, conquering Fear was found to be relatively more effective than relaxation. Based on the mediation analyses, it appears that reducing unhelpful metacognitions and intrusive thoughts during treatment is the most likely mechanism of treatment efficacy. This is consistent with the theoretical framework that underlies Conquer Fear.

Humphries (2018) carried out a study to determine whether emotional talk can be managed during initial review appointments for patients with breast cancer and whether it is possible to predict FCR after 6-8 weeks of radiotherapy. During the second review meeting, patients' emotional expressions and TR responses predicted follow up, follow-up rates. Communication processes have been found to have a significant impact on this specific distress component of survivorship experiences.

Mahendran (2018) conducted a study on a persistent and distressing psychological concern for cancer survivors: FOCR affects their recovery and QOL. In Singapore, we do not know whether FCR is prevalent. In this cross-sectional study, an examination of FCR in mixed-cancer survivors and the factors associated with FOCR was directed locally to identify possible factors contributing to FOCR. For the first time, a study evaluated the level of FOCR among cancer survivors in Singapore. Based on the results of the study, the level of severe or pathological FOCR was four times higher than that found in international studies. Compared with

international studies, the total FCR score was similar. The findings indicate that this issue deserves greater attention despite its lack of recognition and acknowledgment.

Ozakinci, et al. (2018) focused on determining how survivors of HNC express their fears of recurrence in follow-up consultations, how healthcare professionals address recurrence fears, and how survivors perceive this interaction. It has been found that Patients may be reluctant to discuss their FCR with their clinicians for fear that they will appear "ungrateful" or that they will damage an important relationship. According to the findings, patients can benefit from implementing FCR when done with their doctors.

Maguire (2017) conducted a study whose main objective was to establish the role of caregiver-related stressors in predicting FOR in caregivers of cancer patients with HNC. Caregivers of patients with HNC cancers are showing a higher level of worry, which is extremely related to many similarity index factors. These factors can be addressed through the aim of the treatment, which indicates a drop in the level of concern that is related to the FOR, mostly in the caregivers of individuals who are suffering from cancer. Among the most effective methods of reducing cancer-related worry are to minimize the liability of care and to reduce feelings of isolation, with profound assistance for both those who are providing the care and the ones who fight cancer and come back as survivors.

Maguire, et al. (2017) studied to determine whether care-related stressors, as opposed to survivor qualities, are a prognosticator of FOR in patients with HNC. Some characteristics make HNC patients' caregivers more prone to worry about cancer, highlighting the need for caregiver treatments that lessen FOR.

Mititelu (2016) evaluated whether there is any relationship between Locus of Control (LOC), physical activity, and fear of recurrence among the patients who were part of the community cancer support program. According to the findings of this study, LOC and physical activity represent social supports that moderate the negative consequences of fear of recurrence, as proposed in the direct effect model. The results of this pilot study suggest that a stronger internal LOC is associated with better coping when facing the fear of a recurrence of cancer. Furthermore, those with higher levels of education also report being able to cope more effectively. In addition, undergoing a surgical procedure is associated with fewer functional impairments, which may be attributed to a lower fear of recurrences.

Jade et al. (2012) conducted a methodical review to investigate factors associated with FCR in cancer patients. In addition to demographic, clinical, and psychological factors, cancer recurrence fear is a complex issue. FCR has been evaluated using a variety of assessments, which can complicate comparisons between studies. Some studies have provided contradictory

evidence, while others have reported contradictory evidence. Current research in this area is inconclusive. Further research is required to clarify these inconsistencies.

Ghazali (2012) examined longitudinal trends and predictors. Approximately 35% of HNC survivors exhibit significant FoR, and the prevalence remains stable over time. Patient-related factors include the patient's age, temperament, excessive concerns, and FOR, which are identified as the most prominent and significant prognosticators of lasting substantial FOR. Accordingly, PCI can be used to classify sufferers who have a high level of potential for significant FoR. In addition to clinicopathological status and treatment mode, the prognostic factors for HNC are unknown. It is estimated that approximately thirty percent of individuals who are suffering from cancer will show familiarity in the context of a substantial level of FoR constantly over time, and the remaining twenty percent will experience variabilities, possibly related to variations in the concomitant worry and low temper. Providing psychological intervention to these two subgroups may be necessary and beneficial.

Crist et al. (2012) assessed a systematic review to recognize the features connected with FOR in individuals suffering from cancer. In addition to demographic factors, clinical factors, and psychological factors, cancer recurrence fear is a complex issue. FCR has been evaluated using various tools, which complicates comparison between studies. Some studies have provided contradictory evidence, while others have reported contradictory evidence. Current research in this area is inconclusive. Further research is required to clarify these inconsistencies.

Hodges et al. (2009) studied with the prime objective of comprehensively examining disease and distress concerns in patients and caregivers. As a result of early concerns and anguish inside individuals, there is limited evidence of some influence between qualities within and between individuals in the dyad. A prospective dyadic study is required to ascertain the magnitude and relationship of these worries over an extended period of time. To lessen the severity of this disease problem, intervention may be required early in the course of the illness. Llewellyn et al. (2008) conducted a study in which Leventhal's Common Sense Model (CSM) was used to examine predictors of FOR in HNC survivors. It was found that optimism was the strongest prognosticator of fear, sovereign of anxiety, or the concern of fear conveyed before the preceding treatment, even though components of cognition and feelings-related demonstration and coping methods were mostly related to the FOR.

Mellon (2007) studied aspects associated with FOR identified in an inhabitant-based sample (N 14 246) and whether cancer fighters or their families interacted with each other regarding fear of recurrence. Analyses were conducted using the Actor-Partner Interdependency Model, which is based on a family framework. A significant difference in FOR was found amongst

those individuals who came out of all cancer threats and fought with them and those who had provided all support and care during that fight or struggle, with caregivers having higher fear than survivors. Both those individuals who come out of all cancer threats and fight with it and those who provided all support and care during that fight or struggle exhibited elevated FOR when under stress in the family, when the illness had a less positive meaning, and when they were older. It is precarious to examine probable features that may stimulate both those individuals who come out of all cancer threats and fight with them and those who have provided all support and care during that fight or struggle for long-term cancer survivorship because fear is related to QOL, distress, and psychological adjustment as important outcomes.

Humphris (2003) conducted research to assess the FOR in patients with orofacial cancer and their psychological morbidity. It was significant at most data collection points that psychological morbidity was positively associated with fears of recurrence, with the exclusion of depression, which was more autonomous of these concerns. It is recommended that further research be conducted to identify and test new approaches to assisting patients who are vulnerable to psychological disorders, particularly those experiencing fear of recurrence.

2.5. Anxiety

Ainsley Ryan Yan Bin Lee et al. (2023) evaluated the risk factors associated with sadness and worry in older cancer patients as directed. Mental health or emotion-related indications concomitant with cancer can have a profoundly negative impact on older adults. The objective of this review is to point out a range of defensive and aggravating factors recognized from cohort studies that may provide policymakers with the basis for tailoring and individualizing interventions for the management of depression, anxiety, and the related liability in this susceptible population. Studies that evaluate anxiety are relatively scarce, which indicates an important research gap.

Breidenbach et al. (2022) In this study, he describes the prevalence, development, determinants, and predictors of depression and anxiety 5 or 6 years after diagnosis. He identifies predictors for depression and anxiety increasing over time. Breast cancer survivors in Germany face significant burdens due to anxiety and depression. Many clinical and sociodemographic predictors are identified. After acute treatment and for a long period of time, psychosocial support is necessary. We need to research the psychological burdens experienced by long-term survivors of breast cancer within the identified vulnerable groups.

Berta Obispo-Portero et al. (2022) analyzed the excessive worry, hopelessness, and depressive intensities of cancer patients with progressive involvement in the disease during the COVID-19 pandemic and the association between their sociodemographic characteristics,

clinical characteristics, and psychological characteristics. Anxiety and depression were common symptoms in these patients undergoing treatment during the pandemic for advanced cancer. Early diagnosis and intervention strategies are required for specific subgroups of patients, such as young women with a long survival period.

Davis et al. (2022) studied determined whether depression or anxiety preceded a diagnosis of pancreatic cancer (PC). Furthermore, it is important to investigate whether depression or anxiety associated with PC are associated with compliance and survival. In comparison with the general population, PC patients were more likely to experience depression or anxiety. An association was found between the presence of psychiatric symptoms before diagnosis and reduced utilization of chemotherapy. Consequently, if these symptoms are identified and treated promptly, they may have a positive effect.

Ellentika Chayadi et al. (2022) reviewed MBSR, MBCT, and MBSR treatments to provide the most recent evaluation of those treatments. Oncology populations have reported reductions in depression, anxiety, and chemotherapy-related fatigue. Researchers found that MBIs decreased depression, anxiety, and chronic pain symptoms among cancer patients.

James et al. (2022) assessed the prevalence, severity, and associative characteristics of PSA anxiety in the context of FCR. Despite having been associated with poor QoL and mental health symptoms when present, FCR and PSA anxiety remain prominent symptoms among patients with prostate cancer. As part of repetitive follow-up care, we should screen for these constructs and refer our patients to the appropriate services.

Yang et al. (2022) conducted a study on Breast cancer patients to determine how FCR is related to anxiety and depressive symptoms. Breast cancer survivors experience depression and anxiety symptoms near one another. In contrast, FCR may have been considered a relatively independent, unique experience that attenuated ties to the anxiety and depression communities. As important transdiagnostic symptoms, anxiety symptoms, particularly "uncontrollable worry," relate to diverse communities. Researchers found that interventions that enhance the feeling of personal control and alleviate excessive worries could prevent or reduce the symptoms associated with FCR, anxiety, and depression.

Francisco José Sánchez-Torralvo et al. (2021) examined whether anxiety and depression symptoms were prevalent among cancer patients and whether malnutrition was associated with such symptoms. It is common for oncological inpatients to show symptoms of anxiety and depression. Malnutrition has been linked to anxiety and depression symptoms in patients with cancer who are hospitalized.

Henry (2020) conducted a study to identify these care needs of patients who have had HNC patients immediately following management, Investigate early forecasters of unmet needs and comparisons between immediate post-treatment needs and needs at a later stage in the recovery process. This research aims to categorize areas that require further development to improve the quality of health care for people with HNC-P in the immediate post-treatment period and to determine early indicators of unmet needs. To alleviate the burden associated with the disease and to proactively address patients' needs, HNC clinics may wish to perform routine assessments of neuroticism, burden, and anxiety from other life events.

Beek (2020) The first two years following the diagnosis of HNC are characterized by indications of excessive worry and depressive thought processes or conditions. There are several factors concomitant with this illness, including young age (anxiety), chemotherapy treatment, poorer HRQL, and higher levels of symptom burden.

Stark et al. (2020) aimed to assist healthcare providers, such as nurses, social workers, and pharmacists who are not specialists in mental health, in understanding the nature of anxiety in cancer patients and separating the symptoms of morbid anxiety from the symptoms of normal anxiety. Furthermore, a review was conducted to determine how cancer care professionals may use management strategies to alleviate or maintain anxiety in cancer patients, with particular emphasis on the importance of recognizing specific patterns of communication that may function to alleviate or maintain anxiety.

Dinapoli (2019) studied HNC patients with unbearable anxiety experiencing radiotherapy and found that they may benefit from eye movement desensitization and reprocessing (EMDR) ministrations. A limitation of this study is the inability to infer causality from a case report, which makes it impossible to generalize the findings from case reports. It should be noted that the total HADS score was still clinically significant at the last session, and the associated issues needed to be reprocessed during subsequent sessions. EMDR's efficacy in this patient population requires further research (RCT) with a larger sample size. The findings from this case study can encourage psycho-oncologists using CBT or other psychological treatments to consider the benefits of EMDR, especially for those patients with H&N who have a high potential for anxiety disorders.

Henry (2019) conducted a study to determine the determinants of anxiety and depression symptoms. Historical and contextual aspects were investigated. Immediately following a patient's HNC diagnosis at three, six, and twelve months. In the context of HNC, a variety of broader personal and contextual elements, as well as historical factors, should be taken into account.

Klug (2019) conducted a study using Promoting Action on Research Implementation in Health Services, aimed to elicit and analyse HP perspectives on mask anxiety As a guide for developing mask anxiety reduction interventions that can be implemented. Successful interventions are based on several key principles identified by participants. To effectively intervene against mask anxiety, we identified two significant barriers: 1. As far as its prevalence and predictors are concerned, there is a lack of empirical evidence, and 2. The health system may be unable to respond to changes due to contextual and systematic hurdles. In light of these findings, it is necessary to conduct additional descriptive studies and develop interventions that will provide solutions to these challenges.

Sato (2019) examined the correlation between the severity of anxiety and depression and the original MAC subscales in male patients with HNC and inspected the correlations between MAC subscale scores and apprehensiveness and depressive states in male sufferers with HNC. Nineteen of the 40 items originally included on the MAC scale were excluded from the factor analysis, and three coping styles were developed from the remaining 21 items: Adjustment to negative situations, adjustment to positive situations, and abandonment. Male patients with HNC tended to exhibit abandonment, while mixed-sex patients tended to display both Negative and Positive Adjustment styles. During psychological distress, men with HNC exhibited a specific coping style called abandonment.

Nixon (2018) provided a safe level of care to patients with HNC; a thermoplastic mask must be used during radiotherapy treatment; the extent to which such treatment invokes anxiety In the individual undergoing treatment is unknown (i.e., "masking anxiety"). One-quarter of patients receiving radiotherapy for HNC reported mask anxiety. To ensure early detection of the disease and to support patient preparation for mask wear, routine screening and patient education were elicited from participants. Current mask anxiety management could be improved with the use of strategies during RT.

Rhoten (2018) conducted research to examine the relationship between depressive symptoms and social anxiety in patients undergoing treatment for HNC cancer and their perception of neck function. In patients with HNC, impairment of physical function and psychological distress are often intertwined.

Huang (2017) investigated that anxiety and depression, management compliance, and outcome may be negatively affected in patients with HNC. He aimed to determine whether hyperlipidaemia is associated with new-onset anxiety and depression after the diagnosis of HNC, as well as whether statins influence the outcome. It was our objective to find out whether hyperlipidaemia is associated with new-onset anxiety and depression following an HNC

diagnosis and whether statins play a role in influencing these outcomes. Patients with hyperlipidaemia who take statins may be at decreased risk of anxiety and depression, particularly if they are older than 65 years of age and female.

Pelland (2017) investigated whether patients experiencing radiation therapy for HNC are more likely to experience emotional distress, depression, anxiety, and claustrophobia. Studying differences between genders, tumour sites, and treatment types. In addition, the individuals who are at the receiving end of concurrent chemotherapy as one of the parts of their management plan had an advanced state of anxiety compared to those who received adjuvant chemotherapy or who received radiotherapy alone. There may be a connection between the more advanced stage and the apprehension about the intensity of concurrent chemotherapy for HNC, as well as the expected consequences.

Suzuki (2015) examined how physical symptoms, facial disfigurement, preoperative information, and social support affected the depression and anxiety of Japanese patients with HNC. Survivors of HNC can experience long-term symptoms of anxiety and depression. Societal care may assuage these disorders. It is essential to manage future advanced research to ensure that the information provided by surgeons regarding facial disfigurement is accurate before surgery on patients suffering from HNC, which has a psychological impact.

Shadiya Mohamed Saleh Baqutayan (2012) focused on patients' anxiety about breast cancer. This study specifically investigates the impact of cancer symptoms on anxiety levels in patients. People with breast cancer who are similar to them tend to acquire more potential level coping mechanisms as a result of worry, which aids their recovery.

Humphris (2006) examined whether patients with HNC may be at a high level of receptiveness towards psychological distress following their diagnosis and during their treatment process. Depression is common after treatment and tends to persist for a considerable period of time. Psychological responses are not reliably predicted by a particular treatment method. HNC patients present surgeons with several dilemmas when it comes to treatment. The surgical plan requires numerous decisions and considerations of wider issues, such as the patient's psychological status. As a result of this review, clinicians should be aware of some key factors contributing to a patient's overall health.

D. Stark et al. (2002) conducted an investigation to identify the commonness and kinds of anxiety disorders diagnosed among cancer patients according to uniform criteria; It is important to evaluate the effectiveness of screening tools in detecting these cancers, as well as their demographic, oncologic, and psychological associations. Cancer patients often experience anxiety symptoms. Anxiety symptoms can be adequately assessed through questionnaires, but

abnormal anxiety cannot be efficiently discriminated against. This may be improved by employing criteria such as disturbance caused by excessive worry, as demonstrated by the negative effect of apprehension-related conditions on quality of life. Screening for anxiety disorders appears to be dependent on a limited number of oncologic variables.

Dropkin (2001) Anxiety in patients having surgery for HNC is prospectively recorded as part of this study. At a specific moment (5 days after surgery), self-care seems to cause anxiety to decrease, and over time, there is a negative correlation between self-care and anxiety. Further research is necessary to discover suitable therapies that cater to patients' particular requirements with HNC.

Summary of literature review:

The literature review on Positive Therapy intervention for head and neck cancer (HNC) patients underscores a significant gap in research despite its potential to improve quality of life and address prevalent issues such as fear of cancer recurrence and anxiety. Existing studies predominantly focus on conventional interventions like group sessions and relaxation techniques, leaving Positive Therapy largely unexplored in this context. Considering the unique challenges faced by HNC patients, such as changes in appearance and communication difficulties, there is a pressing need to investigate the efficacy of Positive Therapy in alleviating psychological distress and enhancing overall well-being. By addressing this research gap, healthcare professionals can offer more comprehensive support to HNC patients, ultimately improving their quality of life and mental health outcomes.

2.6 Need for the study

High Prevalence of Head and Neck Cancer (HNC): Highlight the significant incidence of head and neck cancer cases globally, underscoring the need for comprehensive supportive care measures.

Impact on Quality of Life (QoL): Emphasize the profound effect of HNC and its treatment on patients' quality of life, including physical, psychological, and social well-being.

Limited Focus on Psychological Well-being: Note the existing gap in research regarding the psychological aspects of HNC care, particularly concerning anxiety and emotional distress.

Role of Positive Therapy: Introduce the concept of positive therapy as a potential intervention to address the emotional and psychological challenges HNC patients face, highlighting its focus on strengths, resilience, and well-being enhancement.

Potential Benefits: Discuss the potential benefits of positive therapy in improving QoL, fostering resilience, and reducing anxiety among HNC patients based on existing literature in related fields.

Need for Empirical Evidence: Stress the importance of empirical research to ascertain the efficacy of positive therapy specifically tailored for HNC patients, given the unique challenges they face in coping with their diagnosis, treatment, and post-treatment experiences.

Informing Clinical Practice: Highlight the significance of the study findings in informing clinical practice and enhancing the holistic care provided to HNC patients by integrating psychosocial interventions like positive therapy into standard care protocols.

Addressing Patient-Centered Care: Emphasize the need for a patient-centered approach in cancer care, where interventions focus on medical outcomes and prioritize patients' overall well-being and quality of life.

Potential to Reduce Healthcare Burden: Suggest that effective psychosocial interventions like positive therapy may reduce healthcare utilization and associated costs by addressing emotional distress and promoting adaptive coping strategies among HNC patients.

Contributing to Knowledge Base: Highlight how the proposed study would contribute to the growing body of evidence on supportive care interventions for HNC patients, ultimately enhancing our understanding of optimal approaches to improve their overall well-being and quality of life.

2.7 Research Gap

Research in cancer care has largely centered on surveys and problem-focused studies, leaving a significant gap in the investigation of positive therapy interventions, especially for head and neck cancer (HNC) patients. There is a lack of global literature on the use of Positive Therapy as a psychological intervention for this group. Current research tends to emphasize group sessions and relaxation techniques, but the specific application of Positive Therapy is notably missing. Addressing this gap could greatly improve the comprehensive care and well-being of HNC patients worldwide.

First, existing literature often overlooks individualized psychological interventions tailored to the unique needs of HNC patients, instead focusing on surveys. Second, despite the acknowledged importance of psychological support in cancer care, few studies explore the effectiveness of Positive Therapy specifically for HNC patients. Third, the literature favours group interventions, which may not fully meet the diverse psychological needs and cultural differences of HNC patients, particularly in India. Fourth, India's cultural diversity and socio-

economic factors require a nuanced approach to psychological interventions. However, there is limited research on how these cultural factors impact the effectiveness of Positive Therapy for HNC patients in India. Finally, there is a notable gap in the Indian healthcare system regarding research on individualized Positive Therapy interventions for HNC patients. Addressing this gap is essential for developing culturally appropriate and effective interventions to enhance the psychological well-being and quality of life of these patients.

This study's significance lies in the pivotal role that mental well-being plays in the overall health of cancer patients during treatment. By focusing on psychological interventions, this study addresses the vital aspect of holistic health, recognizing that physical treatment alone is insufficient for comprehensive care. It aims to improve quality of life (QoL), reduced fear of recurrence (FOR) and anxiety of cancer patients by assessing the impact of Positive Therapy intervention, and offer tailored support for HNC patients.

This study is significant for its comprehensive approach to addressing the mental health needs of head and neck cancer patients. It highlights the importance of psychological interventions in improving quality of life (QoL), reducing fear of cancer recurrence (FCR), and managing anxiety. By demonstrating the effectiveness of positive psychology strategies, the study advocates for more personalized and holistic approaches in cancer care.

Chapter 3

Methodology

3.1.1 Statement of the problem

Efficacy of positive therapy in the area of Quality of life QoL, FoR, and anxiety among HNC patients.

3.1.2 Research Question

Whether positive therapy will improve the QoL and reduce the FoR and anxiety among HNC patients.

Whether there exists a significant relation between QoL, FoR, and anxiety among HNC patients.

3.1.3 Operational Definition

- **Quality of Life in Head and Neck Cancer Patients:** Quality of life is generally defined by overall individual well-being, but in HNC, QoL depends on the individual daily life performance during cancer treatment and post-treatment as well as during the survival period. Daily functioning means that they are able to perform daily routine life without dependency as well as being able to perform their day-to-day task without challenges like having food, speaking, sleeping, chewing, digesting food, performing a sexual activity, bathing, swallowing, getting ready, etc.
- **Fear of Cancer Recurrence:** It was reported that fear of recurrence is the general term we consider that cancer will be back, and many definitions can be found in the same context. Fear of recurrence or progression is a kind of anxiety or fear, but it is not clinical fear like general anxiety. This fear is real, and the patient is facing as well as going through his fear every day during the cancer treatment journey. In head-neck cancer, we can define the fear of recurrence or progression as the way patients find difficulty accepting that cancer is gone and there is no threat of it henceforth. Conscious or continuous thoughts about cancer will come back or it will progress to an advanced stage, which is known as FoR in HNC patients in this study.
- **Anxiety:** Anxiety, in general, is used as an irrational fear. This can be excessive worry about anything that might be the situation, person, thing, environment, or place, which is many times the route of many phobias. But here in head and neck cancer we are defining worry is related to disease, social condition, physical condition, treatment prognosis, and progress as well as diagnosis too. It is realistic worry about future of

dependent, economic challenges. So, in head and neck cancer, we can define anxiety as factual situation-related fear as well as irrational fear too.

- **Hospital Anxiety:**

Hospital anxiety refers to the psychological state experienced by individuals during their hospitalization, characterized by feelings of distress, unease, or apprehension arising from various factors related to the hospital environment, medical procedures, or the underlying health condition being treated. This term encapsulates the emotional responses of patients, caregivers, and even healthcare professionals to the hospital setting, including its physical layout, clinical activities, interpersonal interactions, and perceived threats to well-being. Hospital anxiety can manifest in different forms and intensities, ranging from mild worry or nervousness to more severe symptoms of anxiety, such as panic attacks, agitation, or avoidance behaviours. Factors contributing to hospital anxiety may include uncertainty about medical outcomes, fear of pain or invasive procedures, concerns about personal safety or privacy, separation from familiar surroundings and support networks, as well as cultural or socio-economic influences.

Hospital anxiety represents an important aspect of patient care and healthcare delivery, highlighting the need for comprehensive support services, communication strategies, and interventions to alleviate distress and promote psychological well-being among hospitalized individuals.

3.1.4 Rationale of the study

Head and neck cancer significantly affects patients, leaving them emotionally, mentally, psychologically, and socially vulnerable. These individuals often encounter numerous psychological challenges due to both their diagnosis and the intensive treatments required, such as surgery, radiation, and chemotherapy. These treatments can cause severe side effects, resulting in substantial physical, psychological, and social discomfort that can be difficult to handle. Additionally, eating-related problems further complicate their daily lives.

Patients with head and neck cancer often face heightened anxiety, fear of recurrence, and reduced quality of life. This research employs Positive Therapy to tackle these issues, aiming to alleviate anxiety and fear while enhancing overall quality of life. The study focuses on fostering psychological resilience and emotional well-being throughout and after treatment.

3.2 Objectives of the Study

The current investigation aims to investigate the psychological constructs of quality of life QoL, FoR, and anxiety among HNC patients with the help of positive therapy.

Positive Therapy reduces fear of recurrence and anxiety and improves the QoL. There may be a positive relationship between these variables to support each other. However, these variables may vary among individuals or groups. Keeping in mind the gaps and boundaries revealed in the review, the present research puts accelerates the subsequent chief objects to achieve:-

1. To investigate the effect of Positive Therapy on Quality-of-life QOL among HNC patients.
2. To investigate the effect of Positive Therapy on Anxiety among Head and Neck Cancer patients.
3. To investigate the effect of Positive Therapy on Fear of Recurrence (FOR) among HNC patients.
4. To examine the relationship among QOL, Anxiety and FoR in HNC patients.

3.3 Hypotheses

The following hypotheses are proposed based on above objectives:

1. There will be significant difference between pre and post group on quality of life (QoL) anxiety and fear of recurrence (FOR) among head and neck cancer patients.
2. There will be significance difference between experimental and control group after intervention on quality of life (QoL) among head and neck cancer patients.
3. There will be significance difference between experimental and control group after intervention on Anxiety among head and neck cancer patients.
4. There will be significance difference between experimental and control group after intervention on fear of recurrence (FOR) among head and neck cancer patients.
5. There will be significance relationship between quality of life, anxiety and fear of recurrence in head and neck cancer patients.
6. Fear of recurrence (FOR) will be significantly predicting Anxiety in HNC patients.

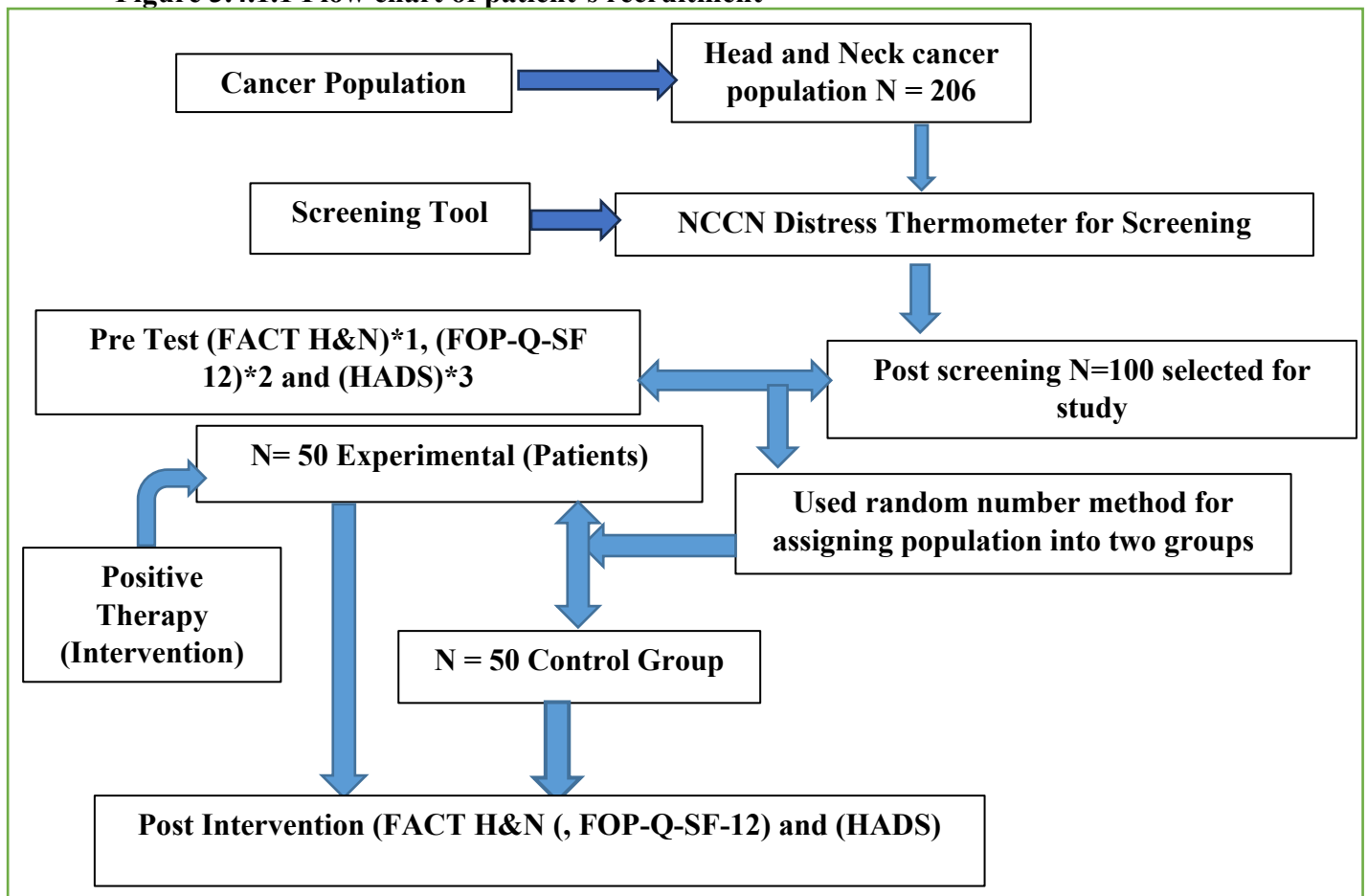
3.4 Research Design

present study research design was used pre and post-research design in the present study is constructed on a pre and post-design under the quasi-experimental design. Design with a control group for the pre and post-periods. For this study, HNC patients from the HCG Manavata Cancer Centre, Nashik, Maharashtra, India, were designated as a sample by using random after; 206 head and neck cancer patients were selected for this study. Based on the results of the screening, it was determined that 100 samples who was either in an early stage or was locally advanced (stage I-III) could be used for this study, which was further divided

into two groups as 50 samples in the experimental group, and 50 samples in the control group. The mean age of the population is 45.7 in the experimental group and control group. Participants were personally distributed questionnaires, Fear of Progression Questionnaire Short Form (FOP-Q-SF12), Hospital Anxiety and Depression (HAD) scale, Functional Assessment of Cancer Therapy (FACT H&N) and clinical interview process were also followed for the purpose of conducting the study. Participants were provided with a consent form explaining the nature of the study. The questionnaires were then collected there and then. Then, an intervention, Positive Therapy, was managed for 8 weeks in the experimental group only; control group was not given any therapy sessions. A later analysis of the completed questionnaires was conducted. Before and after Positive Therapy Intervention, the same procedure is performed twice. The data was statistically preserved and conclusions were drawn.

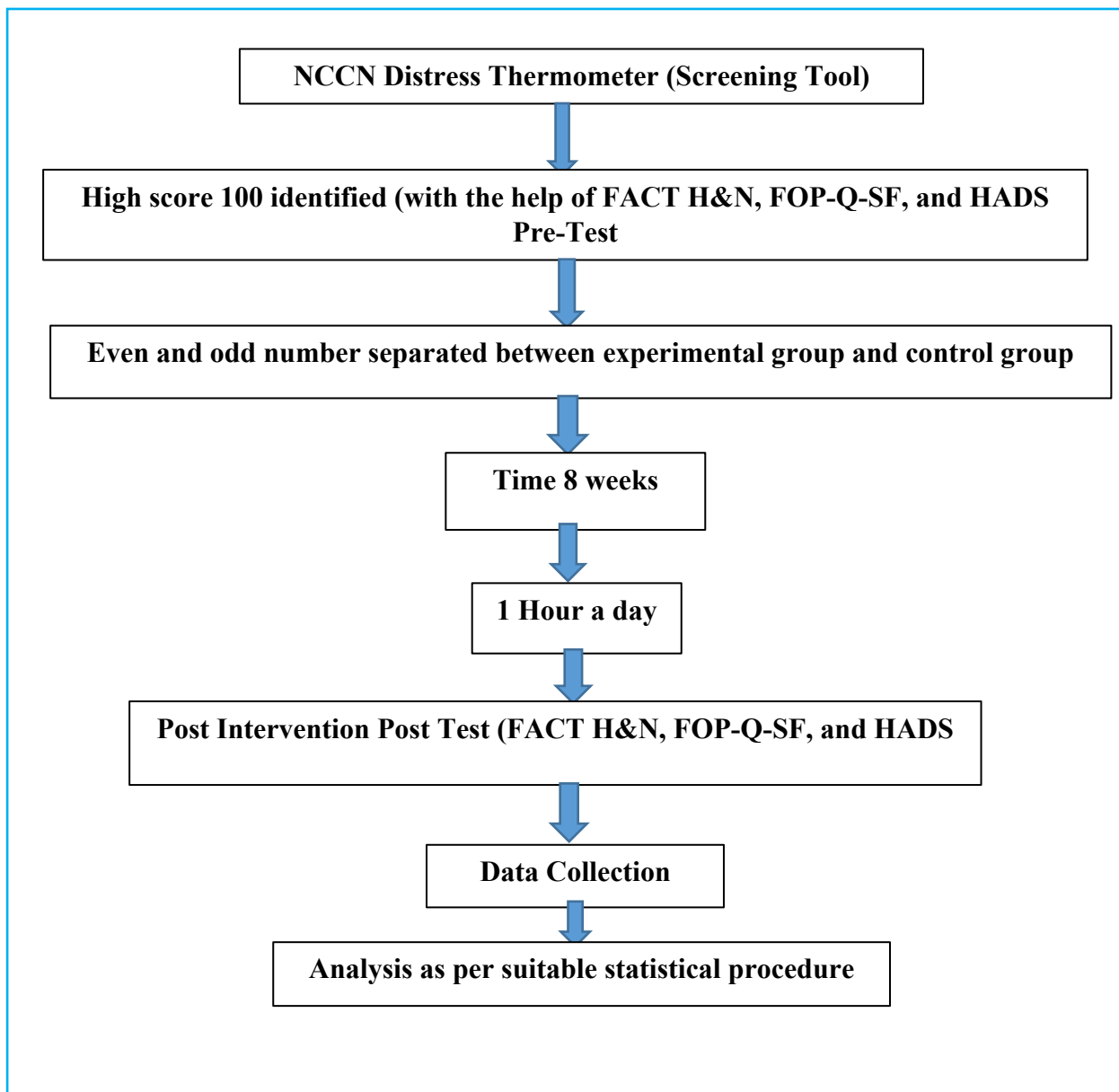
3.4.1 Research Design Outline

Figure 3.4.1.1 Flow chart of patient’s recruitment



*1 Functional Assessment of Cancer Therapy – Head and Neck, *2 Fear of Progression Questionnaire Short Form, *3 Hospital Anxiety and depression Scale

Figure 3.4.1.2. Procedure Flow Chart

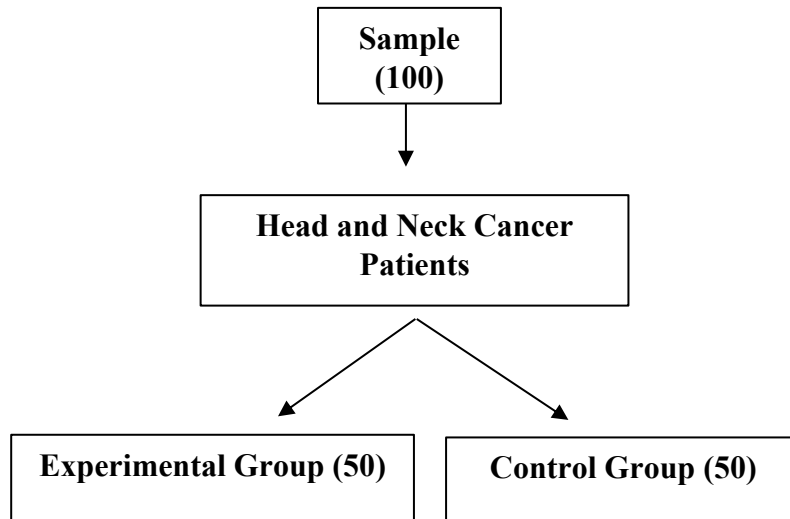


3.5 Sample

The purposive Sampling Method was used for screening, and Simple random sampling (odd and even method) was used for the distribution of the control and experimental groups. The sample for the present research consisted of 100 patients belonging to different parts of the city of Nashik. The age range of patients was 30-55. Distress screening will be done in HCG Manavata Cancer Centre, Nashik, using simple random sampling, and a sample in the study will be selected.

3.5.1 Sample Distribution

Figure 3.5.1.1 Sample Distribution



3.6. Inclusion Criteria

- HNC patients,
- Age would be 30 to 55,
- Newly diagnosed and disease stage between 1 to 3, ongoing treatment like chemotherapy, radiation, surgery, and follow-up

3.7 Exclusion Criteria

- Advanced stage
- Metastasis
- Recurrence of head and neck as well as any
- Multiple organ involvement
- Psychotic disease
- Brain tumour

3.8 Tools

These are the tools mentioned below which were used to administer the data collection

1. NCCN Distress Thermometer (DT)
2. Functional Assessment of Cancer Therapy – Head and Neck (FACT-H&N) (for Quality of Life)
3. Fear of Progression Questionnaire Short Form (FOP-Q-SF12)
4. Hospital Anxiety and Depression Scale (HADS)

3.8.1 National Comprehensive Cancer Network (NCCN) Distress Thermometer (DT) (1997)

In 1997, the National Comprehensive Cancer Network (NCCN) created distress management guidelines, which consist of a 1-item global screener of distress (the Distress Thermometer), an accompanying problem list (Psychosocial Distress Practice Guidelines Panel, 1999) NCCN Distress Thermometer version 2021 used in this study. There is a visual representation on a thermometer of an 11-point Likert scale representing the NCCN Distress Thermometer (DT), which ranges from 0 to 10 (no distress), The level of distress indicated by patients during the preceding week before assessment. An accompanying 40-item list of common problems associated with cancer can be administered to patients who are identified with severe stages of distress. PLs are useful for identifying whether patients are experiencing practical, family, emotional, spiritual-religious, or physical difficulties. A feasibility, accessibility, and informational test of the DT has been conducted (Jacobson & Ransom, 2007; Mitchell, 2010). 106 patients completed the re-test questionnaires after meeting the criteria for the study and all were valid. In total, 110 patients met the criteria for the study and completed their initial test questionnaires. (Li-li Tang, 2011) Li-li Tang's study involved 57 participants of average age (SD=10), and 57.5% were male. The correlation coefficient between the retest and the original test was 0.80 (P0.001). Based on its sensitivity (0.81 and specificity (0.64), DT was the most effective (National Comprehensive Cancer Network 2023)

3.8.2 Functional Assessment of Cancer Therapy – Head and Neck (FACT-H&N) (for Quality of Life)

An instrument designed specifically for patients suffering from head and neck cancer, the FACT-H&N by David Cella in 1993, provides multidimensional self-report measures of Quality of Life. As part of the assessment, patients complete 27 core items assessing their function in four domains: Physical, Social, and Family. In addition to the emotional and functional well-being assessment, 12 items specific to each site are included to assess the symptoms associated with the head and neck. To generate subscale scores for each domain and a global quality of life score, each item is scored on a Likert scale of 0 to 4. Higher scores represent better QoL. In Version 4, most items remain the same as in Version 3, but some items have been reworded, so scoring must be adjusted when comparing versions. There are several languages available for this product. It has been determined that the H&N35 disease-specific module is reliable ($\alpha = 0.90$).

3.8.3 Fear of Progression Questionnaire Short Form (FoP-Q-SF12)

An unidimensional short form was developed by Mehnert et al. (2006) using a sample of women suffering from breast cancer. FoP-Q-SF is an abbreviated version of the full scale comprising 12 items that address four of the five subscales (excluding coping). A correlational analysis with other psychosocial measures suggested that the short form is valid and reliable ($\alpha = 0.87$); the form shows adequate reliability ($\alpha = 0.87$). Furthermore, a companion version of the 12-item short form has been developed and validated (Zimmermann et al., 2011) for partners of chronically ill patients.

3.8.4 Hospital Anxiety and Depression Scale (HADS)

There are two scales in the HAD scale, one to evaluate depression (7 questions) and the other to evaluate anxiety (7 questions). There are seven questions for anxiety and seven questions for depression on this questionnaire, and the completion time ranges from 2 to 5 minutes. This is a 14-item instrument that used a 4-point Likert scale for the evaluation. The total score ranges from 0 to 42; higher scores indicate a higher level of anxiety and depression symptoms developed by Zigmond and Snaith, 1983. The HADS confirmed brilliant reliability generally ($\alpha = 0.89$) and for the individual subscales ($\alpha = 0.84$).

3.9 Intervention

Positive Therapy Intervention

Positive Therapy (Hamaltha Natesan, 2002), a bundle combining Western Techniques based on Cognitive Behavioral Therapies and Eastern Techniques based on Yoga, helps people develop a pleasing personality and a positive perception. It improves both physical and mental health. It helps in the administration of negative emotions like fear, high temper or irritation, frustration, excessive, irrational fear, etc, and in the enhancement of the individual's overall personality. Positive Therapy has four major strategies: they are, Relaxation Therapy Counselling, Exercises and Behavioural Assignments

- Relaxation Therapy: It involves three steps, namely, Deep Breathing Practice, Relaxation Training and Autosuggestion
- Exercises: These include Tension Releasing Exercise, Smile Therapy and Laugh Therapy
- Counselling: It involves Rational-Emotive Therapy, Thought-Stopping, Symptom-Stopping, Cognitive Restructuring, and Assertiveness Training.
- Behavioral assignments

Duration

Positive therapy requires one hour per session. Depending upon the severity of the client's problem, the number of sessions required may range between 2 to 20.

Relaxation Therapy

Techniques based on yoga Relaxation Therapy

Relaxation Therapy consists of 3 steps:

- Deep Breathing Practice
- Relaxation Training
- Auto Suggestions
- **Deep breathing practice**

During the deep breathing practice, the subject was instructed to take a breath very slowly, counting four seconds while inhaling and exhaling with six seconds. The individual was instructed to repeat the same breathing type five times with open eyes and five times with closed eyes.

- **Relaxation therapy**
 - After Deep Breathing Practice, The instruction delivered to the participants to close their eyes gently with a band or folded clean small piece of cloth needs to be put on the eyes to get maximum darkness. (Nose not needed to be covered). The below directions were given:
 - "Breathe in slowly ... breathe out gradually..." (This was repeated 3 times). "Now concentrate on the top of the head".
 - "Breathe in slowly..."
 - Breathe out gradually ... Top of the head ... Relax..." it was asked to repeat three times, with the suggestions
 - Then, the following directions were given to the subjects who were in a relaxed state.
Inhale good health: Breathe out all the body's aches, pains, and sicknesses. ***Inhale happiness:*** Breathe out all the worries from the body.
- **Auto Suggestion:**

When the auto-suggestions were given three times, the subjects were asked to continue deep breathing and enjoy the relaxed state.

Exercises

Positive Therapy involves three exercises, namely,

- Tension Releasing Exercise

- Smile Therapy and
- Laugh Therapy

All the exercises were given to the subjects to help them release their pressure and improve their joy.

- **Tension-releasing exercise**

Stress is the reason for various negative feelings and emotions, leading to mental burden or strain. Tension-releasing exercise guides or supports people to come out of it or be able to deal with it. In this implementation, the participants were given some instructions to follow. "Tension goes out, Fear goes out, Anger goes out, Anxiety goes out, and Worry goes out" This practice was given five times. Then, they were asked to do the same exercise, making a loud sound (Ha) while breathing. This practice was also given five times.

- **Smile therapy**

Smile therapy is one of the exercises that helps individuals train themselves to experience smiling. Practice this technique to help reduce stress and tension. It starts working with facial expressions, and we are able to achieve a cheerful state of mind.

- **Laugh therapy**

People laugh very rarely nowadays and even found difficult to do so due to day-to-day life hazards. Cardiologists maintain that laughing can prevent heart disease. Laugh Therapy can be practiced in groups, preferably with family members or friends. Laugh therapy helps them to enjoy their own company for the moment initially. With daily practice, they can achieve a state where they are able to experience happiness. The following three types were followed in the laughter therapy.

- **30 Second Laughter**
- **Gradient Laughter**
- **Happy Memories Chuckle**

Counselling Techniques Based on (CBT)

The subjects' personal, social, occupational, and emotional problems were solved through counseling. In Positive Therapy, Counselling involves the following methods:

- ❖ Rational Emotive Therapy
- ❖ Cognitive Restructuring
- ❖ Assertiveness training
- **Rational emotive therapy**

The subjects' irrational beliefs and thoughts, such as "I am not worthy," "I am used," etc., were removed by appealing to their reason. The subjects were made to understand that everyone is worthy, and it is irrational to think they are not worthy. This, in turn, helped them to be positive and realistic and face life optimistically. Similarly, every negative thought of the victim was confronted rationally and removed with the help of this technique.

- **Cognitive restructuring**

This helps the subjects replace negative cognitions with positive self-enhancing thoughts and actions, as shown below:

- Positive Thoughts
- I am worthy, I am unique, I am successful.
- The subjects were instructed to strongly believe that they have assimilated the affirmative abilities and start behaving in that context. They were supported to come out from all their negative thought process, learn to re-challenge it, and develop a positive perception attitude towards self-help as well as improvement.
- **Assertiveness Training**

It is the ability to act in your own best interest that defines an assertive individual, Self-advocacy, self-expression, self-control, and self-choice are characteristics of an individual who stands up for themselves. A person who is assertive conveys the subsequent message: "I'm OK, and you're OK." Assertiveness is characterized by an Integrity, directness, self-expression, and self-improvement approach. During the course of his/her actions and even afterward, he/she feels confident and self-respecting.

- **Assertive Techniques**

Broken Record –here, it teaches the individual how to stick to your point.

Fogging – how to accept the criticism without denying it this was trained in this session.

- **Behavioural Assignment:**

The subjects will be asked to resort to the following healthy behaviours:

- Involve in some activity and adore it.
- Having your friends around is a pleasure; try to enjoy that moment.
- Have some recreation like playing games, reading books, etc.,
- Learn to laugh heartily, enjoy jokes, and develop a sense of humour.

- Develop the habit of breathing practice or deep breathing for five minutes in the early morning, facing towards the east, and five minutes in sunset time, facing towards the west.
- Have deep breathing, as and when possible, throughout the day.

3.10 Ethical Consideration

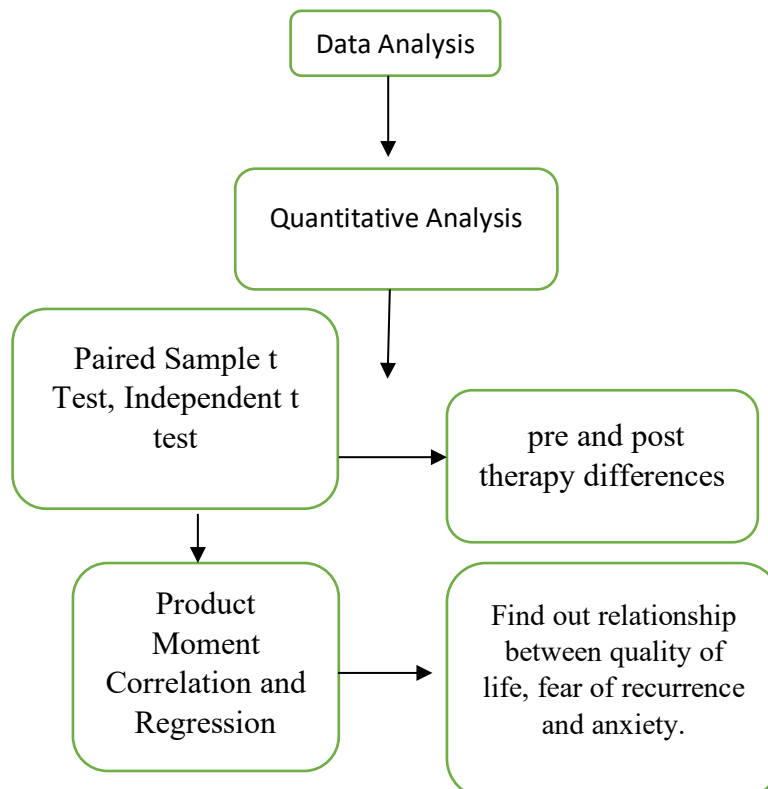
The Institutional Ethics Committee (Protocol number PTHNC 2021) initiated the study after all the required approvals were received. The committee approved the study with the requirement that all participants sign a written informed consent form. The participants will be guaranteed privacy and confidentiality.

3.11 Statistical Analysis

All data were coded and entered in SPSS version 22 after being collected with the above-mentioned tool. Total scale scores were assumed to behave as interval scales. Descriptive tests like Mean, SD, QQPlot, and Independent sample t-test descriptive analysis and Paired Sample t-test comparisons of means t-tests were applied. The product Moment coefficient of Correlation and Simple Regression determined the relationship between variables.

3.12 Data Interpretation:

Figure 3.12.1 The data analysis for the present research was conducted based on qualitative and quantitative methods



Chapter 4

Result and Discussion

4.1 Introduction

Head and neck cancer (HNC) constitutes a significant burden on individuals, families, and healthcare systems worldwide, posing multifaceted challenges across physical, emotional, and social dimensions. The journey through HNC diagnosis, treatment, and survivorship entails a myriad of complexities, ranging from debilitating physical symptoms to profound psychological distress. Among the myriad challenges faced by HNC patients, maintaining a satisfactory quality of life (QoL), managing fears of recurrence (FoR), and coping with anxiety emerge as paramount concerns.

This chapter comprehensively examines the efficacy of Positive Therapy as a psychological intervention for improving QoL, reducing FoR, and alleviating anxiety among HNC patients. Grounded in a robust theoretical framework that integrates Western techniques based on Cognitive Behavioural Therapies (CBT) with Eastern practices rooted in Yoga philosophy, Positive Therapy offers a unique and holistic approach to addressing the psychosocial needs of HNC patients.

Through a combination of quantitative assessments and qualitative insights, the chapter elucidates the transformative effects of Positive Therapy on various dimensions of well-being, shedding light on its potential to enhance resilience and promote psychological well-being in the face of cancer survivorship.

The findings presented in this chapter contribute to the burgeoning literature on psychosocial interventions for HNC patients, offering valuable insights into the holistic care of individuals grappling with the challenges of cancer diagnosis and treatment. By highlighting the efficacy of Positive Therapy in addressing the multifaceted needs of HNC patients, this chapter underscores the importance of integrating psychosocial interventions into the comprehensive care paradigm, thereby fostering a more holistic and patient-centered approach to cancer care. The study involved a meticulously selected sample of 100 head and neck cancer (HNC) patients, with an equal distribution of 50 participants in the experimental and control groups. These participants, aged between 30 and 55 years, were undergoing various treatments such as chemotherapy, radiation, surgery, and follow-up care at the HCG Manavata Cancer Centre in Nashik, Maharashtra, India.

Data collection was conducted using a comprehensive set of assessment tools, including the NCCN Distress Thermometer (DT), Functional Assessment of Cancer Therapy – Head and

Neck (FACT-H&N), Fear of Progression Questionnaire Short Form (FoP-Q-SF12), and Hospital Anxiety and Depression Scale (HADS). The results of the study were analysed tabularized, and discoursed below,

In this research study, sociodemographic details of the participants were discussed below:

Table 4.1

Social Demographic Characteristics of Study Participants (N = 100)

Characteristi	Category	Frequency	Percent	Mean	SD
c					
Gender	Male	86	86.0%		
	Female	14	14.0%		
Age (years)	30-35	6	6.0%		
	36-40	13	13.0%		
	41-45	24	24.0%	46.62	6.17
	46-50	16	16.0%		
	51-55	41	41.0%		
Education	10 th	8	8.0%		
	12 th	12	12.0%		
	Graduate	64	64.0%		
	Post	13	13.0%		
	Graduate				
	Other	03	3.0%		

In this study, the table is labelled "Table 4.1" and titled "Social Demographic Characteristics of Study Participants." The total sample size (N=100) is indicated at the top of the table.

The leftmost column lists each demographic characteristic (e.g., Gender, Age, and Education Level). Under each characteristic, the specific categories are listed (e.g., Male/Female for Gender, Age ranges, and Education levels).

The data are in two additional columns: "Frequency" and "Percent." The "Frequency" column indicates the number of participants falling into each category, while the "Percent" column displays the percentage of participants in each category relative to the total sample size.

4.2 Normality of Data:

The normality of data was checked in research to ensure it follows a bell-shaped curve. This confirms statistical assumptions, aids in selecting appropriate tests, facilitates accurate result interpretation, identifies outliers, and enhances the generalizability of findings, which is crucial for reliable and valid research conclusions. The Normality test of the present study was analysed tabularized and discoursed below:

Table 4.2

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Pre Test FACT	.200	100	.000	.916	100	.000
Pre Test FOP	.239	100	.000	.852	100	.000
Pre Test HADS	.225	100	.000	.844	100	.000

a. Lilliefors Significance Correction

The normality tests were conducted to assess whether the data for each variable (Pre-FACT, Pre-FOP, and Pre-HADS) follows a normal distribution. The results of these tests are summarized in the table above.

Kolmogorov-Smirnov Test:

For Pre-FACT, Pre-FOP, and Pre-HADS, the Kolmogorov-Smirnov test yielded significant p-values of .000, indicating that the null hypothesis of normality is rejected for all three variables at conventional levels of significance ($\alpha = 0.05$). Thus, the data significantly deviates from a normal distribution based on this test.

Shapiro-Wilk Test:

The Shapiro-Wilk test, often considered more appropriate for smaller sample sizes, indicates non-normality for all three variables.

Significant p-values of .000 were obtained for Pre-FACT, Pre-FOP, and Pre-HADS, indicating rejection of the null hypothesis of normality.

Lilliefors Significance Correction:

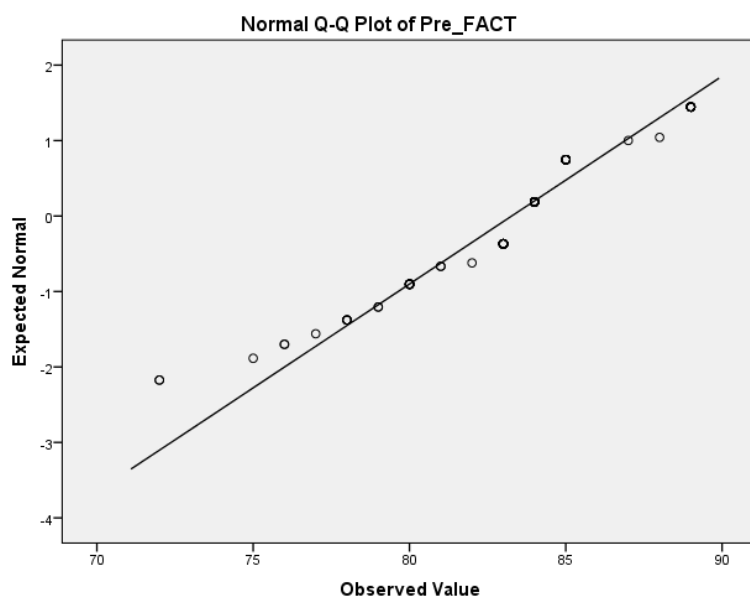
While the table does not provide specific details regarding the Lilliefors Significance Correction, it is typically applied to adjust the p-values obtained from the Kolmogorov-Smirnov test for smaller sample sizes.

The above discussion clearly stated that the findings of the normality tests reveal that the data for all three variables, Pre-FACT, Pre-FOP, and Pre-HADS, significantly deviate from a normal distribution.

Q-Q Plot:

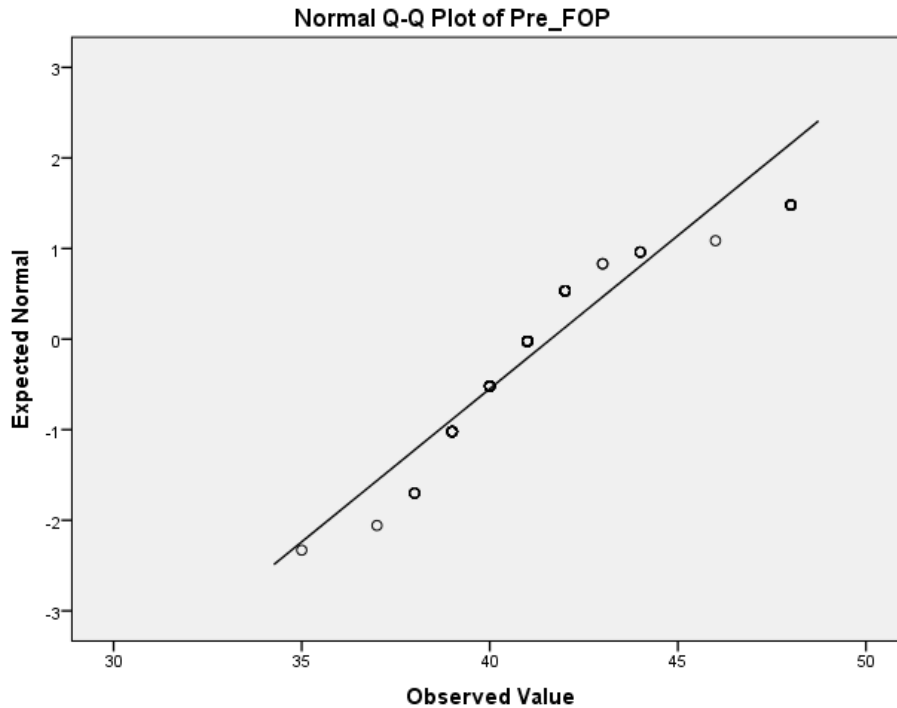
A Q-Q plot is a scatterplot created by plotting two sets of quantiles against one another. If both sets of quantiles came from the same distribution, we should see the points forming a roughly straight line. The present study uses the SPSS version 22.0 to build the Q-Q plot of the data about each variable for both groups. It shows the distribution of the data against the expected normal distribution. If the data is normally distributed, all the observations should lie approximately on a straight line.

Figure 4.2.1 Q-Q Plot for Quality of Life (QoL) of Head and Neck Cancer Patient



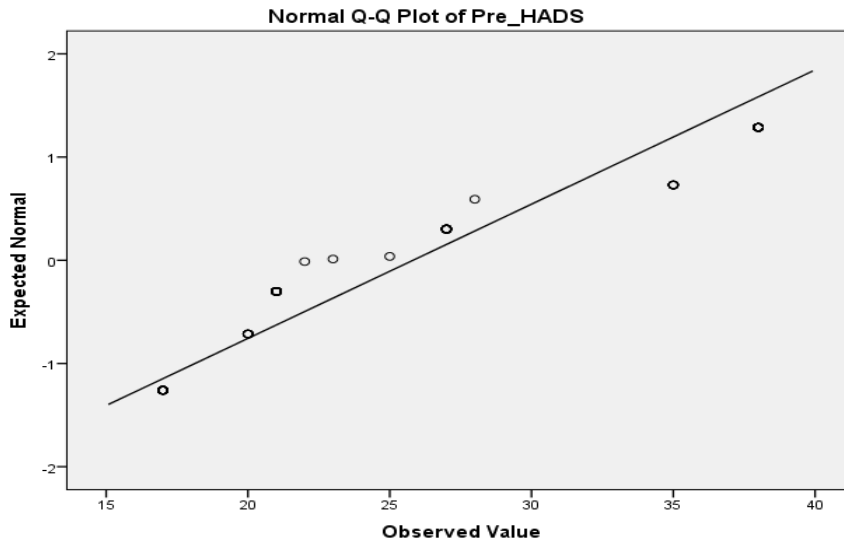
The Quality of Life data plot displays points scattered around a diagonal line, suggesting that the observed values align with the expected values under a normal distribution.

Figure 4.2.2 Q-Q Plot for Fear of Recurrence/Progression of Head and Neck Cancer Patients



In the Fear of Progression/recurrence Q-Q Plot, most of the data points are aligned along a diagonal line. This alignment suggests that the observed values closely match the expected values under a normal distribution. When points align closely along this diagonal line, it typically indicates that the data is normally distributed

Figure 4.2.3 Q-Q Plot for Anxiety (HADS: Hospital Anxiety and Depression Scale) of Head and Neck Cancer Patients



The plot of Anxiety data shows observed values plotted against expected normal values. While the description does not explicitly mention the alignment of points, it indicates that the plot is commonly used to determine whether the dataset is normally distributed.

Overall, the fact that each Q-Q plot closely follows a diagonal line suggests that the respective datasets (Pre-QOL, Pre-FOP, and Pre-Anxiety) are approximately normally distributed. This alignment between deserved and expected values under a normal distribution indicates that the normality assumption holds for these datasets.

Boxplot

the shape of the boxplot shows how the data is distributed, and it also shows any outliers. It is useful to compare different data sets, as you can draw multiple boxplots per graph. Boxplots The observations that are distinctly different from other observations are termed "outliers." Typically, a value stands out from the rest due to an extremely high or low value. Box plots are useful as they provide a visual summary of the data, enabling researchers to quickly identify mean values, the dispersion of the data set, and signs of skewness. Box plots are a very effective and simple technique for assessing the outliers. For the present study, all Boxplots for variables having outliers for QOL, FOP, and Anxiety all graphs related to BOX plots.

Figure 4.2.4 Box Plot for Quality of Life (QoL) of Head and Neck Cancer Patients

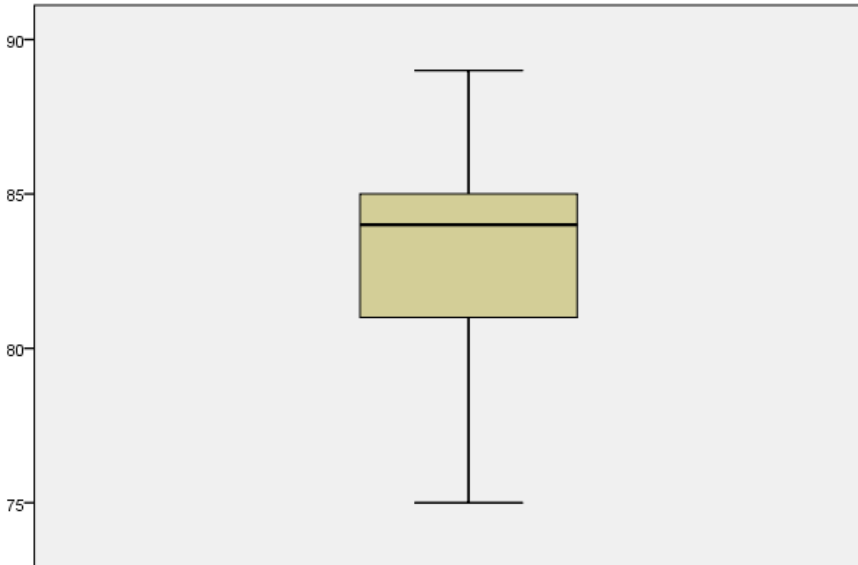


Figure 4.2.5 Box Plot for Fear of Recurrence (FOR) of Head and Neck Cancer Patients

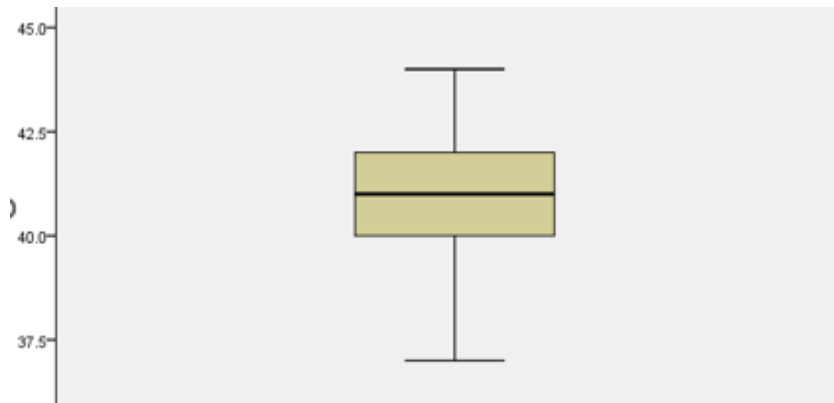
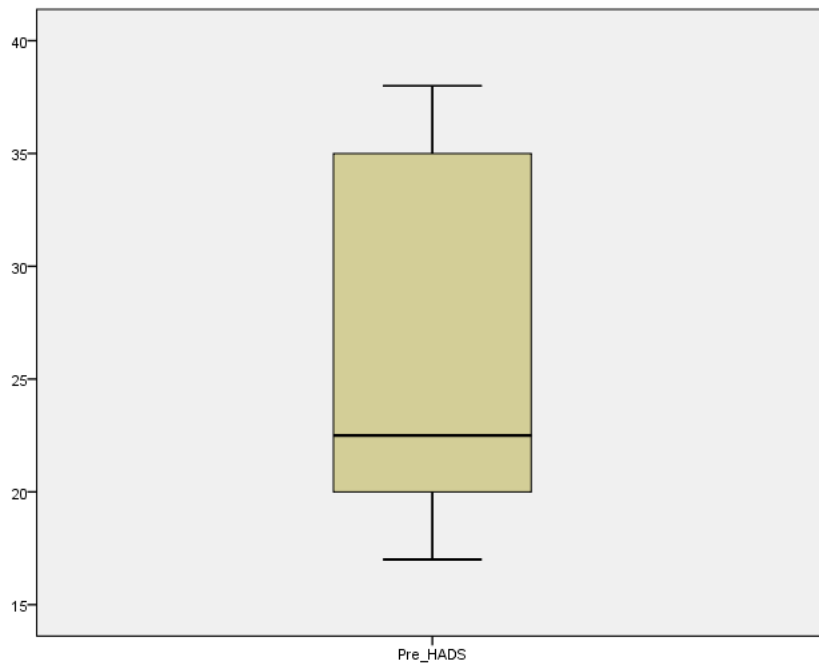


Figure 4.2.6 Box Plot for Anxiety of Head and Neck Cancer Patients



From the above Box plots, it was clearly observed that in the first box plot pre-QOL, The content appears to be a box and whisker chart showing data points and a line graph. The data points range from 70 to 89. second box plot for FOP The image is a box and whisker chart displaying data points and statistical information. The chart includes values such as 77, 47, 47.5, 91, 45.0, 42.5, 40.0, 37.5, 66, and 35.0. third box plot. The image appears to be a box and whisker chart with the data points labelled as "HADS" and values ranging from 15 to 40.

Description of Box Plot

- Boxplots express data based on the median, visually summarizing the dataset's central tendency.
- The rectangular-shaped box represents the middle 50% of the data, with its size indicating the interquartile range (IQR).
- A line parallel to the box's width denotes the median value of the dataset.
- Two lines, known as whiskers, extend from either side of the box, representing the range of the data.
- The endpoints of the whiskers indicate the maximum and minimum data points within 1.5 times the IQR from the lower and upper quartiles, respectively.

- Data points lying beyond the whiskers are termed "outliers," representing values significantly different from the rest of the dataset.
- The FACT boxplot displays data ranging from 70 to 89, with the central box representing the IQR and the median line inside.
- Whiskers extend to the minimum and maximum values within 1.5 times the IQR from the lower and upper quartiles, respectively, but no specific mention of outliers is provided.
- The FOP boxplot includes various values, notably 6871 and 91, which significantly differ from the rest of the data, specifically mentioned as outliers.
- The HADS boxplot, labelled "HADS," shows values ranging from 15 to 40, with a central box representing the IQR and whiskers extending to 1.5 times the IQR from the lower and upper quartiles.
- The above graphs clearly show that the sociometric data is normally distributed and remains at the median.

Table 4.3 Descriptive Statistics

		Statistic	Std. Error	
Pre Test FACT	Mean	83.27	.363	
	95% Lower Confidence Bound	82.55		
	95% Upper Confidence Bound	83.99		
	5% Trimmed Mean	83.46		
	Median	84.00		
	Variance	13.189		
	Std. Deviation	3.632		
	Minimum	72		
	Maximum	89		
	Range	17		
	Interquartile Range	4		
	Skewness	-.594	.241	
	Kurtosis	.927	.478	
	Pre Test FOP	Mean	41.62	.296
		95% Lower Confidence Bound	41.03	
		95% Upper Confidence Bound	42.21	
5% Trimmed Mean		41.51		
Median		41.00		
Variance		8.743		
Std. Deviation		2.957		
Minimum		35		
Maximum		48		
Range		13		
Interquartile Range		2		
Skewness		1.026	.241	
Kurtosis		.568	.478	

Pre Test HADS	Mean		25.82	.769
	95% Confidence Interval for Mean	Lower Bound	24.29	
		Upper Bound	27.35	
	5% Trimmed Mean		25.63	
	Median		22.50	
	Variance		59.119	
	Std. Deviation		7.689	
	Minimum		17	
	Maximum		38	
	Range		21	
	Interquartile Range		15	
	Skewness		.520	.241
	Kurtosis		-1.201	.478

The above table provides a comprehensive overview of the descriptive statistics for three key variables: pre-intervention scores for Quality of Life (Pre-FACT), Fear of Progression (Pre-FOP), and Hospital Anxiety and Depression (Pre-HADS). Each statistic offers valuable insights into the distribution, central tendency, and variability of the data. The interpretation of each variable is given below.

Pre-FACT (Quality of Life)

Mean: The mean score for Pre-FACT is 83.27, indicating the average reported quality of life among participants before any intervention. This serves as a central reference point for understanding the overall perceived quality of life in the sample.

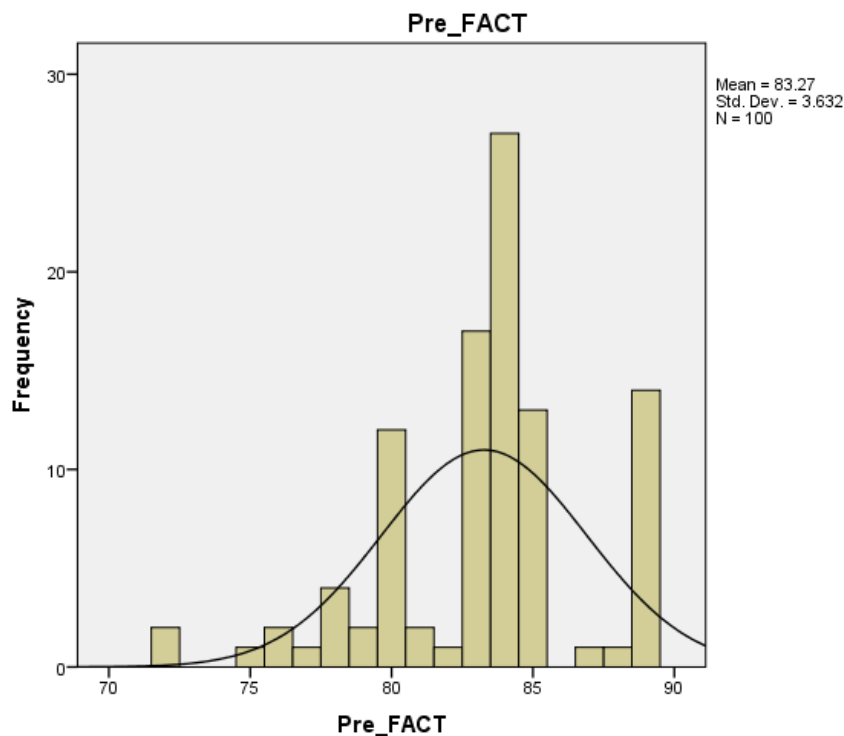
Confidence Interval: The 95% confidence interval for the mean (82.55 - 83.99) provides a range within which we can be confident that the true population mean lies. This interval helps assess the precision of the estimate.

Variability: The variance (13.189) and standard deviation (3.632) indicate the extent to which scores deviate from the mean. A higher standard deviation suggests greater variability in quality-of-life scores among participants.

Range: The range (17) represents the difference between the maximum and minimum scores, providing insight into the spread of scores across the entire range of possible values.

Distribution Shape: Skewness (-0.594) indicates a slightly negative skew, suggesting a slight asymmetry where the distribution tail extends to the left. Kurtosis (0.927) suggests a slightly peaked distribution compared to a normal distribution.

Figure 4.2.7 Graphical Representation of Histogram for Quality of Life (QoL) of Head and Neck Cancer Patients



The above graph most individuals are expected to have FACT scores clustered around the higher end, closer to the median and mean values. The histogram would show a spread of scores across the range, indicating variability in Quality of Life among Head and Neck cancer patients. The narrow interquartile range (IQR = 4) suggests relatively consistent scores within the middle 50% of the data, reflecting moderate variability in FACT scores.

Pre-FOP (Fear of Progression)

Mean: The mean score for Pre-FOP is 41.62, reflecting the average level of fear of progression reported by participants before any intervention. This serves as a central reference point for understanding the overall level of fear of cancer recurrence in the sample.

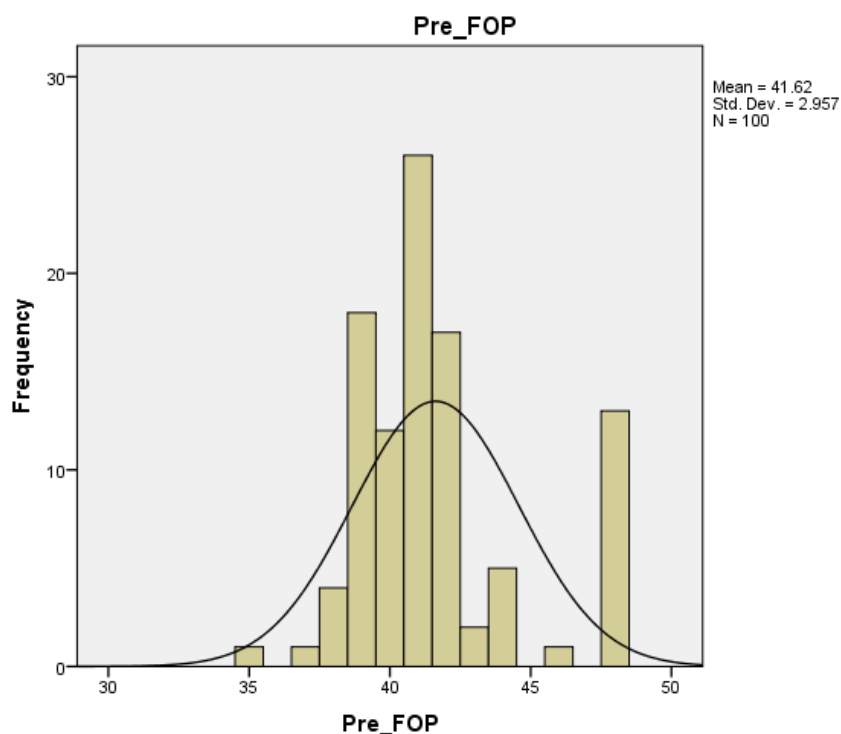
Confidence Interval: The 95% confidence interval for the mean (41.03 - 42.21) provides a range within which we can be confident that the true population mean lies. This interval helps assess the precision of the estimate.

Variability: The variance (8.743) and standard deviation (2.957) indicate the extent of variability in fear of progression scores around the mean. A higher standard deviation suggests greater variability in fear of progression scores among participants.

Range: The range (13) represents the difference between the maximum and minimum scores, providing insight into the spread of scores across the entire range of possible values.

Distribution Shape: Skewness (1.026) indicates a positively skewed distribution, suggesting a tail extending to the right. Kurtosis (0.568) suggests a distribution that is slightly flatter than a normal distribution.

Figure 4.2.8 Graphical Representation of Histogram for Fear of Progression (FoP) of Head and Neck Cancer Patients



The above histogram would show that most individuals have pre-FOP scores clustered towards the lower range, with fewer individuals having higher pre-FOP scores. This suggests that the majority of participant's experience lower levels of fear of progression before any intervention. The histogram's shape, skewed towards higher scores, reflects the variability in fear of progression among Head and Neck cancer patients, with a narrower interquartile range (IQR = 2).

Pre Test HADS (Hospital Anxiety and Depression)

Mean: The mean score for Pre-HADS is 25.82, indicating the average level of anxiety and depression reported by participants before any intervention. This serves as a central reference point for understanding the overall level of anxiety and depression in the sample.

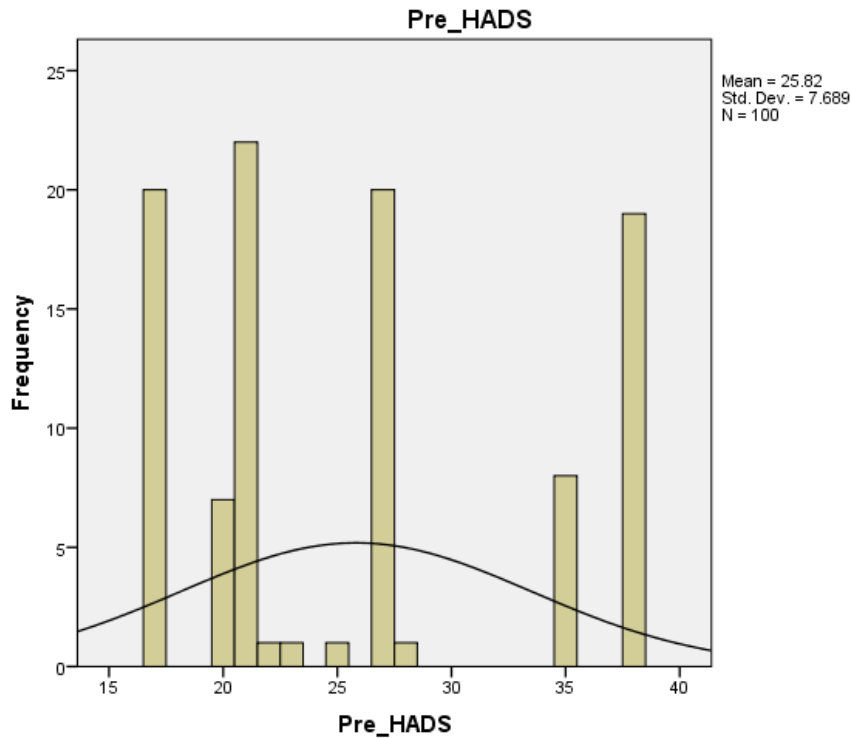
Confidence Interval: The 95% confidence interval for the mean (24.29 - 27.35) provides a range within which we can be confident that the true population mean lies. This interval helps assess the precision of the estimate.

Variability: The variance (59.119) and standard deviation (7.689) indicate the extent of variability in anxiety and depression scores around the mean. A higher standard deviation suggests greater variability in anxiety and depression scores among participants.

Range: The range (21) represents the difference between the maximum and minimum scores, providing insight into the spread of scores across the entire range of possible values.

Distribution Shape: Skewness (0.520) indicates a slightly positively skewed distribution, suggesting a tail extending to the right. Kurtosis (-1.201) suggests a distribution that is slightly flatter than a normal distribution.

Figure 4.2.9 Graphical Representation of Histogram for Anxiety of Head and Neck Cancer Patients



From above graph, it was seen that most individuals are expected to have HADS scores clustered towards the lower end, closer to the median value (Median = 22.50). However, there would be a spread of scores across the range, indicating variability in anxiety and depression levels among Head and Neck cancer patients. The relatively wide interquartile range (IQR = 15) suggests considerable variability within the middle 50% of the data, reflecting diverse experiences of anxiety and depression.

The pre-test results reveal baseline measures of Quality of Life (FACT), Fear of Progression (FOP), and Hospital Anxiety and Depression Scale (HADS) among Head and Neck cancer patients. Quality of Life scores show moderate variability, indicating diverse experiences among patients. Fear of Progression scores display a narrower range, with most individuals reporting lower levels of fear. Conversely, anxiety and depression levels, as indicated by HADS scores, exhibit wider variability, highlighting the diverse psychological challenges faced by patients. These findings underscore the importance of assessing and addressing psychosocial factors in comprehensive cancer care interventions.

After pre-test data collection, an intervention intervention-positive therapy was managed for 8 weeks in the experimental group only, the control group was not given any therapy sessions. The interpretation of the data is given below. The data was collected, and analysis was coded and entered in SPSS version 22. Independent sample t-test descriptive analysis Paired Sample

t-tests comparisons of means, t-tests were applied, Product Moment Correlation and Simple Regression were used to find out ant relations between variables. Objective-wise analysis was given below,

Hypothesis:

H1: There will be a significant difference between pre and post-group on quality of life (QoL) anxiety and fear of recurrence (FOR) among head and neck cancer patients.

Table 4.4 FACT (Quality of Life) on Mean, standard deviation, and standard error mean for the pre-test and post-test

	N	Mean	Std. Deviation	Std. Error Mean
FACT Pre Test	100	83.27	3.63	.363
FACT Post Test	100	100.76	17.26	1.727

Table 4.4 shows the pre-test mean result revealed that the quality of life mean score was lower level (M=83.27) than the mean score of the post-test (M=100.76), indicating a difference between pre and post-test improvement in quality of life. The standard deviation increased from (SD=3.63) on the pre-test to (SD=17.26) on the post-test, suggesting a more homogeneous distribution of quality of life (FACT) scores after the intervention. The standard error of the mean increased from .363 at the pre-test to 1.727 at the post-test, indicating a more precise estimate of the true mean quality of life score.

Table- 4.5 Paired t-test for Quality of Life

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
				Lower	Upper			
FACT Pre Test	-17.490	15.643	1.56	-20.59	-14.38	11.18	99	.000
FACT Post Test								

Table 4.5 shows the results of a paired samples t-test comparing pre-test and post-test on quality of life scores. The mean difference between the two scores is statistically significant ($t=11.18$, $p<0.001$), indicating a significant improvement in the quality of life after treatment.

These tables provide comprehensive information about the changes in quality of life scores before and after treatment and between pre-test and post-test scores.

Table 4.6 Independent Samples t-test for Quality of Life:

Independent Samples Test

Variable	Group				Paired sample T-test		
	Experimental(N=50)		Control(N=50)		t	df	sig
	Mean	SD	Mean	SD			
Quality of Life	116.64	9.10	84.88	2.21	23.97	98	0.01

Table 4.6 showed result revealed that the experimental mean score ($M=116.64$) was higher

than the mean score (M=84.88) of the control group. The independent sample t-test showed a statistically significant difference in quality of life scores between the two groups ($t = 23.97$, $df = 98$, $p < 0.001$). Results revealed that the experimental group had a significant difference in the quality of life as compared to the control group.

Table 4.7 FOP (Fear of Recurrence) on Mean, standard deviation, and standard error mean for the pre-test and post-test

	N	Mean	Std. Deviation	Std. Error Mean
FOP Pre Test	100	41.62	2.95	.296
FOP Post Test	100	26.90	15.78	1.578

Table 4.7 shows that the pre-test mean result revealed that the Fear of Recurrence mean score was higher level (M=41.62) than the mean score of the post-test (M=26.90), indicating a difference between pre and post-test positive improvement in the level of fear of recurrence. The standard deviation increased from (SD=2.95) on the pre-test to (SD=15.78) on the post-test, suggesting a more homogeneous distribution of fear of recurrence (FOP) scores after the intervention. The standard error of the mean increased from .296 at the pre-test to 1.578 at the post-test, indicating a more precise estimate of the true mean fear of recurrence score.

Table- 4.8 Paired t-test for Fear of Recurrence

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
				Lower	Upper			
FOP Pre Test	14.720	16.560	1.656	11.434	18.006	8.889	99	.000
FOP Post Test								

Table 4.8 shows the results of a paired samples t-test comparing pre-test and post-test fear of recurrence. The mean difference between the two scores is statistically significant ($t=8.889$, $p<0.001$), indicating a significant decrease in the fear of recurrence after treatment.

These tables provide comprehensive information about the changes in fear of recurrence scores before and after treatment and the relationship between pre-test and post-test scores.

Table 4.9 Independent Sample t-test FOP

Variable	Group				Paired sample T-test		
	Experimental (N=50)		Control (N=50)		t	df	sig
	Mean	SD	Mean	SD			
Fear of Recurrence	11.36	1.54	42.44	2.08	68.53	98	0.01

Table 4.9 showed that the independent-sample t-test showed a statistically significant difference in fear of recurrence scores between the two groups ($t = 68.53$, $df = 98$, $p < 0.001$). Results revealed that the experimental group had significantly reduced the fear of recurrence as compared to the control group.

Table 4.10 HADS (Anxiety) on Mean, standard deviation, and standard error mean for the pre-test and post-test

	N	Mean	Std. Deviation	Std. Error Mean
HADS Pre Test	100	25.82	7.68	.769
HADS Post Test	100	19.25	14.27	1.427

Table 4.10 shows the pre-test mean result revealed that the anxiety mean score was higher level (M=25.82) than the mean score of the post-test (M=19.25), indicating a difference between pre and post-test improvement in level of Anxiety. The standard deviation increased from (SD=7.68) on the pre-test to (SD=14.27) on the post-test, suggesting a more homogeneous distribution of anxiety (HADS) scores after the intervention. The standard error of the mean increased from 0.769 at the pre-test to 1.427 at the post-test, indicating a more precise estimate of the true mean anxiety score.

Table- 4.11 Paired t-test for Anxiety

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
				Lower	Upper			
HADS _pre – test HADS post-test	6.570	7.620	.762	5.058	8.082	8.622	99	.000

Table 4.11 shows the results of a paired samples t-test comparing pre-test and post-test anxiety scores. The mean difference between the two scores is statistically significant (t=8.622, p<0.001), indicating a significantly lower level of anxiety after treatment.

These tables provide comprehensive information about the changes in anxiety scores before and after treatment and the relationship between pre-test and post-test scores.

Table 4.12 Independent Samples t-test for HADS:

Variable	Group				Paired sample t-test		
	Experimental (N=50)		Control (N=50)		t	df	sig
	Mean	SD	Mean	SD			
Anxiety	5.54	1.50	32.96	5.07	36.66	98	0.01

Table 4.12 showed that the independent-sample t-test showed a statistically significant difference in anxiety scores between the two groups ($t = 36.66$, $df = 98$, $p < 0.001$). Results revealed that the experimental group had significantly reduced the anxiety level as compared to the control group.

‘There will be a significant difference between pre and post-group on quality of life (QoL) anxiety and fear of recurrence (FOR) among head and neck cancer patients’ was accepted.

Objective 1

To investigate the effect of Positive Therapy on Quality-of-life QOL among HNC patients.

H2: There will be a significant difference in quality of life (QoL) among head and neck cancer patients between the experimental and control groups after the intervention.

Table 4.13

Mean comparison of experimental and control group on FACT (Quality of Life)

Variable	Group				Paired sample t-test		
	Experimental (N=50)		Control (N=50)		t	df	sig
	Mean	SD	Mean	SD			
Quality of Life	116.64	9.10	84.88	2.21	23.97	98	0.01

From the above Table 13 it was seen that the mean score for quality of life (QoL) among participants in the experimental group was 116.64 (SD = 9.10), while in the control group, it was 84.88 (SD = 2.21). This substantial difference indicates a statistically significant improvement in QoL among those who received Positive Therapy compared to the control group.

Therefore, the first hypothesis, **‘There will be a significant difference between experimental and control group after intervention on quality of life (QoL) among head and neck cancer patients’, was accepted.**

Further analysis revealed that Positive Therapy interventions, such as relaxation techniques, counseling sessions, and behavioral assignments, contributed significantly to enhancing various domains of QoL, including physical, social, emotional, and functional well-being.

Anxiety (HADS)

Objective 2

To investigate the effect of Positive Therapy on Anxiety among Head and Neck Cancer patients.

H3: There will be significance difference between experimental and control group after intervention on Anxiety among head and neck cancer patient.

Table 4.14

Mean comparison of experimental and control group on HADS

Variable	Group				Paired sample t-test		
	Experimental (N=50)		Control (N=50)		t	df	sig
	Mean	SD	Mean	SD			
Anxiety	5.54	1.50	32.96	5.07	36.66	98	0.01

From the above Table 4.14, it was seen that the mean anxiety score among participants in the experimental group was 5.54 (SD = 1.50), compared to 32.96 (SD = 5.07) in the control group. This noteworthy difference signifies a substantial reduction in anxiety levels among those who received Positive Therapy.

Therefore, the third Hypothesis, ‘**There will be significance difference between experimental and control group after intervention on Anxiety among head and neck cancer patient**’, was accepted.

Through a combination of relaxation techniques, cognitive restructuring, and assertiveness training, Positive Therapy empowered participants to manage anxiety symptoms effectively and cultivate a more positive outlook on life.

Objective 3

To investigate the effect of Positive Therapy on Fear of Recurrence (FOR) among HNC patients.

H4: There will be significance difference between experimental and control group after intervention on fear of recurrence (FOR) among head and neck cancer patients.

Table 4.15

Mean comparison of experimental and control groups on FOP

Variable	Group				Paired sample t-test		
	Experimental (N=50)		Control (N=50)		t	df	sig
	Mean	SD	Mean	SD			
Fear of Recurrence	11.36	1.54	42.44	2.08	68.53	98	0.01

From the above table 4.15, it was seen that Participants in the experimental group had a mean FoR score of 11.36 (SD = 1.54), whereas in the control group, the mean score was 42.44 (SD = 2.08). This striking contrast demonstrates a significant reduction in FoR among those who underwent Positive Therapy. **‘There will be significance difference between experimental and control group after intervention on fear of recurrence (FOR) among head and neck cancer patients’ therefore this research Hypothesis was accepted.**

The techniques employed in Positive Therapy, such as cognitive restructuring and assertiveness training, equipped participants with effective coping mechanisms to address and alleviate fears of cancer recurrence.

Objective 4

To examine the relationship among QOL, Anxiety and FoR in HNC patients.

H5: There will be significance relationship between quality of life, anxiety and fear of recurrence in head and neck cancer patients.

Table 4.16

Coefficient of Correlation of FACT, FOP, and HADS on Head and Neck cancer patients

	FACT	FOP	HADS
FACT	1	.040	-.387**
FOP		1	-.044
HADS			1

** Correlation is significant at the 0.01 level.

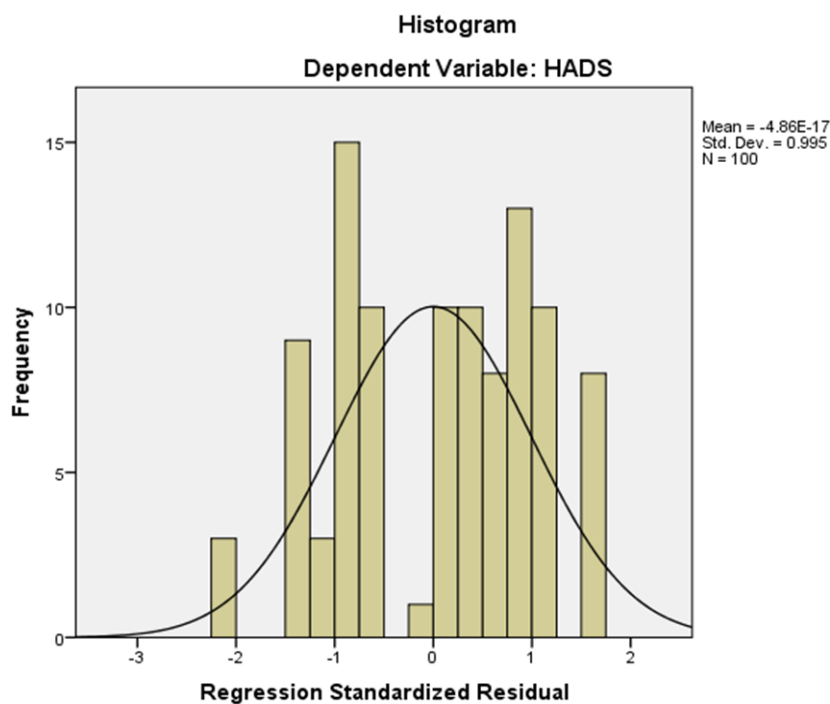
Table 4.16 results revealed that the significantly negative correlation between FACT and Hospital Anxiety and Depression (HADS) is (-0.387, $P=0.01$ level). The negative correlation suggests that as the level of anxiety and depression increases, the quality of life tends to decrease among Head and Neck cancer patients.

There is a negligible correlation of -0.044 between HADS and FOP, suggesting a minimal association between anxiety depression and fear of progression among the study participants.

‘There will be significance relationship between quality of life, anxiety and fear of recurrence in head and neck cancer patients’ therefore this research hypothesis was accepted.

H6: Fear of recurrence (FOR) will be significantly predicting Anxiety in HNC patients

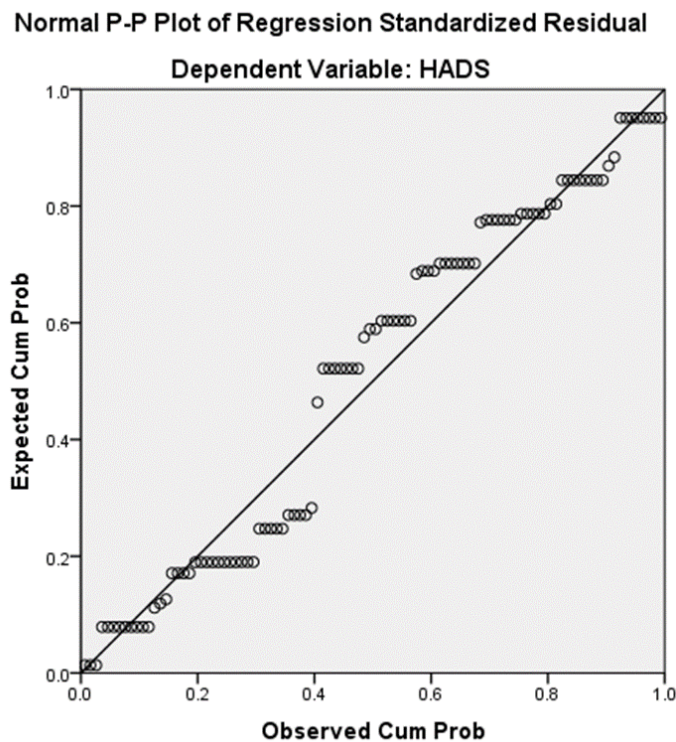
Figure 4.2.10 Graphical Representation of Histogram for the prediction of Anxiety



The histogram of standardized residuals reveals a bell-shaped curve resembling a normal distribution. The majority of standardized residuals cluster around zero, indicating a balanced distribution of overestimations and underestimations by the regression model.

Standardized residuals offer valuable insights into the adequacy of regression models and the presence of outliers or influential data points. In this graph, the histogram analysis demonstrates that the standardized residuals closely approximate a normal distribution, supporting the validity of the regression analysis.

Figure 4.2.11 P-P Plot for Prediction of Anxiety



Points aligned closely with the diagonal line indicate conformity to normal distribution.

Deviations from the diagonal line suggest potential departures from normality. The P-P plot for the regression model of anxiety and fear of cancer recurrence or progression indicates a close alignment between observed and expected quantiles. The majority of points fall along the diagonal line, suggesting that the residuals follow a normal distribution.

Table 4.17

Regression Coefficient of Fear of Recurrence/Progression (FOR/P) and Anxiety (HADS)

Variable	B	β	SE
Constant (FOP)	-4.43***		.65
Anxiety (HADS)	.88***	.97	.021
R^2	.95		

Note N = 100

*** $p < .001$

Table 4.17 shows that the impact of Fear of Recurrence/Progression on anxiety among head and neck cancer patients. The R^2 value of .95 revealed that the predictor variable explained .95% variance in the outcome variable with $F(1,98) = 1754.39, p < .001$. The finding revealed the Fear of recurrence positively predicted anxiety among head and neck cancer patients ($\beta = .97, p < .001$). **‘Fear of recurrence (FOR) will be significantly predicting Anxiety in HNC patients, therefore this research hypothesis was accepted.**

4.3 Findings for the Research Hypotheses

There were six hypotheses formulated in this study.

4.3.1 Hypothesis Testing

According to the hypothesis, the pre- and post-test scores for quality of life, fear of recurrence, and anxiety were compared using paired t-tests within the intervention and controlled groups separately. The between-group differences in the pre- and post-intervention scores were compared using independent t-tests.

4.3.2 Hypothesis-wise Findings

The key findings from the hypothesis testing are as follows:

Table 4.18 This table summarizing which hypothesis were accepted or rejected:

Hypothesis No.	Hypothesis Statement	Accepted/Rejected
H ₁	There will be significant difference between pre and post group on quality of life (QoL) anxiety and fear of recurrence (FOR) among head and neck cancer patients.	Accepted
H ₂	There will be significance difference between experimental and control group after intervention on quality of life (QoL) among head and neck cancer patients.	Accepted
H ₃	There will be significance difference between experimental and control group after intervention on Anxiety among head and neck cancer patient	Accepted
H ₄	There will be significance difference between experimental and control group after intervention on fear of recurrence (FOR) among head and neck cancer patients.	Accepted
H ₅	There will be significance relationship between quality of life, anxiety and fear of recurrence in head and neck cancer patients.	Accepted
H ₆	Fear of recurrence (FOR) will be significantly predicting Anxiety in HNC patients	Accepted

The findings show that all six hypotheses were accepted based on the paired t-test and independent t-test statistical analysis and compelling evidence provided in the study. The positive therapy intervention had a significant positive impact on reducing the fear of cancer recurrence and anxiety and increasing the quality of life among head and neck cancer patients. Additionally, the study confirmed that head and neck cancer patients generally exhibited higher levels of fear of recurrence, anxiety, and lower quality of life compared to the general population.

4.4 Discussion

The objective of this study was to explore the impact of positive therapy on the quality of life (QoL), fear of recurrence (FoR), and anxiety levels among head and neck cancer (HNC) patients. Before the intervention, there were no significant differences in these parameters between the experimental and control groups.

Analysing sociodemographic data, the researcher found that the male population diagnosed with HNC outnumbered females in both groups. Additionally, the age range of 41-55 years was predominant compared to the 31-40 age group. Carcinoma of the tongue and buccal mucosa were the most prevalent diagnoses. Tobacco addiction emerged as a significant factor contributing to HNC diagnoses, indicating a need for targeted interventions in this area.

Treatment protocols followed radical management strategies outlined in the ICD manual. Despite facing various challenges during treatment, including physical and emotional adjustments, financial burdens, and social isolation, patients received strong support from family, friends, and caregivers. Educationally, most participants held graduation degrees, and the majority were employed in service or business sectors. Marital status predominantly leaned towards married individuals.

Patients encountered numerous challenges during treatment, including emotional distress, physical discomfort, altered body image, and fear of the disease's uncertainty. Psychological support emerged as a crucial need as patients struggled with adjustment issues, negative thoughts, and concerns about the future of themselves and their families. Literature supports the notion that psychotherapeutic interventions can improve patients' understanding of their condition, enhance acceptance, and aid in coping with the challenges they face.

The findings of this study provide compelling evidence of the positive impact of Positive Therapy interventions on the quality of life (QoL), fear of recurrence (FoR), and anxiety levels among head and neck cancer (HNC) patients. Prior to the intervention, there were no significant

differences in these parameters from Pre-test and Post-test between the experimental and control groups, emphasizing the efficacy of Positive Therapy in producing measurable improvements in these domains.

Participants who underwent Positive Therapy demonstrated a statistically significant improvement in QoL compared to the control group, as indicated by higher scores on the Functional Assessment of Cancer Therapy (FACT) scale. This aligns with previous research by Saranya et al. (2015), Thenu et al. (2013), Rohini (2012), and Rajalakshmi et al. (2012), which also found Positive Therapy interventions to enhance QoL and well-being across diverse populations, including HNC patients.

Furthermore, Positive Therapy facilitated the development of positive character traits and enhanced confidence among cancer patients in dealing with life challenges. This was corroborated by the observed reduction in fear of recurrence (FoR) among HNC patients undergoing Positive Therapy. Rajalakshmi et al. (2012) similarly found improvements in positive character traits and confidence levels. The reduction in FoR suggests a decrease in anxiety levels, further supported by the substantial reduction in anxiety levels among participants in the experimental group.

The strong negative correlation between anxiety/depression levels (measured by the Hospital Anxiety and Depression Scale - HADS) and QoL (FACT scores) underscores the detrimental impact of anxiety and depression on the well-being of HNC patients. These findings are consistent with previous studies by Brennan et al. (2022), Van Beek (2020), Diego Tetzner Fernandes (2020), Davies et al. (2020), and Simon Dunne et al. (2019), which also found a significant negative correlation between anxiety/depression levels and QoL among HNC patients.

Additionally, Fear of Progression (FOP) exhibited minimal associations with both QoL and anxiety/depression levels among HNC patients. Positive Therapy interventions resulted in enhanced QoL and reduced FoR and anxiety levels, highlighting its effectiveness in addressing emotional well-being and treatment cooperation among HNC patients.

The present research findings are supported by previous studies conducted by Rogers (2015), Mari a Benedetta Ninu (2015), and Julia R Van Liew et al. (2014). Rogers (2015) developed a simple screening question for fear of recurrence (FoR) applicable in clinical practice, aligning with our study's focus on assessing FoR among head and neck cancer (HNC) patients. Mari a Benedetta Ninu (2015) provided interventions for psychological suffering in cancer patients, which could help address the emotional distress associated with FoR observed in our study. Julia R Van Liew et al. (2014) found that HNC survivors with FoR experienced decreased

health-related quality of life (HRQOL) and increased likelihood of smoking, reinforcing our findings on the negative correlation between FoR and HRQOL among HNC patients. These studies collectively underscore the importance of addressing FoR in clinical practice to enhance patient well-being.

The regression analysis demonstrated a substantial impact of fear of recurrence on anxiety level among head and neck cancer patients. Further corroborates the significance of the regression model, suggesting that the relationship between Fear of Recurrence/Progression and anxiety is statistically significant. Specifically, the regression coefficient indicates a positive relationship between Fear of Recurrence/Progression and anxiety levels among HNC patients. This implies that higher levels of Fear of Recurrence/Progression are associated with increased anxiety among individuals diagnosed with head and neck cancer. The findings underscore the critical role of addressing and managing Fear of Recurrence/Progression in mitigating anxiety symptoms among head and neck cancer patients. The discussion section aims to contextualize and interpret the regression analysis results regarding the relationship between Fear of Recurrence/Progression and anxiety among head and neck cancer patients. This section delves into the implications of these findings for clinical practice, research, and patient care.

The present research findings are corroborated by the works of Nik Ruzyanei Nik Jaafar et al. (2022), Riggauer et al. (2022), and Mirosevic (2019) regarding Fear of Recurrence (FOR) or Fear of Progression (FOP). Nik Ruzyanei Nik Jaafar et al. (2022) likely explored aspects related to FOR or FOP that align with the findings of our study. Similarly, Riggauer et al. (2022) may have investigated the impact of FOR or FOP on patient outcomes, reinforcing our understanding of this phenomenon. Additionally, Mirosevic's (2019) work may have contributed insights into the psychological and emotional aspects associated with FOR or FOP, supporting present findings regarding its influence on patients' well-being.

Following the implementation of Positive Therapy in the present research, several notable observations emerged. Participants demonstrated a reduction in stress levels, attributed to relaxation therapy techniques, leading to increased composure and decreased reactivity to stressors. Furthermore, there was an improvement in emotional regulation skills, resulting in better management of negative emotions and heightened emotional resilience. Participants also exhibited a more positive mood and outlook on life, alongside a positive shift in thinking patterns facilitated by cognitive restructuring techniques. Moreover, assertiveness training contributed to enhanced communication skills, while active engagement in behavioural assignments supported the implementation of positive changes in daily life. Overall, participants experienced a transformation in their personality traits, including increased self-

awareness, confidence, and resilience, alongside a reduction in symptoms associated with mental health issues. These observations collectively highlight the significant improvements in both physical and mental well-being among participants, underscoring the efficacy of Positive Therapy in promoting holistic wellness.

Overall, these findings underscore the importance of incorporating Positive Therapy interventions into comprehensive treatment plans for HNC patients to improve their QoL outcomes and psychological well-being and reduce anxiety and fear of recurrence. Addressing anxiety, depression, and FoR is crucial in enhancing overall patient outcomes and promoting holistic cancer care.

4.5 Major Finding

Effect of Positive Therapy on Quality of Life (FACT), Fear of Recurrence (FOP), and Anxiety (HADS):

- Participants who underwent Positive Therapy demonstrated a statistically significant improvement in quality of life compared to the control group, as evidenced by higher scores on the Functional Assessment of Cancer Therapy (FACT) scale. Several studies support the efficacy of Positive Therapy interventions in enhancing quality of life and well-being across diverse populations. Saranya et al. (2015), Thenu et al. (2013), Rohini (2012), Rajalakshmi et al. (2012). The findings from these studies provide support for the effectiveness of Positive Therapy interventions in enhancing quality of life and well-being among various populations, including HNC patients.
- Positive therapy facilitated the development of positive character traits and enhanced confidence among cancer patients in dealing with life challenges. This aligns with the observed reduction in FOR among head and neck cancer patients undergoing Positive Therapy, as indicated in above table. Rajalakshmi et al. (2012) found improvements in positive character traits and confidence levels. While the current study found a significant reduction in FOR among head and neck cancer patients undergoing Positive Therapy, indicating a reduction in anxiety.
- The substantial reduction in anxiety levels among participants in the experimental group suggests that Positive Therapy interventions, which include relaxation techniques, cognitive restructuring, and assertiveness training, offer tangible benefits in managing anxiety associated with HNC.

- The findings support that Positive Therapy equips patients with effective coping mechanisms to confront anxiety symptoms and cultivate a more positive outlook on life despite the challenges posed by HNC diagnosis and treatment.
- There is a strong negative correlation between FACT and HADS, indicating that higher levels of anxiety and depression are associated with lower quality of life among HNC patients. The correlation between FACT and FOP is very weak, suggesting a minimal relationship between fear of progression and quality of life. FACT scores exhibit a perfect positive correlation with themselves, as expected.
- Significant improvements observed in quality of life (QoL), fear of recurrence (FoR), and anxiety among Head and Neck Cancer (HNC) patient's post-positive therapy intervention.
- The findings, supported by studies such as Brennan et al. (2022), Van Beek (2020), Diego Tetzner Fernandes (2020), Davies et al. (2020), and Simon Dunne et al. (2019), reveal a significant negative correlation between anxiety/depression levels (measured by HADS) and quality of life (FACT scores), emphasizing the detrimental impact of anxiety and depression on the well-being of HNC patients. Additionally, these studies indicate minimal associations between fear of progression and both quality of life and anxiety/depression levels among HNC patients.
- FOP is that it exhibits a weak positive correlation with Quality of Life (FACT), implying a slight increase in quality of life as fear of progression slightly increases, though this effect is minimal. Additionally, FOP shows a weak negative correlation with Hospital Anxiety and Depression (HADS), suggesting little association between fear of progression and anxiety/depression among HNC patients.
- Positive therapy intervention resulted in enhanced QoL and reduced FoR and anxiety levels in HNC patients.
- HADS reveals a significant negative correlation with Quality of Life (FACT), indicating that higher anxiety and depression levels correspond to a notable decrease in quality of life among HNC patients.
- Strong correlation identified between QoL, FoR, and anxiety, highlighting the interrelationship among these factors.
- Positive therapy intervention showed promising outcomes in managing emotional well-being and treatment cooperation among HNC patients.
- Fear of recurrence emerged as a significant predictor of QoL, indicating the importance of addressing FoR to enhance overall quality of life outcomes.

Chapter 5

Conclusion

Following points to be covered in the present chapter they are:

1.1 Conclusion

1.2 Limitations

1.3 Suggestions

1.4 Implications

5.1 Conclusion:

The study concludes that positive therapy interventions are effective not only for head and neck cancer (HNC) patients but may also benefit individuals with other types of cancers and chronic health conditions. The main goal of this research was to evaluate the effectiveness of positive therapy on the quality of life (QoL), fear of recurrence (FoR), and anxiety in HNC patients.

Participants were divided into experimental and control groups through pre- and post-tests. The results showed that those who participated in the intervention experienced significant improvements in QoL, reduced anxiety levels, and decreased FoR. These findings provide important insights for medical professionals, mental health care providers, psycho-oncologists, oncologists, healthcare researchers, patients, and caregivers, highlighting the need to incorporate psychosocial support into comprehensive cancer care.

The study also addresses the multifaceted challenges cancer patients face, such as coming to terms with their diagnosis, navigating treatment protocols, and dealing with post-treatment uncertainties. Patients often endure significant sacrifices and emotional and psychological stress. Acknowledging the comprehensive needs of cancer patients, the study emphasizes the importance of psycho-oncological care as a critical aspect of cancer management, on par with medical treatments. Healthcare providers play a crucial role in maintaining both the physical and mental well-being of patients. Financial Factor and Health condition of patients during the time of therapy are the extraneous variable or factors which have a potential impact on patients. This study highlights the significant benefits of

positive therapy interventions, showing marked improvements in quality of life, fear of recurrence, and anxiety levels in head and neck cancer patients.

5.2 Limitations:

There are several limitations to consider when conducting a study on positive therapy for fear of recurrence in head and neck cancer patients in India. Some of these limitations include:

- Cultural norms and values in Indian society may affect the effectiveness of positive therapy. In collectivistic cultures like India, the emphasis on group well-being over individual well-being could influence patients' responses to positive therapy.
 - Language barriers in India's diverse linguistic landscape can challenge the delivery of positive therapy, as patients and therapists may not have a common language.
 - Access to mental health services, Mental health services are often stigmatized in India, and there may be limited access to mental health resources in some areas of the country.
 - Lack of Research: There is currently no research on using positive therapy to address fear of recurrence, quality of life, and anxiety in head and neck cancer patients in India. This gap makes it challenging to develop effective strategies for this population, highlighting the need for an India-based multidisciplinary approach.
 - Patient Characteristics: Head and neck cancer patients face unique challenges that may affect their response to positive therapy. Physical and emotional side effects from surgery or radiation, as well as coping with physical changes, can influence their psychological needs and the effectiveness of positive therapy.
 - Time Constraints: In India, patients may struggle to commit to the multiple sessions required for positive therapy due to work, family obligations, and other cultural factors.
- Overall, these limitations highlight the need for careful consideration of cultural, linguistic, and patient-specific factors when designing and implementing positive therapy for fear of recurrence in head and neck cancer patients in India.

5.3 Suggestions:

- The sample size can be increased, and findings can be correlated.

- The present study was limited to Nasik Hospital. A similar study may be conducted on a larger sample with different areas, such as all cancer hospitals from different parts of India.
- To develop the people coordination among them, such kind of research should be conducted in the government sector as well.
- A more systematic study can be done on the basis of socio-economic status, educational background, and the variable motives of the people involved.
- In future research, it is suggested that the study needs to be done on the positive therapy impact with more detail in psychology pathology. It is because this problem seems quite severe in the current day. The population who are diagnosed with cancer may have certain different mental and emotional health-related issues.
- It is also suggested that multiple variables can be taken into attention in order to define the positive therapy intervention on the other side of cancer, too.

5.4 Implications:

This study can have a number of potential implications for cancer patients, like:

- The study enhances cancer patients' psychological well-being by fostering optimism, resilience, and hope, reducing risks of depression and anxiety.
- Emphasizing life's positives improves overall satisfaction and counters treatment's adverse effects.
- Positive outlooks boost treatment motivation and adherence, increasing success rates.
- Positive therapy aids in stress and pain management, enhancing social support.
- The research guides healthcare professionals in comprehensive cancer care.
- Findings inform government healthcare policies, promoting multidisciplinary collaboration.

- **Challenges Faced by Researcher and Patients**

As a researcher, navigating the challenges of helping head and neck cancer patients was a delicate balance. Researchers had to blend empathy, expertise, and creativity to support them effectively. It was tough guiding patients through their deepest fears while keeping their hope alive. Progress often felt slow, and setbacks were common. Despite the challenges, the researcher remained committed to finding better ways to help these patients and exploring new approaches to improve their care.

To overcome these challenges researchers used different techniques like Positive Therapy, which has four major strategies, and they are, Relaxation Therapy, Counselling, Exercises, and Behavioural Assignments

- **Observation after implementing Positive Therapy**

Following the implementation of Positive Therapy in the current research, numerous significant improvements were observed among head and neck cancer patients. Participants experienced reduced stress levels, attributed to relaxation techniques such as deep breathing, relaxation training, and autosuggestion, which resulted in a calmer and less reactive demeanour. Emotional regulation also improved, enabling participants to better manage negative emotions such as fear, anger, frustration, and anxiety, leading to increased resilience and more effective coping with challenges. Additionally, mood enhancement was evident, with participants reporting greater happiness and optimism due to interventions like smile therapy, laugh therapy, and tension-releasing exercises.

Counseling sessions contributed to a positive shift in thinking patterns through rational emotive therapy, cognitive restructuring, and thought-stopping, fostering more adaptive thoughts and reducing negative self-talk. Communication skills, particularly assertiveness, improved as participants became more confident in expressing their needs and setting boundaries. Participants' engagement in behavioural assignments showed a strong commitment to practicing new, supportive behaviours and habits, further promoting their well-being. Overall personality traits such as self-awareness, self-confidence, and resilience were notably enhanced, and there was a significant reduction in symptoms related to mental health issues like anxiety and depression.

The analysis of therapeutic sessions revealed that adapting communication styles to accommodate speech and swallowing difficulties improved patient engagement and comprehension. Observing nonverbal cues provided valuable insights into emotional states, strengthening the therapeutic alliance. Close attention to emotional expression facilitated the exploration and validation of feelings, promoting psychological well-being. Teaching coping strategies empowered patients to effectively manage the physical and emotional challenges of cancer treatment. Addressing body image concerns promoted acceptance and a positive self-image, while discussions about social support networks enhanced coping and adjustment.

Engaging in existential exploration helped patients find meaning and purpose despite their challenges, promoting existential well-being. Emphasizing treatment adherence underscored the importance of compliance with medical recommendations, improving treatment outcomes. Demonstrating cultural sensitivity acknowledged the impact of cultural and diversity factors

on patients' experiences, fostering trust and rapport. A strong therapeutic alliance, characterized by trust and collaboration, facilitated patient progress and healing.

Overall, these observations highlight the multifaceted benefits of Positive Therapy interventions, demonstrating significant improvements in the psychosocial well-being of head and neck cancer patients. By addressing communication barriers, emotional distress, and existential concerns, Positive Therapy promotes resilience, coping, and adaptation to the challenges posed by cancer treatment.

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Appendices

Consent Form

Patient Information Sheet and Informed Consent Form

Please help us in providing you with a complete evaluation by taking the time to fill out this questionnaire carefully. Your participation in the study is voluntary, you may choose not to take part in this study. No matter what decision you make or even if your decision changes, you will not lose your patients medical care or legal rights. You will receive no payment for taking part in this study. You have right to privacy and all the information that is collected during this study is kept confidential to the extent permitted by regulations. The study data may be published or submitted to regulatory authorities. In all cases your identity will not disclosed. There is no expiry date for use of this information. If you have any questions or clarifications to seek Please feel free to ask us. I 'am Willing to participate in the study voluntarily. I have been explained everything in the language I understand best.

Patient Name:

Patient Signature:

Date:

रुग्ण संमती पत्र

रुग्ण माहिती पत्रक आणि माहिती देणारी संमती पत्र

कृपया आपला वेळ देऊन प्रश्नावली काळजीपूर्वक भरून हे मूल्यमापन पूर्ण करण्यास सहयोग करा .
ह्या अभ्यासातील तुमचा सहभाग स्वैच्छिक आहे, तुम्ही ह्या अभ्यासात सहभागी न होण्याचे ठरवू शकता.
तुमचा निर्णय कोणताही असो किंवा जरी तुमचा निर्णय बदलला तरी तुम्ही वैद्यकीय सेवा किंवा
कायदेशीर अधिकार गमावणार नाही. ह्या अभ्यासात सहभागी झाल्याबद्दल तुम्हाला कोणत्याही स्वरूपातला
मोबदला दिला जाणार नाही. तुम्हाला गोपनीयतेचा हक्क आहे आणि ह्या अभ्यासादरम्यान गोळा
करण्यात येणारी माहिती कायदे व नियमवली ने परवानगी दिलेल्या मर्यादित गोपनीय ठेवण्यात येईल.
सर्वच बाबतीत तुमची ओळख उघड केली जाणार नाही. ह्या माहितीचा वापर करण्यास कोणतीही अंतिम
मुदत नाही. ह्या अभ्यासाबद्दल तुम्हाला कोणत्याही प्रकारचे प्रश्न असतील तर विचारण्यास संकोच बाळगू
नये. मी स्वेच्छेने अभ्यासात भाग घेण्यास तयार आहे. मला चांगल्या प्रकारे समजल्या जाणाऱ्या भाषेमध्ये
सर्वकाही स्पष्ट केले आहे.

रुग्णाचे नाव :

रुग्णाची स्वाक्षरी :

दिनांक :

रुग्ण सहमती प्रपत्र

रोगी सूचना पत्र और सूचित सहमति प्रपत्र

कृपया समय निकालकर इस सर्वेक्षण को सावधानी से भरते हुए आपका दिए गए विषय में पूर्णरूप से मूल्यांकन करने में हमारी सहायता करे। इस अभ्यासक्रम में आपका भाग लेना पूर्णरूप से स्वैच्छिक है, आप अगर चाहें तो इस अभ्यासक्रम में हिस्सा लेने से मना कर सकते हैं। आप चाहें जो निर्णय ले या अगर आप अपना निर्णय बदल भी दें, तब भी आप आपकी चिकित्सकीय सेवा या न्यायिक अधिकार नहीं खोयेंगे। इस अभ्यासक्रम में सहभागी होने के उपलक्ष में आपको कोई मुआफज़ा नहीं दिया जायेगा। आपको गोपनीयता का अधिकार प्राप्त है और इस अभ्यासक्रम के दौरान संकलित की गयी सारी जानकारी नियमों और विनियमों में बताये निर्बंधों के तहत गुप्त राखी जाएगी। आपकी पहचान पूर्णरूप से गुप्त राखी जाएगी। इस जानकारी का इस्तेमाल करनी की कोई अंतिम तारीख निहित नहीं है। अगर आपके कोई प्रश्न हो या कोई स्पष्टीकरण चाहते हो तो कृपया हमसे पूँछे। मैं स्वेच्छा से अध्ययन में भाग लेना चाहता हूँ. मुझे सारी जानकारी मैं समझ सकूँ इस भाषा में समझायी गयी है।

रोगी का नाम:

रोगी का हस्ताक्षर:

तारीख:

Data Entry Link

<https://forms.gle/qXgJt47ZNNqgjpx5>

List of Appendices

Appendix 1 NCCN Distress Thermometer [NCCN DT.png](#)

Appendix 2 FACT Head and Neck Quality of Life [FACT-HN_ENG_Final_Ver4_16Nov07 - Copy.pdf](#)

Appendix 3 FOR-Q-SF [Short_Fear_of_Progression_Scale \(1\).pdf](#)

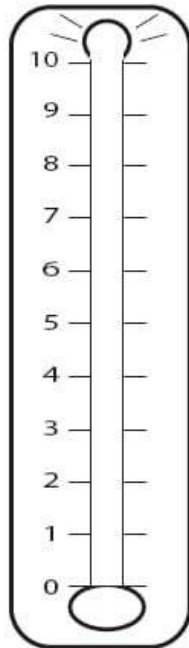
Appendix 4 HADS [HADS-2014.pdf](#)

NCCN Distress Thermometer for Patients

SCREENING TOOLS FOR MEASURING DISTRESS

Instructions: First please circle the number (0-10) that best describes how much distress you have been experiencing in the past week including today.

Extreme distress



No distress

Second, please indicate if any of the following has been a problem for you in the past week including today. Be sure to check YES or NO for each.

YES NO Practical Problems

- Child care
- Housing
- Insurance/financial
- Transportation
- Work/school
- Treatment decisions

Family Problems

- Dealing with children
- Dealing with partner
- Ability to have children
- Family health issues

Emotional Problems

- Depression
- Fears
- Nervousness
- Sadness
- Worry
- Loss of interest in usual activities

Spiritual/religious concerns

Other Problems: _____

YES NO Physical Problems

- Appearance
- Bathing/dressing
- Breathing
- Changes in urination
- Constipation
- Diarrhea
- Eating
- Fatigue
- Feeling Swollen
- Fevers
- Getting around
- Indigestion
- Memory/concentration
- Mouth sores
- Nausea
- Nose dry/congested
- Pain
- Sexual
- Skin dry/itchy
- Sleep
- Substance abuse
- Tingling in hands/feet

FACT-H&N (Version 4)

Below is a list of statements that other people with your illness have said are important. **Please circle or mark one number per line to indicate your response as it applies to the past 7 days.**

PHYSICAL WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GP1	I have a lack of energy	0	1	2	3	4
GP2	I have nausea	0	1	2	3	4
GP3	Because of my physical condition, I have trouble meeting the needs of my family	0	1	2	3	4
GP4	I have pain	0	1	2	3	4
GP5	I am bothered by side effects of treatment	0	1	2	3	4
GP6	I feel ill	0	1	2	3	4
GP7	I am forced to spend time in bed	0	1	2	3	4

SOCIAL/FAMILY WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GS1	I feel close to my friends	0	1	2	3	4
GS2	I get emotional support from my family	0	1	2	3	4
GS3	I get support from my friends.....	0	1	2	3	4
GS4	My family has accepted my illness	0	1	2	3	4
GS5	I am satisfied with family communication about my illness.....	0	1	2	3	4
GS6	I feel close to my partner (or the person who is my main support)	0	1	2	3	4
Q1	<i>Regardless of your current level of sexual activity, please answer the following question. If you prefer not to answer it, please mark this box <input type="checkbox"/> and go to the next section.</i>					
GS7	I am satisfied with my sex life	0	1	2	3	4

FACT-H&N (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

EMOTIONAL WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GE1	I feel sad	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness.....	0	1	2	3	4
GE3	I am losing hope in the fight against my illness.....	0	1	2	3	4
GE4	I feel nervous.....	0	1	2	3	4
GE5	I worry about dying.....	0	1	2	3	4
GE6	I worry that my condition will get worse.....	0	1	2	3	4

FUNCTIONAL WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GF1	I am able to work (include work at home)	0	1	2	3	4
GF2	My work (include work at home) is fulfilling.....	0	1	2	3	4
GF3	I am able to enjoy life.....	0	1	2	3	4
GF4	I have accepted my illness.....	0	1	2	3	4
GF5	I am sleeping well	0	1	2	3	4
GF6	I am enjoying the things I usually do for fun	0	1	2	3	4
GF7	I am content with the quality of my life right now.....	0	1	2	3	4

FACT-H&N (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

ADDITIONAL CONCERNS

		Not at all	A little bit	Some- what	Quite a bit	Very much
H&N1	I am able to eat the foods that I like	0	1	2	3	4
H&N2	My mouth is dry	0	1	2	3	4
H&N3	I have trouble breathing	0	1	2	3	4
H&N4	My voice has its usual quality and strength	0	1	2	3	4
H&N5	I am able to eat as much food as I want	0	1	2	3	4
H&N6	I am unhappy with how my face and neck look.....	0	1	2	3	4
H&N7	I can swallow naturally and easily	0	1	2	3	4
H&N8	I smoke cigarettes or other tobacco products.....	0	1	2	3	4
H&N9	I drink alcohol (e.g. beer, wine, etc.).....	0	1	2	3	4
H&N 10	I am able to communicate with others	0	1	2	3	4
H&N 11	I can eat solid foods.....	0	1	2	3	4
H&N 12	I have pain in my mouth, throat or neck	0	1	2	3	4

Short Fear of Progression Questionnaire (FOP 12)

Your Name: _____ Date of Birth: _____ Your Location Today: _____
 _____ Today's Date: _____ Staff Member: _____

Instructions Below you will see a list of statements that are related to your illness and possible future concerns.

Please place a tick "✓" or cross "X" in the appropriate column as the statement pertains to you.

Some questions will not apply to you. Please make a mark under "never" in these cases.

	Never	Seldom	Sometimes	Often	Very Often
1. I become anxious if I think my disease may progress					
2. I am nervous prior to doctors' appointments or periodic examinations					
3. I am afraid of pain					
4. I have concerns about reaching my professional goals because of my illness					
5. When I am anxious, I have physical symptoms such as a rapid heartbeat, stomach ache or agitation					
6. The possibility of my children contracting my disease disturbs me					
7. It disturbs me that I may have to rely on strangers for activities of daily living					
8. I am worried that at some point in time I will no longer be able to pursue my hobbies because of my illness					
9. I am afraid of severe medical treatments during the course of my illness					
10. I worry that my treatment could damage my body					
11. I worry about what will become of my family if something should happen to me					
12. The thought that I might not be able to work due to my illness disturbs me					
	Never	Seldom	Sometimes	Often	Very Often

Thank you for completing this questionnaire

Hospital Anxiety and Depression Scale

~ Scoring Sheet ~

	Yes definitely	Yes sometimes	No, not much	No, not at all
1. I wake early and then sleep badly for the rest of the night.	3	2	1	0
2. I get very frightened or have panic feelings for apparently no reason at all.	3	2	1	0
3. I feel miserable and sad.	3	2	1	0
4. I feel anxious when I go out of the house on my own.	3	2	1	0
5. I have lost interest in things.	3	2	1	0
6. I get palpitations, or sensations of 'butterflies' in my stomach or chest.	3	2	1	0
7. I have a good appetite.	0	1	2	3
8. I feel scared or frightened.	3	2	1	0
9. I feel life is not worth living.	3	2	1	0
10. I still enjoy the things I used to.	0	1	2	3
11. I am restless and can't keep still.	3	2	1	0
12. I am more irritable than usual.	3	2	1	0
13. I feel as if I have slowed down.	3	2	1	0
14. Worrying thoughts constantly go through my mind.	3	2	1	0

Anxiety 2, 4, 6, 8, 11, 12, 14

Depression 1, 3, 5, 7, 9, 10, 13

Scoring 3, 2, 1, 0 (For items 7 & 10 the scoring is reversed)

GRADING: 0 - 7 = Non-case

8 – 10 = Borderline case

11+ = Case

List of Conferences

1. 8th International Conference of Indian Academy of Health Psychology on 30th November to 2nd December 2023 organized by the Indian Academy of Health Psychology and We Avec U Mental Health Organization, at Calangute, Goa.
2. International Conference on “Holistic Health and Wellbeing : Issues, Challenges and Management” held from 2nd to 3rd June 2023 organized by School of Education and Department of Psychology at Lovely Professional University, Punjab.
3. 7th International Conference of Indian Academy of Health Psychology on 22nd to 24th December 2022 organized by the Department of Psychology and Mental Health, USHSS, Gautam Buddha University, Greater Noida, Uttar Pradesh, Delhi.
4. 6th International Conference of Indian Academy of Health Psychology on 26th to 28th November 2021 organized by the Department of Psychology and Mental Health, USHSS, Gautam Buddha University, Greater Noida, Uttar Pradesh, Delhi.
5. International Conference on Human Dignity and Mental Health in the New Normal (ICDMH 2021) , on 17th to 18th December 2021 organized by Department of Psychology Utkal University, Odisha.
6. National E- conference on ‘Mental Health in an Unique World’ on 7th and 8th October 2021 organized by School of Behavioural Science (SBS), National Forensic Sciences University (NFSU), Gandhinagar, Gujarat.