Antecedents, Appraisal, Coping Strategies and Psychosocial Adjustment among Cervical Cancer Patients in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia: A Mixed-Method Study

Anteneh Dirar

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A Dissertation Submitted to The School of Social Work of Addis Ababa University in Partial Fulfilment of The Requirements for The Degree of Doctor of Philosophy (PhD) In Social Work and Social Development

By

Anteneh Dirar

Advisors

Dr. Wubegzier Mekonnen (Principal Advisor)

Associate Professor, School of Public Health, Addis Ababa University

Dr. Zena Berhanu (Co-Advisor)

Assistant Professor, School of Social Work, Addis Ababa University

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Approved By the Examining Board

	Name	Signature	Date
1. External Examiner	____________________	___________	___________
2. Internal Examiner	____________________	___________	___________
3. Principal Advisor	____________________	___________	___________
4. Co-Advisor	____________________	___________	___________
5. Chairman	____________________	___________	___________

Abstract

Despite great developments in diagnostic and treatment modalities for cervical cancer, overall psychosocial adjustment difficulties lead to poor health outcomes and reduced adherence to therapy. Accordingly, this study assessed the antecedents, appraisal, coping strategies, and psychosocial adjustment among cervical cancer patients in Tikur Anbessa Specialized Hospital. A cross-sectional, mixed-method study design was employed. The quantitative study collected data from 299 women and analyzed using descriptive, correlation, multiple regression, and path analysis. The qualitative study collected data through in-depth interviews with 11 women and analyzed via thematic analysis. The quantitative study revealed that most women experienced significantly greater psychosocial adjustment difficulties. They appraise their illness as a threat and harm/loss than a challenge. The result indicated that uncertainty, self-efficacy, presence of meaning in life, harm/loss and challenge appraisal, problem-focused coping, and emotion-focused coping strategies were significant predictors of psychosocial adjustment difficulty. Besides, the mediating role of cognitive appraisal and coping strategies in the association between antecedents and psychosocial adjustment was partially supported. The qualitative study findings indicated that women experienced a lack of satisfaction with health care, struggle in work and daily life, and financial difficulties. Women employed various strategies to cope with their illness such as accepting, diverting attention, and religiousness. They experienced delays in seeking medical care because of limited awareness and repeated practice of traditional rituals. Information and advice from health professionals were the most crucial support need identified. The integrated study findings show that women’s personal and environmental antecedents influence their appraisal and coping strategies, and consequently their psychosocial adjustment with diagnosis and treatment of cervical cancer. Finally, it was recommended that cervical cancer treatment needs to integrate the psychological and social components of health. Also, expanding diagnostic and treatment facilities should be considered to help women access timely and cost-effective care.

Key words: *cervical cancer, appraisal, coping, psychosocial adjustment, Tikur Anbessa Specialized Hospital, Ethiopia*

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Acronyms and Abbreviations

ACS	American Cancer Society
AMOS	Analysis of Moment Structures
AAU	Addis Ababa University
BSW	Bachelor of Social Work
CAHS	Cognitive Appraisal of Health Scale
CCA	Cancer Council Australia
CDC	Centers for Disease Control and Prevention
CHS	College of Health Sciences
CSS	College of Social Sciences
DALYs	Disability Adjusted Life Years
ETB	Ethiopian Birr
FIGO	The International Federation of Gynecology and Obstetrics
FMOH	Federal Democratic Republic of Ethiopia Ministry of Health
GCO	Global Cancer Observatory
GSES	General Self Efficacy Scale
HCPs	Health Care Professionals
HPV	Human Papillomavirus
HR-HPV	High-risk Human Papillomavirus
HSTP	Health Sector Transformation Plan
IARC	International Agency for Research on Cancer
LR-HPV	Low-risk Human Papillomavirus
MLQ	Meaning in Life Questionnaire

MSPSS	Multidimensional Scale of Perceived Social Support
MSW	Master of Social Work
MUIS	Mishel Uncertainty in Illness Scale
NCCP	National Cancer Control Plan
NCD	Non-communicable Disease
NGOs	Non-governmental Organizations
RHB	Regional Health Bureau
SCC	Squamous Cell Carcinoma
SEM	Structural Equation Modeling
SPSS	Statistical Package for Social Science
SSW	School of Social Work
STIs	Sexually Transmitted Infections
SWs	Social Workers
TASH	Tikur Anbessa Specialized Hospital
TSAC	Theory of Stress Appraisal and Coping
WC-R	Ways of Coping (Revised) Questionnaire
WHO	World Health Organization

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CHAPTER ONE

1. INTRODUCTION

1.1. Background of the Study

Cervical cancer is slow-growing cancer that begins in the cervix of women (Centers for Disease Control and Prevention [CDC], 2016). The cervix connects the vagina to the womb. Once the cancerous cells begin to grow, the abnormal cells can slowly invade the whole body to cause devastating effects on health (CDC, 2016). Human papillomavirus (HPV) is a necessary but not sufficient cause of cervical cancer (Bruni et al., 2017).

Other factors that have a significant role in the development of cervical cancer in addition to infection with the virus include factors such as having multiple sexual partners, history of the sexually transmitted disease, long term use of hormonal contraceptives, multiparty, early onset of sexual activity, early age at first birth, smoking, and immune suppression (American Cancer Society [ACS], 2013; Jaime, Garza-Salazar, Flavia, & Abelardo, 2017).

Globally, cervical cancer accounted for an estimated 604,127 new cancer cases and 341,831 deaths in 2020. Cervical cancer stood at fourth place regarding diagnosis and cause of death from cancer among women living worldwide. Age-standardized incidence rates remain excessively high in less developed countries as compared to developed countries (18.8 vs. 11.3 per 100,000), and the age-standardized death rates remain excessively high in less developed countries compared to developed countries (12.4 vs. 5.2 per 100,000) (Sung et al., 2021).

Over the past few decades, cervical cancer incidence and death rates have dropped in most parts of the world. In contrast, incidence and mortality rates in low- and middle-income countries have increased or unaffected (World Health Organization [WHO], 2020). In low- and middle-income countries, its incidence is nearly twice as high, and its mortality rates three folds higher than in high-income countries. The excessively high cervical cancer load in low- and middle-income countries is ascribed to a lack of effective screening and high-quality treatment services for cervical cancer (WHO, 2020).

Global Cancer Observatory (GCO) indicated that the burden of cervical cancer is projected to continue to increase. It is estimated that by 2030, more than 700,000 women will be diagnosed with cervical cancer, and 400,000 will die because of cervical cancer. The estimate also indicated that most increases would be in women living in low- and middle-income countries (GCO, 2018).

According to WHO, in Ethiopia, cervical cancer is the second most commonly diagnosed cancer accounting for 9.6% of cancer cases, and it is the second cause of cancer death responsible for 10.3% of cancer mortality in 2020 (International Agency for Research on Cancer [IARC], 2021). In 2020 a total of 7445 women were diagnosed with cervical cancer, and 5338 died due to cervical cancer. The age-standardized incidence rate was 21.5 per 100,000, and the age-standardized mortality rate was about 16.0 per 100,000 (IARC, 2021).

The magnitude of cancer is increasing in economically evolving countries which includes Ethiopia, as a result of an increasing number of aged populations, adoption of cancer-associated lifestyle, exposure to different infections, smoking, physical inactivity, and unhealthy diets (Tigeneh, Molla, Abreha, & Assefa, 2015, p. 2).

There have been international and national commitments to curving the prevalence of cervical cancer and its ill consequences. Cervical cancer is highlighted in the 2011 Political Declaration of the United Nations High-Level Meeting on the Prevention and Control of Non-communicable Diseases (NCDs) (WHO, 2014). The World Health Organization, Global Action Plan for the Prevention and Control of Non-communicable Diseases 2013-2020, cervical cancer control is among the priority interventions to be universally recommended for cervical cancer control that identifies HPV vaccination and screening and treatment of cervical cancer (WHO, 2013).

The World Health Organization is also involved in developing, testing, and implementing appropriate technologies to make comprehensive cervical cancer care feasible and affordable in low- and middle-income countries (WHO, 2014, p. 9). The first strategy was developed by the World Health Organization in 2020 to hasten the reduction of cervical cancer as an important health problem globally. To achieve that goal, high coverage targets for HPV vaccination, screening and treatment of precancerous lesions, and cancer management must be reached by 2030 and maintained at this high level for decades (WHO, 2020, p. 19).

In 2015, the Federal Democratic Republic of Ethiopia Ministry of Health (FMOH) developed the first National Cancer Control Plan (NCCP) (2016-2020) that endorses a comprehensive cancer control strategy and interventions. The plan was developed following the main target areas of the Health Sector Transformation Plan (HSTP) (2015/16-2019/20) (FMOH, 2015a). Moreover, HSTP II (2020/21-2024/25) also focuses on improving cervical cancer access to screening and management as one of the major strategic initiatives under family planning and reproductive health program areas (FMOH, 2021).

In addition, FMOH has developed a National Guidelines for Cervical Cancer Prevention and Control in 2015 that provides a framework on cervical cancer screening, treatment, and management. The guideline layout a standardized strategy for the employment of cervical cancer screening and treatment and provides guidance and coordination for the prevention and control of cervical cancer in Ethiopia among different stakeholders (FMOH, 2015b).

The diagnosis and treatment of cancer can be a challenging and distressing experience for any woman. Research has documented various physical, psychological, and social consequences as an effect of dealing with a life-threatening illness, undergoing painful and impairing treatments, and accepting of a new identity (Brandao, Schulz, & Matos, 2017; Craft et al., 2011; Goncalves, 2010; Liao et al., 2014).

Studies showed that cancer patients presented fear of recurrence and/or death, feelings of loss of control, isolation, problems adjusting to physical changes, anxiety, depression, low self-esteem and changes in the body image, sexual dysfunction, and redefining fundamental values, beliefs, and goals (Bloom, Stewart, Chang, & Banks, 2012; Boehm, Holger, Thomas, & Thomas, 2014; Vrzackova, Weiss, & Cibula, 2010; Zainal et al., 2013; Zemestani, Hasannejad, & Nejadian, 2013).

Brennan (2001) provides a definition for psychosocial adjustment to cancer as “the processes of adaptation that occur over time as the individual manages, learns from and accommodates the multitude of changes which have been precipitated by changed circumstances in their lives” (p. 2). Adjustment, therefore, can be perceived as a complex concept. Stanton, Revenson, and Tennen (2007) described adjustment as a multifaceted concept encompassing interpersonal, cognitive, emotional, physical, and behavioral components.

All aspects related to illness and treatment affect psychosocial adjustment to illness. It involves managing multiple changes connected with a cancer diagnosis and all types of treatment methods. Psychosocial adjustment to illness consists of positive or negative influences on the progress of cervical cancer (Rizalar, Ozbas, Akyolcu, & Gungor, 2014). Thus, the psychosocial adjustment of cervical cancer patients matters a lot, and understanding psychosocial adjustment and its predictors assist in recognizing the effects of illness and its treatment modalities. It is a significant step towards improving treatment outcome and providing holistic care for these patients.

Therefore, the present study examined antecedents, appraisal, coping strategies, and psychosocial adjustment among cervical cancer patients in Tikur Anbessa Specialized Hospital. The Theory of Stress, Appraisal and Coping (TSAC) proposed by Lazarus and Folkman (1984) was used as a theoretical framework to examine the psychosocial adjustment process concerning the personal, environmental, appraisal, and coping strategies components.

1.2. Statement of the Problem

Even though cervical cancer is preventable and can be cured if noticed early and adequately treated, it is among the leading cause of death related to cancer among women globally (WHO, 2020). Cervical cancer affects women, including their families worldwide. The impacts (physical, psychological, social, and economic) of cervical cancer mortality in developing countries are very high (Bruni et al., 2017).

Cervical cancer affects women at a relatively younger age when they may be raising children, caring for the family, and contributing to the development of their community (Bruni et al., 2017; WHO, 2014). According to the World Health Organization, the death of a woman in her younger age due to cervical cancer is a tragic and unnecessary loss to her family and community that brings a massive consequence for the well-being of both (WHO, 2014, p. 8).

Despite great developments in diagnostic and therapeutic approaches for gynecological cancer, psychosocial adjustment problems instantly after its detection and at the moment of treatments are consistently found in the literature (Consolo & Romao, 2012; Silva, Crespo, & Canavarro, 2012). Physical and psychological consequences are significant in women living with cervical cancer (Maher & Denton, 2008; Singhrao, Huchko, & Yamey, 2013). Cervical cancer also poses a substantial economic difficulty for families in several countries. This difficulty includes the inability to be productive because of the illness, high expenses related to medical care, and the need for caregivers to quit or reduce working hours to look after women who have cervical cancer (Lipsy, 2008; Tsu & Levin, 2008).

Cervical cancer treatments can lead to adverse short- and long-term effects. Treatment-related complications, including bladder dysfunction, bowel dysfunction, sexual dysfunction, lymphedema, and psychosocial problems, were documented (Donovan, Boyington, Judson, & Wyman, 2014; Grover et al., 2012; Kirchheiner et al., 2014; Mirabeau-Beale & Viswanathan, 2014; Osann et al., 2014). The treatments of cervical cancer have resulted in a significant occurrence of anxiety and distress (Kirchheiner et al., 2014).

Throughout many years, the main concern in the management and treatment of cancer was associated with survival and did not consistently address the psychosocial problems associated with the illness (Adler & Page, 2008). However, improvements in treatments and survival rates are directed to a paradigm shift from '*living* to *living well'*, with patients' quality of life being considered important as their survival (Grassi & Travado, 2008).

Adler and Page (2008) described that having cancer and receiving the treatment affects different aspects of the patients' lives, including physical functioning. For this reason, cancer has become to be conceptualized as a '*life-threatening chronic condition'* needing continuing and long-term management in terms of not only biomedical care but also psychosocial care (Weis, 2015).

Findings from research studies around the world among patients with diverse kinds of cancer together with cervical cancer indicated that patients are experiencing a lot of psychosocial adjustment difficulties associated with health care, work setting, household situation, personal relations, family relations, stress, and a financial burden (Çürük, Kartin, & Şentürk, 2020; Jang & Kim, 2018; Ntinga & Maree, 2015; Tadesse, 2015; Taghadosi, Tajamoli, & Aghajani, 2017). These demands a closer look into the antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment among cervical cancer patients in Ethiopia.

Literature suggests that the psychosocial adjustment of patients with cancer is influenced by sociodemographic characteristics, clinical variables, personal factors (self-esteem, meaning in life, optimism), environmental factors (social support, uncertainty), cognitive appraisal, coping strategies, and other factors that contribute to positive or negative health outcome (Çürük et al., 2020; Eisenberg et al., 2015; Mazanec, Daly, Douglas, & Musil, 2011; Oztunc, Yesil, Paydas, & Erdogan, 2013; Pan et al., 2018; Rizalar et al., 2014; Rottmann et al., 2010; Shakeri et al., 2015; Shelby et al., 2014; Taghadosi et al., 2017; Thapa et al., 2018; Weis, 2015; Yahaya et al., 2015). Identifying these influences in the local setting is a way of paving commission for cancer treatment activities.

During the immediate post-cancer treatment period, psychosocial adjustment is described within the emotional, physical, interpersonal, and practical domains (Stanton, Rowland, & Ganz, 2015, p. 162). During the completion of treatment, cancer patients face problems related to returning to their social roles in the family, workplace, and community (Holland & Reznik, 2005). Early detection and treatment of those conditions in people living with cancer significantly improved their adaptation and wellbeing and increased survival rates (Weinberger et al., 2010).

Vilhena et al. (2014) reported that understanding psychosocial factors in patients leads to better control of illnesses, resulting in better patient outcomes. Accordingly, a better understanding of psychosocial adjustment and its determinants will assist in recognizing the effects of cervical cancer and its means of treatment on patients and propose evidence-based interventions. Thus, research needs to assess the level and determinants of psychosocial adjustment and explore the psychosocial adjustment experiences and support needs among cervical cancer patients receiving treatment.

From the assertions proposed by Lazarus and Folkman's theory of stress, appraisal, and coping that cognitive appraisal and coping strategies are used by patients mediated the association between antecedents and psychosocial adjustment. Previous studies are scarce, and few available studies found mixed results. Some studies supported the mediating model Thiruchelvi and Supriyain (2012), while others found no mediation effect (Akker et al., 2016; Song et al., 2016). These diverse findings demanded a need to examine the mediating role of cognitive appraisal and coping strategies used by patients on the association among antecedents and psychosocial adjustment among cervical cancer patients in Ethiopia.

Brandao, Schulz, and Matos (2017) indicated that "as a result of prolonged survival of cancer patients and consideration of cancer as a chronic disease, assessing the way cancer patients adjust with their illness and detecting the determinants are helpful for better adjustment of patients” (p. 917). Thus, as more people live with cancer, research that adequately addresses psychosocial adjustment is essential to enable adequate support for people affected by cervical cancer. In addition, the course of adjustment to cervical cancer is a complex phenomenon. Many studies focus on these issues in the developed world, but data is scarce in developing countries like Ethiopia (IARC, 2021); the existing knowledge of cervical cancer is predominantly from developed countries.

The justification for conducting this study in Ethiopia based on the points raised above is: First, even though cervical cancer is among the leading causes of cancer morbidity and mortality among women in Ethiopia, the arguments above tell us that there are scarcities of studies on cervical cancer patients locally. Second, there is no individual study (at least to the knowledge of the present researcher) that has investigated the level and association of demographic factors, clinical markers, antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment specific to cervical cancer patients, and their psychosocial adjustment experiences and needs of psychosocial support using both quantitative and qualitative method. Third, no research to date (at least to the knowledge of the present researcher) has applied Lazarus and Folkman’s (1984) theory of stress, appraisal, and coping to the specific population of cervical cancer patients undergoing cervical cancer treatment. Fourth, the lack of research examining the mediating role of cognitive appraisal and coping strategies on the association among antecedents and psychosocial adjustment using path analysis in Ethiopia and those abroad is inconclusive. This way, a comprehensive view of these processes using quantitative and qualitative methods is needed to determine what is known, provide an up-to-date detailed understanding of factors contributing to cervical cancer adjustment, and document such knowledge gaps in the literature.

1.3. Research Questions

This study tried to address the following research questions:

1. What are personal and environmental antecedents (self-efficacy, meaning in life, perceived social support, and uncertainty) among cervical cancer patients?
2. How do cervical cancer patients appraise their illness?
3. What type of coping strategies are utilized by cervical cancer patients?
4. How are the psychosocial adjustment of cervical cancer patients explained?
5. Does cervical cancer patients' psychosocial adjustment differ as a function of sociodemographic characteristics and clinical markers?
6. Are there associations between antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment?
7. Do cognitive appraisal, and coping strategies play mediating roles in the relationship between antecedents and psychosocial adjustment components?

1.4. Objectives of the Study

1.4.1. General objective

- To assess the antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment among cervical cancer patients in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia.

1.4.2. Specific objectives

1. To describe the antecedents (self-efficacy, meaning in life, perceived social support, and uncertainty) among cervical cancer patients.
2. To assess the level of cognitive appraisal among cervical cancer patients.

3. To identify the type of coping strategies utilized by cervical cancer patients.
4. To describe the level of psychosocial adjustment among cervical cancer patients.
5. To calibrate statistically significant differences in psychosocial adjustment across sociodemographic characteristics and clinical markers of cervical cancer patients.
6. To estimate the correlations between cervical cancer patients' antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment.
7. To measure the mediating role of cognitive appraisal and coping strategies in the relationship between antecedents and psychosocial adjustment components among cervical cancer patients.

1.5. Significance of the Study

This research on antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment among women with cervical cancer receiving treatment will have various significance for social work education, practice, and research. First, the knowledge produced through the study will be integrated into social work education to equip students with new information regarding psychosocial adjustment to cervical cancer in the Ethiopian context. The study approach addressed the personal and environmental components of cervical cancer patients. Lazarus and Folkman's (1984) theory of stress, appraisal, and coping have served as a framework to understand psychosocial adjustment in this study. This will be an input for social work education to help students see this model's practical application in social work research. Hence, the present study's findings had verified the usefulness of the theoretical model to understand cervical cancer patients' adjustment to their illness.

Second, the current research attempted to provide an empirical basis for interventions. The identified factors that have the potential to facilitate or hinder the process of adjusting to cervical cancer contribute to helping social workers and health professionals better understand the process of adjustment to cervical cancer, to identify women who are at greater risk for adjustment difficulties and to inform the development of psychosocial interventions. The new knowledge that emerged from this study's results will help determine what kind of psychological, physical, and social support is needed most in cervical cancer patients' care. This will help social workers partner with health professionals in supporting the patient and family by understanding the potential implications of the diagnosis and treatment, creating and implementing systematic psychosocial support programs based on women's needs.

Third, this study was a social work-based study to investigate the level and association of demographic factors, clinical markers, uncertainty, perceived social support, self-efficacy, meaning in life, cognitive appraisal, coping strategies, and psychosocial adjustment specific to cervical cancer patients, and their psychosocial adjustment experiences and needs of psychosocial support to cervical cancer in Ethiopia. Therefore, the study will serve as a reference source for researchers interested in investigating more about psychosocial adjustment aspects of cervical cancer patients in Ethiopia. It also posed research questions that need further investigation in the future.

1.6. Definition of Terms

Self-efficacy: self-efficacy was defined as ‘‘a judgment of one's ability to organize and execute given types of performances, whereas an outcome expectation is a judgment of the likely consequence such performances will produce'' (Bandura, 1997, p. 21).

Meaning in life: meaning in life has been defined as an "understanding of existence, a sense of purpose in one's life, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment" (Ho, Cheung, & Cheung, 2010, p. 658).

Perceived social support: perceived social support indicates social support (emotional, informational, and instrumental support) expected prospectively at a time of need some time in the future (Cohen, Underwood, & Gottlieb, 2000).

Uncertainty: uncertainty was defined as "the inability to determine the meaning of illness-related events" (Mishel, 1988, p. 225).

Cognitive appraisal: a cognitive appraisal is understood as "the process of categorizing an encounter, and its various facets, with respect to its significance for well-being" (Lazarus & Folkman, 1984, p. 31).

Coping: coping was defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141).

Psychosocial adjustment: psychosocial adjustment has been defined as "the processes of adaptation that occur over time as the individual manages, learns from and accommodates the multitude of changes which have been precipitated by changed circumstances in their lives" (Brennan, 2001, p. 2).

CHAPTER TWO

2. LITERATURE REVIEW

This chapter provides a review of literature related to the study's objectives. This review of the literature was organized into seven sections. The first section provides an overview of cervical cancer epidemiology, treatment, and its physical, psychological, and social impacts. The second section presents the conceptualization of psychosocial adjustment in relation to cervical cancer. The third section presented the theory of stress, appraisal, and coping (Lazarus & Folkman, 1984), as a framework to understand psychosocial adjustment among women with cervical cancer. Section five presents sociodemographic and clinical characteristics that were related to psychosocial adjustment. Studies on the status and association of patients' antecedent (self-efficacy, meaning in life, perceived social support, and uncertainty), cognitive appraisal, coping strategy, and psychosocial adjustment are presented in section six. Section seven present studies on mediating role of cognitive appraisal and coping strategy between antecedents and psychosocial adjustment. In section eight, the conceptual framework of the study is presented. Finally, summaries of the methodological approaches, limitations, and gaps in the literature consulted are presented.

2.1. Overview of Cervical Cancer

2.1.1. What is cervical cancer?

Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells (ACS, 2016). Cancers are distinguished by the specific type of cells involved and their location in the body. In sum, smoking, dietary patterns, reproductive behaviors, and infectious agents have been the main risk factors for cancer in high, middle- and low-income countries (Jemal, Canter, DeSantis, & Ward, 2010). It is an ongoing development of tissues that are not normal inside the cervix. It is developed gradually, starting with abnormal cell changes called precancerous that could regress or advance into cancer over the years (Markovic & Markovic, 2016).

2.1.2. Risk factors for cervical cancer

Human papillomavirus (HPV) is the primary causative agent in cervical cancer (Borruto, De Ridder, & Marc, 2012). HPV is the most common Sexually Transmitted Infection (STI) among women and men worldwide (Bruni et al., 2010). The virus is transmitted through skin-to-skin contact and skin-to-mucosa (Bzhalava, Eklund, & Dillner, 2015). Approximately 80-90% of all sexually active individuals have been infected by HPV (Bosch et al., 2013). The peak incidence of HPV infection occurs at a young age, in late adolescence, in young adulthood (Bruni et al., 2010). There are over 200 HPV genotypes identified (Bzhalava, Eklund, & Dillner, 2015), of which about 40 are known to infect the anogenital tract (De Villiers, 2013).

The HPV types are categorized as low-risk human papillomavirus (LR-HPV) and high-risk human papillomavirus (HR-HPV). Studies showed that many infections are symptomless, with around a ninety percent clearance rate in one to two years. Nevertheless, persistent HPV infections can lead to cervical cancer (Doorbar et al., 2012; Heitmann & Harper, 2012). Persistent infection of HR-HPV is a prerequisite for precancerous lesions and cervical cancer, detected in greater than 99 percent of the cancer cases (Bosch et al., 2013; De Martel et al., 2012). Progression from HPV infection to invasive cervical cancer is usually a slow process, taking 10 to 12 years (Jit, Gay, Soldan, Hong, & Edmunds, 2010).

Several risk factors are associated with HPV-related disease and cervical cancer. Age at first sexual intercourse, number of sexual partners and partner's sexual behavior, young age of first delivery, suppression and alteration of immune status, smoking, long-term use of oral contraceptives (>5 years), high parity (>5 children), and comorbidity with other STIs, such as HIV, chlamydia and herpes simplex type 2, are associated with increased risk (ACS, 2013; Almonte et al., 2008; Hwang et al., 2009; Jaime et al., 2017; Johnson et al., 2012; WHO, 2014; Zhang, Dai, Zhang, & Wang, 2012).

2.1.3. Types of cervical cancer

Squamous cell carcinoma (SCC) and adenocarcinoma are the two major categories of cervical cancer based on the cell cancer begin in. SCC is the most common type, accounting for about 7 out of 10 (70%) cases. SCC develops from the transformation zone, which locates at the junction between the squamous and columnar cells of the cervix (squamocolumnar junction), which migrates from the exocervix to the distal endocervical canal with advancing age. The second type of cervical cancer is adenocarcinoma, which develops from the mucus-producing cells of the endocervix. It accounts for about twenty-five percent of cervical cancer cases. The site where it occurs and the difficulty of recognizing the abnormal glandular cells make it harder to diagnose. A few cervical cancers feature both squamous cells and glandular cells. These cancers are adenosquamous carcinomas or mixed carcinomas (ACS, 2016; Cancer Council Australia, [CCA], 2017).

2.1.4. Signs and symptoms of cervical cancer

Patients with cervical cancer may not experience any symptoms in the early stages. Numerous signs and symptoms begin to be apparent when the cancerous cells spread in the body.

Once abnormal cervical cells become cancerous and invade nearby tissue, the most common symptom is abnormal vaginal bleeding. The abnormal vaginal bleeding may occur between regular menstrual cycles, and the bleeding during menstruation could take longer days and increase in amount. In addition, postcoital bleeding may be evident, and bleeding could be detected after cleaning or a pelvic examination. Symptoms may also include postmenopausal bleeding and increased vaginal discharge. Offensive discharge may appear as the tumor grows and areas of it become necrotic (ACS, 2016; Dunleavey, 2009; WHO, 2014).

2.1.5. Stages of cervical cancer

Several systems are used for cervical cancer staging. The International Federation of Gynecology and Obstetrics (FIGO) staging system, based on tumor size and the extent of spread of the disease within the pelvis and to distant organs, is the most commonly used system (ACS, 2016; WHO, 2014). Cervical cancer occurs in four stages. In stage I, it is limited to the cervix (includes substages IA1, IA2, IB1, and IB2). Stage II: Cancer has spread outside the cervix into the upper vagina or to the tissue beside the cervix (parametrium), but not to the sidewall(s) of the pelvis (includes substages IIA1, IIA2, and IIB). Stage III: Cancer has spread to the lower part of the vagina or through the parametrium to the sidewall(s) of the pelvis (includes substages IIIA and IIIB). Stage IV: Cancer has spread to surrounding organs or distant tissue, such as the lungs and distant lymph nodes (substages IVA and IVB).

2.1.6. Treatment options for cervical cancer

The treatment of cervical cancer is based on the FIGO clinical staging criteria. Cervical cancer treatment options include surgery, radiotherapy, and chemotherapy, and these may be used in combination. The prescribed treatment can be very different from woman to woman, the variation being influenced by many factors (ACS, 2016; CCA, 2017; WHO, 2014).

Surgery

Surgery as a treatment option is performed by removing the tissues and surroundings affected by cancer. The procedure can be performed through the vagina or abdomen. It is done either as a primary or secondary treatment option. After surgery for cervical cancer, patients may experience some of the following side effects: problems with bladder or bowel, lymphedema (excess tissue fluid in the legs or pubic area), the removal of the ovaries will cause sudden menopause, impact on sexuality, and internal scar tissue (adhesions) tissues in the body may stick together (ACS, 2016; CCA, 2017; WHO, 2014).

Radiotherapy

Radiotherapy (or radiation therapy) uses sophisticated equipment to produce invisible rays similar to rays of light but with higher energy that are beamed onto cancer and the surrounding areas. The rays penetrate the body and destroy cancer cells to eliminate cancer fully or partially. Destroyed cancer cells are eliminated from the body. The radiation treatment for cervical cancer can also affect adjacent organs, including the lower abdomen and regional bone marrow. In addition, cessation of menses, sterility, and dyspareunia could also be the side effects. Fistula is a rare side effect (ACS, 2016; CCA, 2017; WHO, 2014).

Chemotherapy

During chemotherapy, a toxic drug is administered repeatedly as a treatment. A repetitive treatment with one or more chemicals is administered intravenously to destroy the rapidly dividing abnormal cells. Chemotherapy treatments affect not only cancer cells but also rapidly dividing cells in systems of the entire body: bone marrow, digestive system, urinary system, skin, and other organs lined by epithelial. This means a risk of anemia, low white blood cell counts and infections, or bleeding from low platelet counts. Chemotherapy can also cause nausea and diarrhea or allergic reactions to the drug, and these are usually short-lived and do not imply increased risks (ACS, 2016; CCA, 2017; WHO, 2014).

Chemoradiotherapy

Chemoradiotherapy means having radiotherapy and chemotherapy together. The treatment will be effective since chemotherapy makes the cancer cells more sensitive to radiotherapy. Chemoradiotherapy can have side effects that include exhaustion, diarrhea, wanting to pass urine more often or in urgency, cystitis, the skin in the treatment area could be dry and itchy, or a lowered number of white blood cells, which results in an increased risk of infection (ACS, 2016; CCA, 2017).

2.1.7. Physical, psychological, and social effects of cervical cancer

Patients with cervical cancer can experience various psychosocial difficulties related to diagnosis, treatment, and survival. Being diagnosed with cancer and receiving treatment creates a stressful situation that influences both a person's personal and family life (Soleimani, Lehto, Negarandeh, Bahrami, & Chan, 2017). Studies indicate a significant level of psychological distress, including symptoms of anxiety, depression, fear of recurrence and/or death, and concerns regarding body image, fertility, and sexual function can occur in patients (Ashing-Giwa, Lim, & Gonzalez, 2010; Jacobsen & Andrykowski, 2015; Mehnert et al., 2014; Stafford et al., 2015; Urbaniec, Collins, & Denson, 2011).

The importance of detecting and treating distress in individuals with cancer is that comorbid illnesses may further affect the treatment of depression and cancer, resulting in reduced compliance to treatment and poorer outcomes of depression and cancer (Massie, 2004). Many cancer patients need help coping with emotions related to illness and treatment, while many other needs support in managing their illness (Adler & Page, 2008).

Studies indicated that psychosocial distress occurs throughout the disease in cancer patients, not only soon after being diagnosed with cancer (Weis, 2015). In cancer patients' feelings of depression and uncertainty about the effectiveness of treatment, the future, the possibility of long-term side effects, and cancer recurrence were the common psychological reactions (Schroevers, Kraaij, & Garnefski, 2011). Due to the nature of cancer treatments, most cures are not without negative consequences. Physical, psychological, and sexual squeal and stress are associated with cervical cancer and treatment-related side effects (Cleary & Hegarty, 2011; Donovan et al., 2007).

Treatments for cervical cancer, including surgery, radiotherapy, and chemotherapy, are associated with risks of significant effects (Maher & Denton, 2008). Studies described these treatments as a distressing experience causing pain, anxiety, and distress for most women (Amsbaugh, Amsbaugh, ElGhamry, & Derhake, 2016; Dzaka & Maree, 2016; Kirchheiner et al., 2014; Long, Friedrich-Nel, & Joubert, 2016).

A patient's physical comfort, body image, sexual function, and fertility are significantly affected by the cancer treatments (Susan, 2011). Brearley et al. (2011) indicate peripheral neuropathy, lymphedema, gastrointestinal problems, sleep disturbance, bladder dysfunction, and menopause as physical symptoms experienced by cancer survivors. According to Aktas et al.

(2014), the overall survival time of cancer patients is reduced due to an increase in the number and/or strength of cancer symptoms.

Cancer has a substantial adverse effect on patients' sexuality and intimacy both during and after the treatment (Elena, Kelly, Peter, & Mary, 2010). Studies found that cervical cancer patients have significant problems in their sexual functioning and gynecologic health due to discomfort and physical difficulties they experience (Bjelic-Radisic et al., 2012; Khalil et al., 2015; Le Borgne et al., 2013). Cervical cancer is mainly diagnosed when women are in their sexually active age (Thranov & Klee, 2009).

Women experienced problems with body image and vaginal functioning/vaginal dryness (Plotti et al., 2011; Sadovsky et al., 2010), pain during intercourse (Ljuca & Marosevic, 2011), decrease in overall sexual satisfaction, orgasmic satisfaction, and vaginal elasticity, decrease in desire (Froeding et al., 2014), decrease in spontaneous interest and frequency of intercourse (Plotti et al., 2011; Sadovsky et al., 2010), premature menopause, and loss of fertility (Herzog & Wright, 2007; Baze, Monk, & Herzog, 2008). The toxicities of cancer treatment result in more sexual problems than cancer (Le Borgne et al., 2013; Lind et al., 2011; Sadovsky et al., 2010).

Cervical cancer patients also experience socio-economic problems and marital issues following diagnosis and treatment (Brunault et al., 2016; Wilson et al., 2016). As a result of cervical cancer, patients experience out-of-pocket expenses for treatment-related costs. Longo, Deber, Fitch, Williams, and D'Souza (2007) explained that these out-of-pocket costs include expenses directly due to treatment, expenses related to treatment, or other expenses because of having cancer. Further, due to having cancer and follow-up treatment, some patients experienced reduced time spent on work, leading to a decrease in income (Bennett et al., 2009).

A systematic literature review showed that unhelpful work environment, labor-intensive work, cancer types associated with an unfavorable prognosis, fatigue and physical symptoms, and perceived employer discrimination because of cancer and treatment had been previously reported as barriers for returning to work (Anja, 2011). Cancer also interrupts life and disrupts the many roles filled by middle adults, such as worker, spouse/ partner, parent, and caregiver of aging parents. Inevitably, relationships will change when one partner or family member becomes ill. For the patient, feelings of guilt and inadequacy about their perceived change in the ability can be overwhelming (Grace, Carolyn, & Lynn, 2015).

In sum, cervical cancer is a distressing disease with physical and psychosocial consequences that persist beyond diagnosis and treatments. For this reason, it is not surprising that psychosocial adjustment is an essential issue in oncology social work both in terms of research and in terms of clinical practice (Grace et al., 2015). Understanding and promoting psychosocial adjustment to cervical cancer is one of the main tasks in the psychosocial care offered to these patients.

2.2. Conceptualization of Psychosocial Adjustment to Cervical Cancer

According to Brennan (2001), psychosocial adjustment is defined as “the processes of adaptation that occur over time as the individual manages, learns from and accommodates the multitude of changes which have been precipitated by changed circumstances in their lives” (p. 2). Brennan (2001) stresses several critical points about psychosocial adjustment. First, psychosocial adjustment is not limited to a specific period but rather is an ongoing process. Second, it is more than the outcome of a coping process. It includes both psychological and behavioral adaptive processes made by an individual and his/her social network in response to stress. Lastly, it is a dynamic and reflexive process between the individual and his/her environment and occurs within a social context.

Adjustment, therefore, can be perceived as a complex concept. Stanton, Revenson, and Tennen (2007) described adjustment as a multifaceted concept encompassing interpersonal, cognitive, emotional, physical, and behavioral domains. Many influences were considered when assessing the psychosocial adjustment to long-lasting diseases (Stanton et al., 2007). It also includes dealing with the numerous changes that result from cancer and its treatment. Thus, psychosocial adjustment can positively or negatively affect an illness's progress (Rizalar et al., 2014).

A psychosocial adjustment was defined as an adaptation course in which the individual uses cognitive and behavioral resources in response to the physical, emotional, and functional demands during the treatment period (Brennan, 2001; Stanton et al., 2007). It is a dynamic, multidimensional phenomenon in which the individual makes a conscious effort to reduce emotional distress and assimilate the experience of cancer into her daily roles.

Susan, Barbara, Sara, and Carol (2011) described that "evaluating the psychosocial adjustment of a person offers a descriptive, practical, and complete representation of how she is doing with the social and emotional 'work' of the treatment period" (p. 2). In addition, the psychosocial domains of health, vocation, family, sexuality, interpersonal relationships, and emotions are potential targets for social work interventions (Grace et al., 2015).

In general, adjustment is a dynamic and multifaceted process with different adaptive tasks throughout the disease, and contextual factors influence that. Because adjustment occurs within a person's socio-cultural context, there is marked individual variability in the way women adapt to cervical cancer. Therefore, due to these variabilities in the way women perceive, adjust, and recover from cancer diagnosis and its treatments (Conley, Bishop, & Andersen, 2016), assessing the determinants to this individual variability is needed (Stanton, Rowland, & Ganz, 2015).

2.3. The Theory of Stress, Appraisal and Coping for Understanding Antecedents, Appraisal, coping, and Psychosocial Adjustment to Cervical Cancer

Many theoretical models have guided research studies in understanding health and illness. The biomedical, psychological, and biopsychosocial models are currently predominant in explaining adjustment to chronic illnesses (Walker, Jackson, & Littlejohn, 2004). The biomedical model “attributes a key role to biological determinants and explains disease as a condition caused by external pathogens or disorders in the functions of organs and body systems.” (Havelka, Luanin, & Luanin, 2009, p. 303). The medical model excludes the psychological and social dimensions. The psychological models of adaptation to illness assume the role of psychological factors on the cause and course of illness (Walker et al., 2004). The biopsychosocial model “takes into account all relevant determinants of health and disease and that supports the integration of biological, psychological and social factors in the assessment, prevention, and treatment of diseases.” (Havelka et al, 2009, p. 303).

Lazarus & Folkman’s (1984) theory of stress, appraisal, and coping was used as a theoretical framework in this study to understand antecedents, appraisal, coping, and psychosocial adjustment. It was established to examine individual coping and adaptation (Lazarus & Folkman, 1984). The theory is assumed to be incorporating the notions of the biopsychosocial approach (Zimmerman & Tansella, 1996). In addition, it is among the most prominent theories of adjustment to chronic illness (Hoyt & Stanton, 2018).

According to Lazarus and Folkman (1984), stress is “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and imperiling his or her well-being” (p. 19). For women who have experienced cervical cancer and are the focus of this research, cancer treatment is the stressor. However, the experience of the disease itself is also stressful; particularly when at an advanced stage, the treatment morbidity may be pretty demanding and long-term (Maher & Denton, 2008; Weis, 2015).

The model illustrates that when people are faced with a stressor, such as cancer diagnosis and treatment, they experience a “cognitive appraisal process,” which, in turn, directs their coping and ultimately their adaptation to the stressor (Lazarus & Folkman, 1984). It is considered a “transactional” model because it depicts the individual as a mediator between the environmental stimuli and the response and highlights the dynamic and reciprocal interactions between the person and the environment (Derogas & Coons, 1993; Lazarus & Folkman, 1984). Thus, according to this theory, an appraisal is a unique, dynamic, and relational process constantly occurring between the person and environment (Lazarus & Folkman, 1984).

According to the model, cognitive appraisal consists of primary and secondary appraisal (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Folkman, 1984). Primary appraisal is the cognitive evaluation of a stimulus, which can have a positive, neutral or negative valence. Stimuli with positive or neutral valence pose no potential danger and do not represent stressors. Negatively appraised stimuli, however, can represent a possible danger to the person and are appraised as potentially harming, threatening, or challenging.

Secondary appraisal refers to the belief whether the stressor can be handled and whether necessary resources are available to accomplish this endeavor. This course does not enter conscious awareness. For cervical cancer patients, primary appraisal likely determines that the diagnosis and treatment are stressful, followed by secondary appraisal involving the contemplation of coping options. As new information becomes available, cognitive reappraisals will take place. In the model proposed by Lazarus and Folkman (1984), cognitive appraisal precedes a coping response, leading to adaptation.

Coping is defined as “a constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Lazarus and Folkman explain that the way a person copes with stress is determined by cognitive appraisal and the interaction between situational (environmental) and personal factors.

There are two types of coping strategies identified in this model, “problem-focused coping” and “emotion-focused coping”. Problem-focused coping is a response geared toward resolving the stressful situation or taking action to alleviate the stress and change the situation. Problem-focused coping pursues to eliminate the source of the stress or formulate a plan to fight the stressful condition. On the other hand, emotion-focused coping seeks to resolve the emotional response to a stressor rather than eliminating or resolving the stressor itself by avoiding thinking about the threat or reappraising it without changing the realities of stressful situations (Folkman, et al., 1986; Lazarus, 1993).

In the model, “causal antecedents” that are personal and environmental factors work together to affect cognitive appraisal (Lazarus & Folkman, 1984). Commitments (choices, values, and goals), beliefs about personal control, and existential beliefs are significant personal factors that affect appraisal (Lazarus & Folkman, 1984). Characteristics of the situation that influence appraisal include the novelty, predictability, and uncertainty of the situation. In addition, the imminence and duration of an event and the uncertainty about when it will occur (temporal uncertainty) influence appraisal (Lazarus & Folkman, 1984). According to the model, social factors directly affect appraisal and directly and indirectly affect the outcome of the model (Lazarus & Folkman, 1984).

Lazarus & Folkman’s (1984) theory of stress, appraisal, and coping model provides a comprehensive picture of the elements involved in coping and the individual’s cognitive and behavioral responses to a stressful situation. This theoretical model incorporates the concept of cognitive appraisal, the evaluative cognitive processes that intervene between the stress encounter and the outcome. Adaptation is the model’s outcome and is conceptualized as emotional well-being, functional status, and health behaviors. The outcome represents an individual’s adaptation to a stressor. An individual’s ability to cope with stress determines to what extent overall function is achieved or compromised. Poor, inadequate, or inappropriate coping strategies can lead to poor outcomes (Folkman, et al., 1986).

To sum up, adjustment to cervical cancer is a complex, multifactorial process. Personal, environmental, appraisals, and coping are essential components of the adjustment process. They interact and act as determinants of the adjustment outcomes. Thus, the causal antecedents, facilitators, or barriers from the environment, personal, and biological factors influence how woman appraises cervical cancer treatment, how a woman copes with the treatment of cervical cancer, and how they adjust with diagnosis and treatment of cervical cancer.

The choice of TSAC as a theoretical framework for the present study is because 1) it is a well-documented theory which rigorously used to study the processes involved in coping and adjustment; 2) the theory strongly emphasizes the interplay between the individual and their environment/social circumstances, which is in line with the approach upon which this empirical study is based; 3) it takes into account the situation-specific notions, which is the dynamic coping process overtime; 4) it is important to understand subjective experiences of cervical cancer patients; 5) using TSAC will add a knowledge the soundness of the TSAC in understanding psychosocial adjustment among cervical cancer patients.

2.4. Description of Antecedents, Cognitive Appraisal, Coping Strategies, and Psychosocial Adjustment

2.4.1. Antecedent variables

2.4.1.1. Self-efficacy

Bandura (1997) defined self-efficacy as ‘‘a judgment of one’s ability to organize and execute given types of performances, whereas an outcome expectation is a judgment of the likely consequence such performances will produce’’ (p. 21). Bandura (1997) described self-efficacy as a multidimensional set of belief systems, which vary across level, generality, and strength. Self-efficacy consists of people’s beliefs in their capability to perform a specific action required to achieve a desired or specific outcome.

The choice of actions and the level of drives are affected by self-efficacy. The attainment of knowledge that forms the basis for skills results from beliefs of personal efficacy (Bandura, 2001). The central mechanism is the person's belief in coping with different challenges and exerting some control over environmental events (Bandura, 2001). Therefore, self-efficacy plays an important role and knowledge and skills in health-promoting behaviors (Bandura, 1997; Luszczynska, Scholz, & Schwarzer, 2005).

The level of self-efficacy had been reported in studies among patients with different types of cancer. For instance, a quantitative study among female cancer patients by Thieme, Einenkel, Zenger, and Hinz, (2017) found that the mean score of general self-efficacy was 29.8±5.3. Another quantitative study by Akker et al. (2016) found a mean general self-efficacy score of 30.5±4.7 on chronic illness patients. These studies used the general self-efficacy scale to assess the patients' level of self-efficacy. Hoffman, Lent, and Raque-Bogadan (2013) indicated that "general self-efficacy unlike domain-specific self-efficacy, general self-efficacy is considered a personal variable, referring to global confidence in one's capabilities across life contexts" (p. 253). In this study, self-efficacy was considered as a personal antecedent factor.

2.4.1.2. Meaning in life

According to Ho, Cheung, and Cheung (2010), meaning in life has been defined as an "understanding of existence, a sense of purpose in one's life, the pursuit and attainment of valuable goals, and an associated sense of contentment" (p. 658). Cancer as a distressing life event may lead to changes in one's view of meaning, which can result in questioning the formerly thought beliefs about meaning in life (Heather, Jason, Susan, Deanna, & Barbara, 2006). Issues of meaning in life are significant for patients given the danger of a severe illness, treatment measures, and the possible clash with the finiteness of their own lives (Bower et al., 2005).

Meaning in life is widely considered a “critical ingredient in human wellbeing and flourishing” (Steger, 2012, p. 384). According to Erci (2015), “the diagnosis of cancer and its follow up treatment may force some people to change their former outlook on life, as it no longer gives enough life direction, thus the threat to life can challenge people’s beliefs about their life and sense of well-being” (p. 4). Steger (2012) indicated that people seek to build meaning in their lives, defend it from threats and repair it from damage.

Previous studies assessed cancer patients’ meaning in life. Erci (2015) assessed the meaning in the life of patients with cancer. The result indicated a lower score in the meaning in life scale indicating respondents had a low level of motivation to find meaning and purpose in life. On the other hand, a previous study on breast cancer patients established that the meaning in the life of patients with cancer scores was higher (Thompson, 2007). These studies indicated that patients with different types of illness could have a different level of meaning in life scores.

Studies have also been conducted to compare the level of meaning in life among patients and healthy persons. For instance, a comparative study among patients with cancer and their family in Iran found that patients with cancer had a lower meaning level in life components than their family members (Hassankhani et al., 2017). Further studies are needed to assess the level of meaning in life among cervical cancer patients. This study viewed meaning in life as a personal antecedent factor during cervical cancer follow-up treatment.

2.4.1.3. Perceived social support

Social support refers to “the function and quality of social relationships, such as perceived availability of help, or support received” (Schwarzer & Knoll, 2007, p. 244). According to Cohen, Underwood, and Gottlieb (2000), social support can be measured as perceived social support and received social support. Perceived social support indicates social support expected prospectively at a time of need some time in the future, while received social support shows a retrospective account of received social support (Cohen et al., 2000).

Perceived and received social support can be differentiated as emotional, informational, and instrumental support (Cohen et al., 2000). Emotional support is considered the most familiar recognized type and includes the provision of compassion, apprehension, consideration, love, and trust. The family and close friends are the sources of emotional support. Informational support may help the person to respond to personal or situational demands that come in the form of advice and suggestions from members of a person’s network. According to Cohen et al. (2000), assistance in money, time, practical assistance, and other explicit interventions are instrumental support.

Social support is linked to improved physical and mental well-being as the main effects and stress-buffering models (Cohen & Wills, 1985). The main effects model maintains that support is beneficial to health and well-being irrespective of the amount of stress people are experiencing. The stress-buffering model indicates the belief that support buffers against the adverse effects of stressors under high-stress conditions. A study by Wang et al. (2018) among oral cancer patients found a mean score of 39.07±19.40 perceived social support. A study conducted in Ethiopia among breast cancer patients found a higher mean score of 70.35±16.81 perceived social support (Wondimagegnehu, Abebe, Abraha, & Teferra, 2019). Thus, assessing the level of perceived social support is essential in cervical cancer patients. In this study, perceived social support was considered an environmental antecedent factor during cervical cancer-follow up treatment.

2.4.1.4. Uncertainty

Uncertainty is defined as “the inability to determine the meaning of illness-related events” (Mishel, 1988, p. 225). Perceived uncertainty occurs in patients regarding disease symptoms, diagnosis, treatment, prognosis, and relationships with family members (Mishel, 1981). The individual, influenced by personality and knowledge, then forms an appraisal of the uncertainty as a danger or an opportunity (Mishel, 1988). This view of uncertainty as an antecedent of appraisal is consistent with Lazarus and Folkman’s view of the event and temporal uncertainty as situational factors influencing appraisal (Lazarus & Folkman, 1984).

According to McCormick (2002), the level of uncertainty can affect patients’ psychosocial adjustment, and it is also considered an element of all illness experiences. The level of uncertainty had been reported in studies among patients with different types of cancer. For instance, a study among breast cancer survivors in Thailand (Anusasananun et al., 2013) found a mean uncertainty to illness score of 59.92±8.36. On the other hand, another study among female cancer survivors in South Korea (Lee and Park, 2020) found a higher mean uncertainty to illness score of 83.06±15.29. The studies presented above depicted those patients from different illness types had a different level of uncertainty regarding their illness.

Management of the uncertainty may be a fundamental concern if the adjustment is to occur (Mishel, 1988). Research on uncertainty and its impact on psychosocial adjustment is needed in cervical cancer patients undergoing treatment. This study considered uncertainty an environmental antecedent factor during cervical cancer follow-up treatment.

2.4.2. Cognitive appraisal

According to Lazarus and Folkman (1984), a cognitive appraisal is understood as "the process of categorizing an encounter, and its various facets, concerning its significance for well-being" (p. 31). Cognitive appraisal has been categorized into primary and secondary appraisal (Lazarus & Folkman, 1984). Primary appraisal involves evaluating whether an event is stressful. The secondary appraisal occurs when an event is stressful (i.e., the outcome is viewed as resulting in harm/loss, threat, and challenge). The secondary appraisal includes evaluating what can be done to deal with the stressor; it directly impacts coping strategies. This process does not necessarily enter conscious awareness.

According to Hoffman, Lent, and, Raque-Bogadan (2013), negative appraisal of illness results in "treatment that requires frequent medication appointment, pain or discomfort, disfigurement or loss of functions, a medication that impairs functioning, or traveling great distances may be viewed as exceeding one's available resources" (p. 247). Studies conducted among different illnesses indicated that patients' interpretation of their illness determines the reaction and behaviors of patients towards their illness. For instance, Esteva et al. (2013) found that colorectal cancer patients' interpretation of illness determines delayed diagnosis. Treatment adherence was also reported because of illness perception among rheumatoid arthritis (Morgan et al., 2015).

Szymona-Pabkowska et al. (2016) had assessed the link between knowledge of the disease and disease-related appraisals among women with urinary incontinence. It was found that lack of knowledge could contribute to unfavorable patterns of disease-related appraisals. A qualitative study by Shrestha, Mulmi, Phuyal, Thakur, and Siwakoti (2020) among women with cervical cancer in Nepal indicated that patients had a lack of knowledge regarding cervical cancer and its causative agent and are also delayed seeking health care. The studies mentioned above indicated that patients with different illnesses had different appraisals about their illness.

For cervical cancer patients, primary appraisal likely determines that the diagnosis and treatment are stressful. As new information becomes available, cognitive reappraisals will take place. Although it is well known that numerous antecedent factors influence appraisal, including those related to the illness and personal factors (Lazarus & Folkman, 1984), very little is known about cognitive appraisal and psychosocial adjustment during cervical cancer treatment. In this study, the cognitive appraisal was viewed as a mediating factor between causal antecedents and psychosocial adjustment during cervical cancer treatment.

2.4.3. Coping strategies

Coping is defined as “a constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). The coping strategies that individuals engage in are believed to play a critical role in psychosocial adjustment to chronic illness and disability (Livneh & Wilson, 2003). Coughlin (2008) described that the psychosocial outcomes of cancer patients are influenced by the type of coping strategies they use. Coping is process-oriented as it highlights what a person thinks and does in a stressful encounter. It is contextual as it is influenced by how one perceives the actual demands and resources for managing this encounter (Folkman et al., 1986).

Coping strategies may change over time, as coping strategies adopted early in the adjustment period can become less effective as time progresses, and alternative coping strategies may be adopted (Lazarus & Folkman, 1984). Problem-focused coping is typically utilized when an individual perceives that something can be changed about the outcome. In contrast, emotion-focused coping is typically employed when an individual perceives that a stressor is something that must be endured as opposed to fixed or altered (Lazarus & Folkman, 1984).

Problem-focused coping and emotion-focused efforts are often used simultaneously in response to the dynamic demands of a stressful encounter as it unfolds during a single episode or across episodes (Lazarus, 1999). Therefore, Lazarus argues that there is not a universally good or bad coping process concerning adaptation outcomes. Thus, the level of effectiveness of coping efforts is measured based on the effect brought on the situational or stressful encounter associated with personal wellbeing and the specific adaptation outcome. Coping strategies should be evaluated within specific contexts since a coping strategy that is effective in one situation may not be effective in another (Lazarus & Folkman, 1984).

The coping strategies used by patients had been examined among different patient groups with chronic illness. For instance, a study had been conducted among recently discharged postsurgical cancer patients in Japan (Taniguchi & Mizuno, 2016). In this study, it had been found that participants used both problem-focused and emotion-focused coping strategies. Similarly, Shakeri et al. (2015) conducted a study among cancer patients and found that breast and skin cancer patients used both emotion-focused and problem-focused coping strategies. In India, a study among patients with head and neck carcinoma by Vidhubala, Ravikannan, Mani, and Karthikesh (2006) found that patients adopt both emotion-oriented and problem-oriented coping strategies during their illness.

Previous studies also identified whether patients more utilized problem-focused or emotion-focused coping strategy. For example, a study among Turkish women with ovarian cancer by Tuncy (2014) reported that patients use both emotion and problem-focused coping strategies. Nevertheless, problem-focused strategies were used more than emotion-focused coping strategies. Similarly, a study among breast cancer survivors in Thailand by Anusasananun et al. (2013) found that positive problem solving was the most frequently used coping behavior. Another study by Jabbarian et al. (2020) among patients with advanced lung and colorectal cancer found that acceptance and problem-focused coping strategies were the most frequently used coping strategy.

A study conducted by Long et al. (2020) among Vietnamese cancer caregivers found that active coping, acceptance, and positive reframing were the most utilized coping strategies. It was revealed that caregivers used more emotional coping strategies than problem strategy coping mechanisms. This was also reported by Hedlund, Ronne-Engström, Carlsson, and Ekselius (2010), where emotion-focused coping was the most frequently used coping strategy among patients with subarachnoid hemorrhage (SAH). The variations in the reported studies could be partly attributed to the measurement differences in coping strategies.

Studies have also identified other types of coping strategies. For instance, a study conducted in Ghana among cancer patients by Benson, Cobbold, Boamah, Akuoko, and Boateng (2020) indicated that women used active and avoidant coping strategies. It was also found that religious coping strategies were the most adapted active coping strategies, while self-distraction was the most adopted avoidant coping strategy. Similarly, a study by Khalili, Farajzadegan, Mokarian, and Bahrami (2013) among breast cancer patients revealed that the most common coping strategies used were religion, acceptance, active coping, positive reframing, and denial.

A qualitative study among women with gynecological cancer in Turkey conducted by Yaman and Ayaz (2016) found that patients' praying, seeking social support and denial were coping strategies. However, Yahaya, Subramanian, Bustam, and Taib, (2015) found that behavioral disengagement, self-blame, and substance use were the least used coping styles.

In the above studies, it was clear that patients with different illnesses at different levels used different coping strategies. It is therefore essential to identify coping strategies used by cervical cancer patients. Therefore, this study will examine whether problem-focused coping or emotion-focused coping can explain, or mediate, the relationship between causal antecedents and psychosocial adjustment during cervical cancer treatment.

2.4.4. Psychosocial adjustment

Studies have directly measured patients' psychosocial adjustment to illness, as studying patients' psychosocial adjustment are beneficial for better treatment outcomes. These studies, in general, indicated that patients experience psychosocial adjustments difficulties as a result of their illness. Using the psychosocial adjustment, studies reported a variety of scores. For instance, a higher mean level of psychosocial adjustment difficulties had been reported in studies among cancer patients as 59.11±4.62 among patients with oral cancer in Taiwan (Wang et al., 2018), 56.15±14.02 among Turkish patients with breast cancer (Rizalar et al., 2014), and 56.0±9.5 (Çürük et al., 2020).

On the contrary, other studies reported a lower mean level of psychosocial adjustment difficulties as 41.48±11.04 among cancer patients in Pakistan (Ashraf, Ambreen, and Shah, 2018), 44.9±15.0 among patients with advanced chronic kidney disease (Davison & Jhangri, 2013), and 50.1±17.18 among cancer patients in Iran (Taghadosi et al., 2017). From the studies above, it is understood that the levels of psychosocial adjustment varied in terms of types of cancer, phases of treatment, and other patient characteristics.

Qualitative studies were also employed to assess patients' psychosocial adjustment experiences. For example, a qualitative study by Fauske, Bondevik, Bruland, and Ozakinci (2015) found that long-term osteosarcoma survivors revealed that participants had experienced a change in activity and exclusion from participation in different outdoor activities. Similarly, another qualitative study among women with cervical cancer in Zambia (Ntinga and Maree, 2015) revealed that women had experienced the treatment's physical, socioeconomic, and sexual consequences. Further, the study showed that patients experienced spiritual matters concerning cervical cancer and faced health system challenges.

A study among patients with cervical cancer in China (Thapa et al., 2018) found that patients have difficulty with insomnia, constipation, financial difficulties, and menopausal symptoms. A qualitative study among women by Günüşen, İnan, and Üstün (2013), reported that patients experienced social as well as related psychological difficulties. Because of the diagnosis and treatment side effects, patients experienced psychological difficulties. Disruption of familial and social relationships was also experienced. Another study found that numerous cancer patients experienced financial difficulties, either due to their inability to work or because of cancer treatment costs (Greeff & Theil, 2012).

A qualitative study by Tadesse (2015) among cervical cancer patients in Ethiopia assessed adjustment challenges patients face. The study identified healthcare-based challenges related to system and practice delay, the psychological challenges of fear of recurrence, negative social attitude and distress associated with treatment side effects, and financial difficulties related to the cost of the treatment and accommodation. The finding indicates that patients had experienced psychological and social difficulties and physical difficulties.

The above studies indicated that undergoing treatment is a challenging experience for many cancer patients. It demonstrates that a significant proportion of patients with different types of illnesses had experienced various psychosocial adjustment difficulties. Identifying patients with high risk for poor adjustment will enable the care provided to intervene, promoting better adjustment and treatment outcomes among cervical cancer patients. Therefore, this study will examine the psychosocial adjustment experiences of cervical cancer patients.

2.5. Sociodemographic and Clinical Variables Related to Psychosocial Adjustment

Sociodemographic and clinical variables that are related to cervical cancer patients' psychosocial adjustment were identified from previous studies. Previous studies found that sociodemographic and clinical variables influence a patient's psychosocial adjustment. However, the study findings look inconsistent. Since there is a lack of studies on cervical cancer patients, sociodemographic and clinical variables were also identified from studies on other types of cancer.

Several studies revealed that psychosocial adjustment is associated with age (Anusasananun et al. 2013, Brunault et al. 2016, Navarta-Sanchez et al. 2016), place of residence (Ashraf et al. 2018, Çürük et al. 2020, Rizalar et al. 2014, Thapa et al. 2018), level of education (Ashraf et al. 2018, Rizalar et al. 2014), marital status (Çürük et al. 2020), occupational status (Baraki, Tessema, and Demeke 2020, Rizalar et al. 2014, Taghadosi et al. 2017), and income level (Ashraf et al., 2018; Rizalar et al., 2014, Shakeri et al., 2015).

Previous studies had also revealed the sociodemographic characteristics, resulting in disparities among patients' psychosocial adjustments. For instance, a study that examined psychosocial compliance in patients with breast cancer found that patients who were single and who lived in a village had a significantly worse psychosocial adjustment (Çürük et al., 2020). In addition, a study that examined the psychosocial adjustment of cancer patients indicated that poor psychosocial adjustment among cancer patients is associated with those patients with poor education, who are self-employed, who have no family support, and those who have low adherence to religious beliefs (Taghadosi et al., 2017).

Similarly, a study among cancer patients by Shakeri et al. (2015) in Iran found that those sociodemographic variables like being single, having a high income, higher educational status, and lower age are related to a higher quality of life. Another study that examined the impact of cervical cancer on the quality of life of women found that women who live in rural areas and have poor economic status harmed their overall quality of life (Thapa et al., 2018).

Contrary to the findings mentioned above, a study in Turkey among cancer patients found that sociodemographic characteristics of patients such as age, level of education, family type, and the number of children had no significant association with psychosocial adjustment (Çürük et al., 2020). Similarly, Taniguchi and Mizuno (2016) reported that demographic characteristics of postsurgical cancer patients in Japan were not significantly associated with stress. Another study among cancer patients undergoing treatment in Iran found that age and place of residence did not show a significant relationship with psychosocial adjustment (Taghadosi et al., 2017). As shown in the above studies, the reported inconsistent associations between sociodemographic characteristics and psychosocial adjustment could be partly because of the variations of the definitions of sociodemographic characteristics used across the studies.

The reported inconsistent association could indicate that the effect of sociodemographic characteristics on the psychosocial adjustment of patients requires further evaluation. Thus, identifying those sociodemographic characteristics that play an important role in cervical cancer patients' psychosocial adjustment is essential.

Previous studies also found that psychosocial adjustment is associated with time since diagnosis (Manne et al. 2015), stage (Azmawati, Najibah, Hatta, and Norfazilah, 2014, Kyei et al. 2020), and type of treatment received (Kyei et al. 2020, Li and Wang 2016, Tadesse et al. 2018, Thapa et al. 2018). For instance, Manne et al. (2015) found that time since diagnosis affects resilience, positive coping, and quality of life. Similarly, a study among patients with cervical cancer in China by Thapa et al. (2018) found that patients treated with surgery only had fewer problems with their quality of life. The advanced stage of cancer had a statistically significant effect on the overall quality of life. In addition, Li and Wang (2016) revealed that patients undergoing surgery have higher resilience levels than those taking combinations of surgery, chemo, and radiation therapies.

Contrary to the above findings, previous studies also did not show the influence of clinical markers on patients' psychosocial adjustments. A study by Taghadosi et al. (2017) revealed that duration with cancer and duration of chemotherapy did not show a significant relationship with psychosocial adjustment. Similarly, a study by Ashraf et al. (2018), Çürük et al. (2020), and Rizalar et al. (2014) found that there was no significant association between time since diagnosis and psychosocial adjustment. These findings show that the association between clinical markers and patients' psychosocial adjustments is not yet conclusive. Moreover, it remains inconclusive regarding which clinical factors would most influence patients' psychosocial adjustment. This study examined the influence of sociodemographic and clinical variables on cervical cancer patients' psychosocial adjustment.

2.6. Associations of Antecedents, Cognitive Appraisal, Coping Strategies, and Psychosocial Adjustment

2.6.1. Antecedents and cognitive appraisal

Few studies explored the precise relationship between antecedents and cognitive appraisal in cancer patients. A study conducted by Krok and Telka (2018) on cancer patients regarding the relationship of meaning in life with illness perception and global meaning change. It was found that the presence of meaning in life is associated with illness perception, change of beliefs, and goals. Patients with the presence of meaning in life perceived their illness less negatively have fewer disruptions in important beliefs and goals.

Another study that assessed the role of illness uncertainty in stress appraisal in patients with breast cancer found that uncertainty had the most influence on the survivor's stress appraisal (Wonghongkul et al., 2000). Even though the above findings support the predictive association between antecedents and appraisal in cancer patients, there is a need to see whether this association exists in cervical cancer patients.

2.6.2. Antecedents and coping strategies

Studies have been conducted to assess the relationship between antecedents and coping strategies among cancer patients. Studies have found inconclusive results regarding the influence of antecedent variables on the problem and emotion-focused coping strategies. For instance, a study had been conducted by Anusasananun et al. (2013) on cancer patients' coping strategies. In this study, it was revealed that perceived social support was positively correlated with only problem-solving coping strategies.

However, other studies indicated that perceived social support could influence problem- and emotion-focused coping strategies. For example, a study conducted by Long et al. (2020) examines the relationships between types of coping strategies utilized and social support. The study found that a high score of perceived social support significantly positively influenced both problem-focused and emotion-focused coping strategies. From both studies, it is understood that the effect of perceived social support on patients coping strategy appears to be positive.

Previous studies have also examined the influence of social support on other types of coping strategies. A study that examined the challenges, coping strategies, and support systems among women diagnosed with breast cancer in Ghana revealed that social support from more than two sources increases the use of both active and avoidant coping strategies by women (Benson, Cobbold, Boamah, Akuoko, & Boateng, 2020). These findings indicate that social support and various coping strategies are related.

Looking at the other antecedent variables, Lazarus and Folkman (1987) believed that self-efficacy perception is a powerful personal source for coping. This was supported by Hoffman et al.'s (2013) study that reported a higher level of general self-efficacy was associated with using an active coping style. In addition, self-efficacy has been associated with people's moods (Bandura, 1997) and coping (Cicognani, 2011). Luszczynska et al. (2005) identified that general self-efficacy seems to be an adaptive construct related to active coping strategies such as planning and having a fighting spirit, which contributes to successful adaptation to stressful situations.

Previous studies also assessed the effect of uncertainty on coping strategy. For example, in a study conducted by Anusasananun et al. (2013) on breast cancer patients' coping strategies, it was revealed that uncertainty in illness positively predicted escape or avoidance coping strategy and had no significant relationship with a positive problem-solving coping strategy. The above studies were inconclusive in that some antecedent variables had relationships with coping strategy while others did not. Thus, it is necessary to examine the effect of both personal and environmental antecedent variables on cervical cancer patients' coping strategies.

2.6.3. Antecedents and psychosocial adjustment

Studies had been conducted to assess the association of antecedent variables (meaning in life, self-efficacy, perceived social support, and uncertainty) with psychosocial adjustment among cancer patients. To begin with, studies that assessed the relationship between meaning in life and psychosocial adjustment, Krok (2015) conducted a study to assess the role of meaning in life within the relations of religious coping and psychological well-being. The findings indicated a positive association between the presence of meaning in life and psychosocial wellbeing. Similarly, a study conducted by Hoffman et al., (2013) also indicated that meaning-making is associated with improved adjustment in cancer patients. Another study was done by Park (2010) among patients with advanced cancer found that meaning in life has a vital role in reducing anxiety.

Studies were also conducted to look at this association with other chronic illnesses. For instance, a study among chronically ill patients in Belgium found that experiencing meaning in life significantly predicted wellbeing (Dezutter et al., 2013). Maintenance in emotional stability, psychological health, and well-being was observed in cancer patients seeking and fulfilling meaning in life (Skaggs & Barron, 2006; White, 2004). Studies also indicated that better overall psychological adjustment and less psychological distress are associated with patients who found situational meaning in the experience (Bower et al., 2005; Schnoll, Knowles, & Harlow, 2002). But studies about the relationship of meaning in life and psychosocial adjustment are lacking. Thus, it is essential to assess the influence of meaning in life on cervical cancer patients' psychosocial adjustment.

The relationship between self-efficacy and psychosocial adjustment was assessed in different research studies. Even though studies assessing this effect on cervical cancer patients are limited, a study by Yang et al. (2014) among Chinese cervical cancer patients assessed the prevalence and associated positive psychological variables of depression and anxiety. It was found that general self-efficacy was a significant negative predictor of depression. A study by Badana et al. (2019) conducted among breast cancer patients indicated that better quality of life was associated with higher self-efficacy and lower self-efficacy associated with worse mental health. Similarly, a study among women with breast cancer in Korea (Jang and Kim, 2018) found that self-efficacy was significantly correlated with psychosocial adjustment.

A study among prostate cancer patients by Curtis, Groarke, and Sullivan (2014) was conducted to assess stress and self-efficacy predicted psychosocial adjustment at diagnosis. The result indicates that self-efficacy had a significant negative relationship with adjustment indices on tension and depression. Neipp, López-Roig, and Pastor (2007) did a literature review to assess the relationship between perceived control and health outcomes in people with cancer. The study revealed that a high level of self-efficacy was associated with improved emotional status and adjustment to cancer.

However, other studies reported contrary results with the above studies. For instance, a study by Hoffman et al. (2013) reported that general self-efficacy did not significantly predict social and physical wellbeing. Thieme et al. (2017) also found that self-efficacy did not show a statistically significant association with quality of life, anxiety, and depression. The mixed results across the studies indicated that the effect of self-efficacy on patients' psychosocial adjustment seems to be undecided that requires further investigation.

On the other hand, Yang et al. (2010) described that enhanced self-efficacy could improve people's adjustment in the long term. Hence, self-efficacy may be an essential resource in performing different tasks and determining activities or situations to perform or avoid. Thus, it is essential to evaluate not only how the women adjust to the disease, but also with general situations influencing the adjustment such as self-efficacy.

Previous research studies had identified the relationship between social support and psychosocial adjustment in different illness types. Wang et al. (2018) indicated that perceived social support had a direct relationship with psychosocial adjustment among cancer patients. Another study by Rizalar et al. (2014) also showed that better psychosocial adjustment to the illness was observed among cancer patients with a higher level of perceived social support. Moreover, a study by Ashraf et al. (2018) among breast cancer patients found that perceived social support had significantly related to positive psychosocial adjustment.

A study that assessed social support and psychosocial compliance among women with breast cancer in Turkey revealed that high perceived social support was significantly related to a high level of psychosocial adjustment (Çürük et al., 2020). Another study found that perceived social support is negatively correlated with psychological distress and suicidal thought in cancer patients. It is positively correlated with better orientation to health care services and adjustment to family relationships (Ceyhan et al., 2014). On the other hand, Jang and Kim (2018) found that perceived social support significantly affected psychosocial adjustment among women with breast cancer in Korea.

Perceived availability of social support during a stressful experience may contribute to a less threatening appraisal of the stressor and bolster confidence in one's ability to cope, leading to lower perceived stress and more adaptive emotional, behavioral, and physiological responses (Lazarus & Folkman, 1984; Taylor, 2011). This was also reported by Lee and Park (2020) that perceived social support had a significant positive effect on female cancer survivors' quality of life. Perceived social support is also associated with subjective well-being (Ammar, Nauffal, & Sbeity, 2013) and is a significant factor in reducing stress (Lyrakos, 2012).

However, studies assessing the effect of perceived social support on psychosocial adjustment are lacking in Ethiopia. A study conducted by Wondimagegnehu et al. (2019) among breast cancer patients indicated that breast cancer patients with high perceived social support were found to have a lower level of depression. Thus, to address this limited information evaluating the relationship of perceived social support and psychosocial adjustment among cervical cancer patients in Ethiopia is timely.

Previous research studies have identified the relationship between uncertainty and psychosocial adjustment among various cancer patients. For instance, a study done by Lee and Park (2020) assessed the relationships between uncertainty in illness, quality of life, and social support among female breast and thyroid cancer survivors. The study found that uncertainty in illness significantly negatively affects female cancer survivors' quality of life. Similarly, Mazanec et al. (2011) reported that uncertainty was a significant predictor of psychosocial adjustment among patients during the post-radiation treatment transition. These findings indicate that uncertainty is among the antecedent variables that affect patients’ psychosocial adjustment. Thus, assessing the role played by uncertainty in cervical cancer patients’ psychosocial adjustment is essential.

The studies cited above indicate that some antecedents had relationships with psychosocial adjustment, while some other antecedents did not have associations with psychosocial adjustment. The observed difference in the relationship indicates a need to examine antecedent factors associated with cervical cancer patients’ psychosocial adjustment.

2.6.4. Cognitive appraisal and coping strategies

Studies assessed the association between cognitive appraisal and coping strategy in two ways. The first group of studies considered the domains of cognitive appraisal and the second group of studies considered cognitive appraisal as a single variable. For instance, a study among patients with prostate cancer in Jordan by Ahmad, Musil, Zauszniewski, and Resnick (2005) assessed the relationship between domains of cognitive appraisal and specific coping strategies using quantitative methods. The study revealed that patients who appraise their illness as harm/loss or threat significantly used emotion-focused coping strategies.

Similarly, another quantitative study among breast cancer patients found that only cognitive appraisal of harm/loss significantly predicted the use of escape avoidance coping strategies (Bigatti, Jennifer, & Miller, 2012). Both studies have documented the effects of harm/loss or threat appraisals on coping strategy. However, the effects of challenge appraisal on coping strategy need to be examined on other patient populations.

On the other hand, some studies evaluated the association between cognitive appraisal and coping strategy. For example, Peter et al. (2014) conducted a study to assess the relationship between cognitive appraisal and specific coping strategies among spinal cord injury patients. In the study, it was found that negative appraisal of situations is related to emotion-focused coping strategies. The above studies did not indicate the effects of cognitive appraisal on problem-focused coping strategies. Thus, this study examined the association between domains of cognitive appraisal (harm/loss, threat, and challenge) and coping strategies (both problem-focused and emotion-focused) among cervical cancer patients.

2.6.5. Cognitive appraisal and psychosocial adjustment

Studies assessed the association between cognitive appraisal and psychosocial adjustment in patients with diverse illnesses. To begin with those studies that assessed the relationship between harm/loss appraisal and psychosocial adjustment, a study among patients with prostate cancer in Jordan (Ahmad et al., 2005) assessed how cognitive appraisal and types of coping affect the health status of patients. It was revealed that patients who appraised their illness as less harm/loss were significantly experienced better mental health. Those patients who appraised their illness as harm/loss were significantly experienced worse physical and mental health. Similarly, Bigatti et al. (2012) found that the cognitive appraisal of harm/loss significantly predicted depressive symptoms among breast cancer patients. However, the variations in depressive symptoms had been explained only by harm/loss appraisal.

The association between cognitive appraisal and psychosocial adjustment had also been studied among other types of chronic illnesses. Herrero, Ramírez-Maestre, and González (2008) assessed the association between cognitive appraisal and psychosocial adjustment among chronic pain patients in Spain. It had been reported that cognitive appraisal of harm suggestively predicted poor adjustment to their situation, high anxiety levels, and greater perceived pain. Looking at the effect of threat appraisal on psychosocial adjustment, Hamana-Raz and Solomon (2006) indicated that cognitive appraisal can predict anxiety and adjustment in cancer patients. Thus, threat appraisal results in a lower level of well-being and more significant distress. Similarly, Gillanders, Sinclair, MacLean, and Jardine (2015) conducted a study among adult cancer patients. The result indicated that threat appraisal has a significant direct effect on the quality of life.

Another study by Rose et al. (2012) found that undesirable beliefs about the consequences of the illness were related to cancer patients' functioning. This implied that cognitive appraisal components influence patients' psychosocial adjustment. However, these studies did not indicate the effects of challenge appraisal on psychosocial adjustment. Thus, there is a need for further studies to evaluate the effect of cognitive appraisal domains, namely harm/ loss, threat, and challenge appraisals, on psychosocial adjustment among cervical cancer patients.

2.6.6. Coping strategies and psychosocial adjustment

Earlier studies assessed the association between coping strategies and psychosocial adjustment in patients with diverse illnesses. The research findings on the association between coping strategies and psychosocial adjustment varied. Some of the research findings agree that problem-focused coping strategies generally result in better adjustment outcomes. Others indicated that emotion-focused coping strategies generally result in lower adjustment outcomes. Few of the studies revealed no association between coping strategies and adjustment outcomes.

To begin with, those studies agreeing that emotion-focused coping strategies generally result in lower adjustment outcomes, a study by Taniguchi and Mizuno (2016) assessed the psychological stress and coping among recently discharged postsurgical cancer patients in Japan. The study revealed that the use of emotion-focused coping strategies showed a significant association with a high level of stress. Similar results had been reported in a study that evaluated the association between stress coping styles and quality of life in cancer patients. It was reported that emotion-focused coping had a significant negative correlation with the quality of life and the functional dimension of quality of life (Malekina & Kaharazei, 2015).

On the contrary, to the above findings, some researchers found a significant association between the use of problem-focused coping strategies and better psychosocial adjustment. A study by Tuncy (2014) investigated the utilization of both problem and emotion-focused coping strategies and their relation with aspects of quality of life among Turkish women with ovarian cancer undergoing chemotherapy. The study results showed that problem-focused coping strategies predicted more outstanding quality of life among Turkish women with ovarian cancer. In addition, the use of problem-focused coping was related to higher physical and spiritual well-being, while emotion-focused coping was related to lower psychological and social well-being. Likewise, Malekina and Kaharazei (2015) study found that problem-focused coping strategies had a significant positive association with quality of life.

On the other hand, some researchers found a significant association between emotion-focused coping strategies and wellbeing but no significant association between problem-focused coping strategies and wellbeing. Khalili et al. (2013) assessed coping strategies, quality of life, and pain of women with breast cancer. The study reported that emotion-focused coping strategies were positively and significantly related to symptom aspects of quality of life and affective interference of pain. It was negatively correlated to functional health status. In contrast, problem-focused coping strategies indicated no significant correlation with the quality of life and different aspects of pain.

Similarly, a study among cancer patients in Iran by Shakeri et al. (2015) assessed the association between coping styles and quality of life in cancer patients. It was reported that quality of life was significantly negatively associated with emotion-focused coping strategies and positively associated with avoidant coping strategies. However, they found no significant association between problem-focused coping strategies and quality of life. In addition, in a study among patients with prostate cancer in Jordan by Ahmed et al. (2005), it was revealed that problem-focused and emotion-focused coping strategies did not contribute significantly to explaining the health status of men with prostate cancer. The studies above were inconclusive in revealing the influence of coping strategies on psychosocial adjustment. This could result as the studies used different measurements to assess coping strategies and psychosocial adjustment outcomes.

Apart from the problem and emotion-focused coping strategies, some researchers have used other kinds of coping strategies in their studies. For example, a prospective study by Oancea et al. (2018) evaluated the reciprocal relationship between coping mechanisms and lung cancer diagnosis among lung cancer patients in Romania. The study revealed a greater increase in anxiety and depression intensity in patients who used avoidance coping strategies. Similarly, another finding had been reported from the study conducted by Bigatti et al. (2012) among breast cancer patients. In this study, patients who use more significant escape avoidance coping strategies significantly predicted higher depressive symptoms.

A study conducted among people with multiple sclerosis assessed the ability of coping strategies to predict positive and negative psychosocial consequences related to stress, depression, anxiety, and quality of life. The study revealed that inappropriate coping forms were related to higher levels of stress, depression, and anxiety and lower quality of life. In comparison, proper coping approaches were related to lower stress frequency, depression, trait anxiety, and higher quality of life (Greach et al., 2018).

Valente, Ribeiro, and Jensen (2009) consider emotion-focused coping are ineffective for adjustment. It was also found that emotion-focused coping is effective to cope with short-term life threats, and problem-focused coping is effective with long-time life threats (Donnellan, Hevey, Hickey, & O'Neill, 2006). The above studies revealed that a variety of coping strategies employed by patients were related to diverse adjustment experiences. Perhaps the sample characteristics and measurement tools account for the difference in magnitude of the relationship found in the above studies. Thus, assessing the influence of coping strategies on psychosocial adjustment could help determine whether a problem or emotion-focused coping strategy is effective for cervical cancer patients' adjustment.

2.7. Mediating Role of Cognitive Appraisals and Coping Strategies on the Association Between Antecedents and Psychosocial Adjustment

Studies assessing the mediating role of cognitive appraisal and coping strategies on the association between antecedents and psychosocial adjustment take two forms. The first group assessed the mediating role of coping strategies. In contrast, the second group assessed the mediating role of cognitive appraisal.

Regarding mediation of coping strategies, mixed results have been reported. For instance, a study by Song et al. (2016) on prostate cancer patients has examined the association between patient's and spouse's appraisal, perceived dyadic communication, and quality of life. They consider perceived dyadic communication will mediate the association between appraisal and quality of life and however, they found no mediation effect. Similarly, another study by Akker et al. (2016) on fatigued patients with multiple sclerosis examined whether coping styles mediated the association between appraisal and societal participation capacity. The study results indicated that coping styles did not mediate the relationship between multiple sclerosis-related fatigue, appraisal, and societal participation.

On the other hand, studies revealed that coping mediated the relationship between antecedents and psychosocial adjustment. For example, Thiruchelvi and Supriyain (2012) study in India investigated the mediating role of coping strategy on locus of control and well-being. They found that only one of the coping strategies (coping self-statement) mediated the relationship locus of control and wellbeing.

Studies have also examined the mediating role of cognitive appraisal between antecedents and health outcomes. For instance, Gillanders et al. (2015) conducted a study among adult cancer patients. Path analysis indicated that threat appraisal has a significant direct effect on the quality of life. In addition, threat appraisal has a significant indirect effect via the combined mediation of fusion and avoidant coping. Likewise, in a study among men who opted to undergo watchful waiting for prostate cancer, an appraisal was found to mediate the effects of illness uncertainty on the quality of life (Wallace, 2003).

From the above studies, it had been found that the mediating role of cognitive appraisal and coping strategy between antecedents and psychosocial adjustment were inconsistent. Further, the reviewed studies did not evaluate the total mediating effects of both cognitive appraisal and coping strategy. Assessing the mediating role of cognitive appraisal and coping strategy between antecedents and psychosocial adjustment among patients with cervical cancer would suggest the need to identify patients with adjustment difficulties and further recognize targets for intervention. Therefore, it is essential to study further the total mediating role of cognitive appraisal and coping strategies in the relationship between antecedents and psychosocial adjustment among cervical cancer patients.

2.8. Conceptual Framework of the Study

The conceptual framework was informed by Lazarus and Folkman's (1984) theory of stress, appraisal, and coping and took into account the empirical literature. According to this theoretical model, an outcome that occurs in response to a stressor is influenced by the attributes of the individual, the individual's cognitive appraisal, and coping strategies the individual uses to manage the situation. The concept of cognitive appraisal is described as the "evaluative cognitive processes that intervene between the stress encounter (i.e., cervical cancer diagnosis and treatment) and the outcome (i.e., psychosocial adjustment)" (Lazarus & Folkman, 1984, p. 31). Through cognitive appraisal, a woman evaluates the significance of what is happening and its effect on her well-being. Personal and environmental antecedents may affect the appraisal. The way a woman copes with the diagnosis and treatment of cervical cancer depends mainly upon her appraisal of whether the diagnosis and treatment pose a threat, a challenge, or potential harm/loss, and the coping strategy she uses. Appraisal and coping processes are influenced by the person's characteristics and the environment (Lazarus & Folkman, 1984).

The conceptual framework depicted in Figure 1 describes this relationship. Socio-demographic and clinical variables influence the antecedents, appraisal, coping, and psychosocial adjustment. Antecedent factors: personal and environmental antecedents. Personal factors are conceptualized as meaning in life and self-efficacy and environmental antecedents are conceptualized as uncertainty and perceived social support. According to the model, cognitive appraisal and coping strategies mediate the relationship between antecedent factors (personal and environmental) and the outcome variable (psychosocial adjustment).

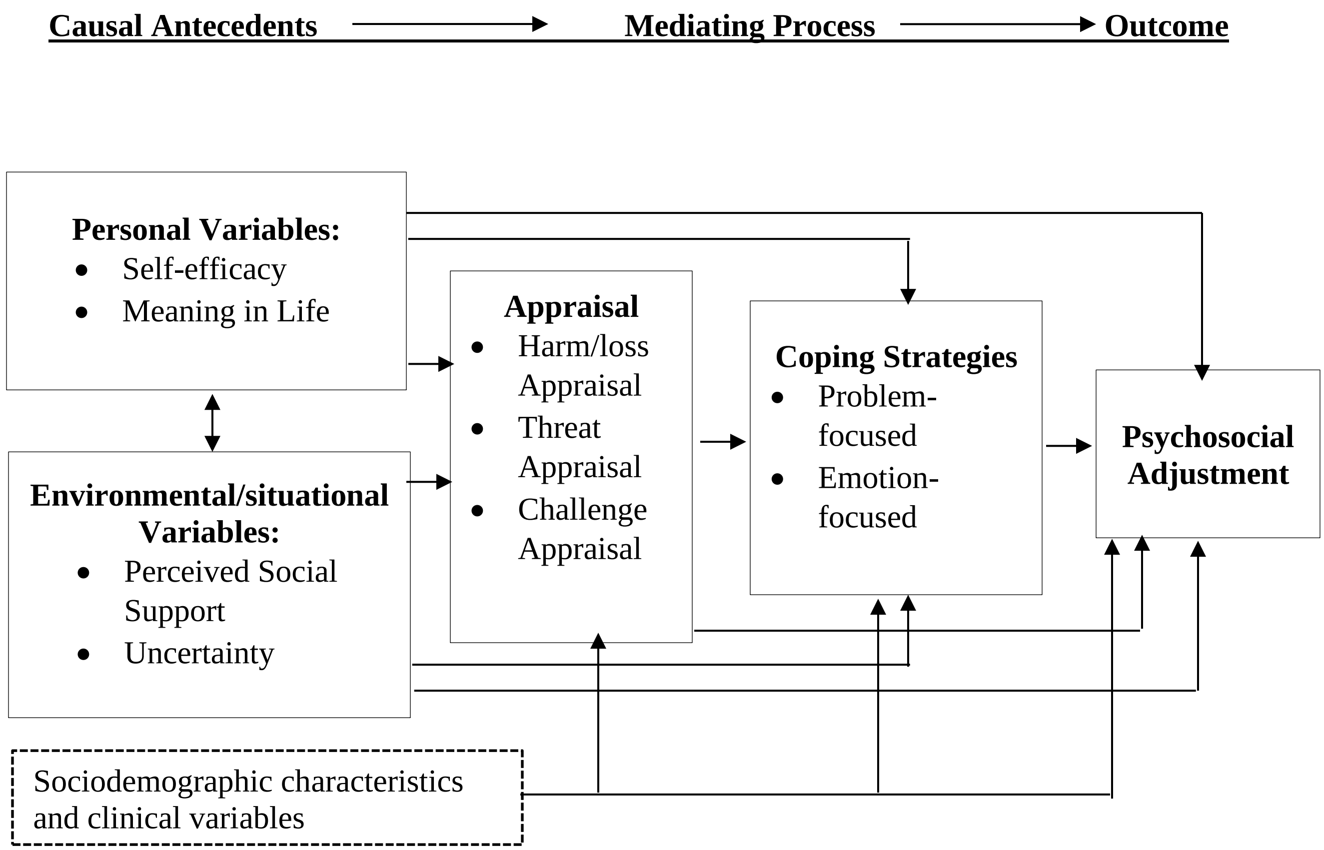

Figure 1: Conceptual framework of the study adapted from Lazarus and Folkman's (1984) theory of stress, appraisal, and coping.

2.9. Summary of the Literature

A review of existing research relevant to the antecedents, appraisal, coping, and psychosocial adjustment of women with cervical cancer identified the following gaps in the literature: cervical cancer patients confront numerous physical, emotional, and social challenges, yet very little is known about the patient's appraisal of illness, coping strategies utilized and psychosocial adjustment experience due to the limited number of studies.

Studies reviewed reported the association of antecedents (self-efficacy, meaning in life, perceived social support, and uncertainty), cognitive appraisal, coping strategies, and psychosocial adjustment in various patient populations. However, these results have been inconsistent concerning the relative efficacy of antecedents (self-efficacy, meaning in life, perceived social support, and uncertainty), cognitive appraisal, coping strategies contribution to these predictive models.

A limited number of studies have focused on the association among sociodemographic, clinical markers, antecedents (self-efficacy, meaning in life, perceived social support, and uncertainty), cognitive appraisal, coping strategy, and psychosocial adjustment aspects within the context of cervical cancer patients. However, this relationship has been shown in other populations. In addition, the studies reported mixed results regarding psychosocial adjustment of women receiving cervical cancer treatment.

Further, only a few studies inconclusively showed cognitive appraisal and coping with mediating the relationship between antecedents and psychosocial adjustment. More information is needed about the mediating role of cognitive appraisal and coping strategy between antecedents (self-efficacy, meaning in life, perceived social support, and uncertainty) and psychosocial adjustment in this population.

From the review of literature, some methodological issues were identified, including small and/or heterogeneous sample; use of single and/or simple assessment of psychosocial adjustment status; inadequate definition and measurement of the psychosocial concepts; lack of insight into the aspects of the subjective experiences of cancer patients; using the single (quantitative or qualitative) method.

The present study attempted to address these gaps by assessing the level and association of clinical markers, meaning in life, social support, uncertainty, self-efficacy, cognitive appraisal, coping strategies, and psychosocial adjustment using a homogenous sample (cervical cancer patients on follow-up treatment), guided by Lazarus and Folkman’s (1984) theory of stress, appraisal and coping, using adequate sample, employing mixed-method approach, using adequate definition and measurement of the variables, and examined the mediating role of cognitive appraisal and coping strategies between antecedents and psychosocial adjustment using SEM-Path analysis. The study also had insight into the subjective experience of women’s antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment.

CHAPTER THREE

3. RESEARCH METHODS

3.1. Research Paradigm

The *Pragmatic* research paradigm guided this study. Creswell (2012) indicates that “the pragmatist believes philosophically in using procedures that “work” for a particular research problem under study and that you should use many methods when understanding a research problem” (p. 537). According to Creswell and Plano Clark (2018), pragmatism is typically associated with mixed-methods research. The focus is on the consequences of the research, on the primary importance of the question asked rather than the methods, and on the use of multiple data collection methods to inform the issues being studied. Teddlie and Tashakkori (2009) claimed that using a mixed-method approach, the researcher embraces pragmatism as the worldview or paradigm but that otherworld view exists. Thus, within the pragmatic paradigm, the researcher incorporates both quantitative and qualitative methods concerning data collection, analysis, and interpretation of the best results for answering the research questions.

3.2. Research Design

A cross-sectional, mixed-method study design was employed. A mixed-method study “involves combining and integrating quantitative and qualitative research and data in a research study” (Creswell, 2014, p. 14). Using both quantitative and qualitative methods in combination provides a better understanding of the research problem and question than either method (Creswell, 2012; Teddlie & Tashakkori, 2009). The rationale for using quantitative and qualitative approaches in this study was that this allows for a more complementary knowledge and a better understanding of the overall research issue of psychosocial adjustment in women with cervical cancer than just one approach alone. Both quantitative and qualitative methods may provide a unique contribution to enhance understanding because the psychosocial adjustment is subjective but can also be measured.

In this study, the quantitative study focused on describing the measurable concepts and factors associated with psychosocial adjustment among women. In contrast, the qualitative study enabled an in-depth exploration that focuses on psychosocial adjustment and the psychosocial needs of the women. The quantitative study addressed selected aspects of the women's experiences rather than the total experience as subjectively expressed by the women as qualitative studies can do. Thus, in this study, the variables were investigated using both quantitative and qualitative methods to give a comprehensive understanding of the variables under investigation.

A *convergent parallel mixed-methods design* was used in this study; both qualitative and quantitative data were collected and analyzed concurrently or at the same timeframe, prioritizing both methods equally (Creswell, 2012). The justification of employing a convergent parallel mixed-methods design in this study is that "one data collection form supplies strengths to offset the weaknesses of the other form, and that a complete understanding of a research problem results from collecting both quantitative and qualitative data" (Creswell, 2012, p. 540). The quantitative and qualitative studies were conducted separately. Each of the studies was designed as a single method study and combining the findings was done during the final interpretation and discussion process.

3.3. Study Area and Period

The study was conducted in Tikur Anbessa Specialized Hospital (TASH) Oncology Centre. TASH is the largest Central Specialized Referral teaching hospital under the administration of Addis Ababa University, located in Addis Ababa, Ethiopia. The oncology unit of TASH is the only oncology referral and radiotherapy center in the country (Kasahun, Gebretekle, Hailemichael, Woldemariam, & Fenta, 2020). The data was collected from September through November 2020.

3.4. Quantitative Part

3.4.1. Source and study population

All cervical cancer patients who have access to being evaluated and treated at the outpatient oncology unit were considered as a source population for the current study. Those cervical cancer patients who were actually evaluated and treated at the unit during the data collection time and met the inclusion criteria were included as a study population.

3.4.2. Inclusion and exclusion criteria

Inclusion criteria: (a) adult patients, aged ≥18 years, (b) diagnosis of stage I, II, or III cervical cancer, (c) receiving treatment as an outpatient.

Exclusion criteria: (a) previous history of cancer, (b) previous history of cervical cancer treatment, (c) recurrence of cancer, (d) stage IV disease, (e) cognitively impaired and severely ill patients.

3.4.3. Sample size and sampling technique

The sample size was determined using a single population proportion formula to estimate the population proportion. That is:

$$n= [(Z\alpha/2)^2 \text{ x } p \text{ x } (1\text{-}p)]/d^2$$

The following assumptions were made, where Zα/2 at 95% confidence interval (1.96), d margin of error 0.05, and p proportion (0.5) to get the maximum sample size. Consequently, the calculation using the formula gave 384. Besides, there was expected to be a 10% non-response rate, that is, 38. This gives a total of 422 participants. Considering the finite population correction formula (taking N=1068), 303 women were selected using a simple random sampling method from the follow-up appointment within the study period.

3.4.4. Variables

Dependent variable

- Psychosocial Adjustment

Mediating variables

- Appraisal (harm/loss, threat, and challenge appraisal)
- Coping Strategies (problem and emotion-focused coping strategies)

Independent variables

- Socio-demographic characteristics (women's age, education, occupation, marital status, income, place of residence, family size/number of children)
- Clinical markers (the length of time elapsed since diagnosis, the stage of cervical cancer, the type of treatments received to date, comorbidity)
- Antecedents (self-efficacy, meaning in life, perceived social support, uncertainty)

3.4.5. Data collection instruments

A package of questionnaires was used for collecting the quantitative data (Appendix III). Study instruments were adapted from different literature (Folkman & Lazarus, 1985; Kessler, 1998; Mishel, 1981; Schwarzer & Jerusalem, 1995; Steger, Frazier, Oishi, & Kaler, 2006; Zimet, Dahlem, Zimet, & Farley, 1988).

Sociodemographic Items

Sociodemographic characteristics including age in years, level of education, marital status, employment status, average monthly income, place of residence, and family size/number of children were collected.

Clinical Markers

Clinical markers, including length of time elapsed since diagnosis, stage of cervical cancer, type of treatments received to date, and comorbidity were collected.

Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure social support in this study (Zimet et al., 1988). The scale is a 12-item self-report measure for subjective assessment of experienced social support from three sources: Family, Friends, and Significant Others. Four of the questions represent responses aimed at measuring family support, four items are aimed at measuring support from friends, and four items are aimed at measuring the support of significant others. Each item is rated on a 7-point Likert-type scale ranging from “very strongly disagree” to “very strongly agree”. The total score ranges from 12 to 84 for the entire 12-item questionnaire, and from four to 28 for each of the three subscales. Higher scores indicate greater perceived social support (Zimet et al., 1988). This specific measurement of social support was chosen for this study due to its multidimensional approach, looking at the support of family, friends, and significant others. The scale has been widely used internationally and with diverse populations (Duru, 2007). The scales and each of its subscales have shown good internal reliability and validity (Eker, Arkar, & Yaldiz, 2001).

Meaning in Life

The Steger et al. (2006) Meaning in Life Questionnaire (MLQ) was used to measure the following domains: search for meaning and presence of meaning in life. The MLQ is a 10-item, self-report instrument, with response items on a Likert Scale ranging from 1 *(absolutely untrue)* to 7 *(absolutely true)*. The MLQ has two subscales. These subscales are titled search and presence. Presence and search scores are derived by summing responses to items on each subscale. These subscales are designed to distinguish between a search for purpose and established and understood the presence of meaning in life. The tool has shown good internal consistency, with Cronbach alpha levels for both subscales ranging from 0.86 to 0.88 (Steger et al., 2006).

Self-efficacy

Self-efficacy was assessed using the General Self-Efficacy Scale (GSES) (Schwarzer & Jerusalem, 1995). The General Self-Efficacy Scale is a 10-item measure used to assess general or global self-efficacy. The response format ranges from 1 (*not at all true*) to 4 (*exactly true*). The total score ranges from 10 to 40. Higher scores suggest higher perceived self-efficacy. Cronbach's alphas ranged from 0.76 to 0.90 (Schwarzer & Jerusalem, 1995).

Uncertainty

The Mishel Uncertainty in Illness Scale (MUIS) (Mishel, 1981) measured illness-related uncertainty. The MUIS consists of 23 items rated on a 5-point Likert scale, and higher scores signify higher uncertainty. The scale questions seek to address the attitudes and feelings regarding specific aspects of the illness and its treatment, prognosis, expected course, and symptoms. The validity has been demonstrated in patients with various medical and surgical diagnoses and cancer patients (Mishel, 1981).

Appraisal

The appraisal was measured using 23 items from the Cognitive Appraisal of Health Scale (CAHS), a self-report tool to assess primary appraisal with four separate scales: Threat, Challenge, Benign/ Irrelevant, and Harm/Loss (Kessler, 1998). Participants rate their agreement with statements using a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The scores are summed for each scale, and higher scores indicate agreement with the appraisal type. The psychometric properties of the CAHS were tested (Kessler, 1998).

Coping Strategies

Coping strategies were measured using the Ways of Coping (Revised) Questionnaire (WC-R) (Folkman & Lazarus, 1985). The tool consists of 66 items representing opinions and activities that can deal with the demands of a stressful encounter. Respondents rate each item on a four-point Likert scale from 0 *(not used)* to 3 *(used a great deal)*. The items can be categorized into two broad groups: problem-focused coping or emotion-focused coping. Higher scores indicated greater use of coping methods. This scale’s internal consistency and validity were confirmed (Folkman & Lazarus, 1985; Kim & So, 2012).

Psychosocial Adjustment

The psychosocial adjustment was measured using the Psychosocial Adjustment questionnaire. This instrument measures psychosocial adjustment. Scores from all spheres were totaled to reflect the patients’ psychosocial adjustment, with higher scores indicating poorer adjustment. The mean total psychosocial adjustment score was obtained by dividing total scores from each domain by the number of items. The scale is appropriate for assessing adjustment of any medical condition that has an identifiable psychosocial component. Reliability and validity of the scale have been supported by multiple studies involving cancer patients (Chun, Lynn & Shiow, 2011).

3.4.6. Translation, validity, and reliability of the instruments

When adapting an instrument from one language to another, it is essential to assure cross-cultural equivalence (Jones, Lee, Phillips, Zhang, & Jaceldo, 2001). The cross-cultural translation process is an important consideration early in a translation effort and is used to increase the conceptual equivalence between the original version scale and translated version (Jones et al., 2001; Polit & Beck, 2004).

In this study, the translation process of the instruments was completed in three steps. First, a professional in Language and Literature translated the English version of the questionnaire to the local language Amharic. Second, another language expert translated the Amharic version back to English for consistency. Finally, after completing the translation process, the researcher and the translators have discussed and adjusted disparities between the forward and back translations. The two translators were selected based on their previous experience in translating related questionnaires.

To ensure the translated instruments' validity, content, face, and construct validity were assessed. Content validity was evaluated by computing a scale content validity index (Polit, Beck, & Owen, 2007). The scale content validity index was computed by averaging the item content validity index (Polit et al., 2007). A panel of three experts (oncology nurse, health psychologist, and social worker) were asked to evaluate the relevance of each question in the local context by giving a score of 1 (not relevant), 2 (somewhat relevant), 3 (quite relevant), and 4 (highly relevant). Content validity index (universal agreement) S-CVI/UA ≥0.80 was considered acceptable (Polit et al., 2007). The results of the S-CVI/UA rated by the panel of experts in this study were more significant than 0.80. In addition, necessary modifications were made according to the comments and suggestions by these experts.

Face validity was assessed for the understandability of the items, clarity of language, and appropriateness in the local context. The pretest participants reported that most of the items were not difficult to understand, not vague, and acceptable. Few modifications were made according to the feedback of the participant.

Construct validity of the translated tools was evaluated using exploratory factor analysis. The Kaiser-Mayer-Olkin (KMO) measure and Bartlett's specificity test were used to test sampling adequacy. The data set is considered adequate for factoring if the KMO value is greater than 0.7 and Bartlett's specificity test was statistically significant ($p < 0.05$). Principal axis factoring with Promax rotation was used as an extraction method. Eigenvalue and scree plots were used to decide the number of factors to retain. Items with low factor loading (<0.3) and cross-loaded items in more than one factor were removed. The detailed procedures and results of the factor analysis for the translated tools are available in Appendix XIII.

The reliability coefficient (Cronbach's Alpha) was used to assess the internal consistency for all translated scales, based on the recommendation of ($\alpha > 0.7$). The analysis indicated that the reliability of the translated scales was considered acceptable with a range of Cronbach's alpha value from 0.72 to 0.93 (Appendix XIV).

3.4.7. Data collection procedure

According to the inclusion criteria, potential participants were identified from the patients' scheduled for treatment at the oncology center of the TASH. All potentially eligible patients attending follow-up treatment at the center, who expressed interest in the study, were approached in person by the data collectors and were provided with an explanation of the study.

The data collectors have given/read an information sheet explaining the study and consent form to participants. The data were collected by using interviewer-administered structured questionnaires. Two nurses who have previous data collection experience collected the data. One public health professional with previous supervision experience supervised the data collection process. Cervical cancer patients attending outpatient follow-up treatment were interviewed daily within the specified period of data collection time. The data collector who interviewed the respective respondent did a review of patient records for clinical markers.

3.4.8. Data quality assurance

Before actual data collection, a pre-test of research instruments was conducted (n=30). The pre-test aimed to assess the clarity of the questions, the flow of the questionnaire, and the time required to complete the questionnaire. Few amendments and necessary modifications were made based on the pre-test result. Most of the participants involved in the pre-test were not comfortable giving written consent by signing on the form. Thus, it was decided to ask respondents to provide verbal informed consent to being interviewed. Patients involved in the pre-test were not included in the actual data collection. A three-day intensive training was given for the supervisor and data collectors. Initial two-days training was followed by a one-day practice and discussions. The training package consisted of instruction regarding interviewing techniques and a detailed review of questionnaire content on administering the paper questionnaires. The supervisor checked all the questionnaires daily and provided feedback immediately for the data collectors as needed to ensure completeness. The researcher supervised the overall data collection process.

3.4.9. Quantitative data analysis

Before analysis, the data were checked for any errors, missing values, and outliers. In the first instance, the data were visually inspected to assess whether the recorded data looked plausible. There was no missing value, and a few cases were found to be outliers, but none of them was extreme. Thus, no correction was necessary, and no case was deleted for being an outlier.

Data were also evaluated for meeting assumptions for analysis used in this study. Assumptions of normality distribution were checked using skewness, kurtosis, P-P plot, and histogram. A linear relationship between dependent and independent variables was checked by visual inspection of the scatterplot. The assumptions of homoscedasticity were tested by visual inspection of the scatterplot of the standardized residuals by the regressions standardized predicted value. Multicollinearity assumptions were checked using Variance Inflation Factor (VIF) and tolerance score (Appendix XV).

Both descriptive and inferential statistical analysis techniques were used to analyze the data. Descriptive statistics including frequencies, mean, median, standard deviations, ranges, minimum and maximum values, and percentages were computed to summarize sociodemographic characteristics, clinical markers, antecedents (perceived social support, uncertainty, self-efficacy, and meaning in life), cognitive appraisal, coping strategies, and psychosocial adjustment variables.

Independent sample t-test and ANOVA tests were used to look into the significant mean differences in psychosocial adjustment among groups of sociodemographic variables (women's age, education, occupation, marital status, average monthly income, place of residence, family size/number of children) and clinical markers (the length of time elapsed since diagnosis, the stage of cervical cancer, the type of treatments received to date, comorbidity).

Pearson Product Momentum correlations (*r*) were calculated to examine the relationship among antecedents (meaning in life, perceived social support, uncertainty, self-efficacy), cognitive appraisal (harm/loss, challenge, threat), coping strategies (problem-focused and emotion-focused), and psychosocial adjustment variables.

A multiple linear regression analysis was carried out for: a) predicting cognitive appraisal (harm/loss, challenge, threat) from antecedents (perceived social support, uncertainty, self-efficacy, and meaning in life); b) predicting coping strategies (problem-focused and emotion-focused) from antecedents (perceived social support, uncertainty, self-efficacy, and meaning in life) and cognitive appraisal (harm/loss, challenge, threat); c) predicting psychosocial adjustment from antecedents (meaning in life, perceived social support, uncertainty, self-efficacy), cognitive appraisal (harm/loss, challenge, threat), and coping strategies (problem-focused and emotion-focused). Before the analysis, sociodemographic characteristics and clinical markers were changed to dummy variables.

An SEM-Path analysis was used to test the mediating role of cognitive appraisal and coping strategies on the association between antecedents (perceived social support, uncertainty, self-efficacy, and meaning in life) and psychosocial adjustment components proposed by Lazarus and Folkman's (1984) theory of stress, appraisal, and coping (TSAC). To examine the model fitness, χ^2 goodness of fit, General Fit Index (GFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), and the Root-mean-square error of approximation (RMSEA) were considered.

Descriptive, correlational, and multivariable analyses were conducted using SPSS version 23. SEM-Path analysis for the test of mediation was conducted using SPSS-AMOS version 23. The statistical significance level indicated by $p \leq 0.05$ (two-tailed) was used for all the statistical analyses.

3.5. Qualitative Part

3.5.1. Selection of participants

Cervical cancer patients receiving follow-up treatment at TASH Oncology Unit were the study participants. Participants who were thoughtful and able to describe their appraisal, coping strategies, and psychosocial adjustment experience with cervical cancer diagnosis and treatment were purposively selected. This purposeful selection of participants was to ensure gaining access to the details of their individual experiences. The participants were recruited with the help of an Oncology Nurse working in the triage room

Recruitment and data collection continued until adequate level of ‘saturation’ was reached, and no new significant insights have emerged from the interviews (Morse, Barrett, Mayan, Olson, & Spiers, 2002). Thus, 11 women who were receiving follow-up treatment for cervical cancer were recruited to participate in the qualitative study.

3.5.2. Data collection instrument

A semi-structured interview guide was used for this part of the study to elicit responses related to the study’s aims (Appendix IV). This interview guide comprised open-ended questions where the participants could best describe their illness and treatment-related experiences. In addition, probes were employed to elicit more information from the participants. The interview guide was developed after reviewing pertinent literature in the area.

Based on the aim of the study, broad categories were outlined, and questions were developed for each category. The interview guide was evaluated by: all the advisors and three experts (oncology nurse, health psychologist, and social worker). Modifications and corrections were made based upon the comment and suggestions.

3.5.3. Data collection procedure

The data was collected through individual face-to-face in-depth interviews by the researcher. All interviews were audio-recorded after getting permission from each interviewee, and this helped not to miss the points raised and check the statements for a quote. In addition, field notes were taken.

Two pretest interviews were conducted during the data collection, and modifications on the language and order of some questions were made. For example, participants get confused about naming of cervical cancer 'yemahitsen chaf' and 'yemahitsen ber'. Participants more agreed with the naming of 'yemahitsen ber', thus 'yemahitsen ber' was used in the remaining interview.

All data collected were kept confidential. The transcripts and audio recorded data were secured in a separate locked file cabinet to ensure that they could not be connected to any information related to background data. The anonymity of all the participants was protected in the presentation of the findings.

3.5.4. Qualitative data analysis

After each interview, the researcher listened carefully to the audio data and made initial notes. The audio data were then transcribed verbatim by the researcher. While doing this, the researcher examined the field notes to recall the participants' behavior during the interview and the specific context in which the interview was completed.

The dataset was analyzed via thematic analysis. According to Braun and Clarke (2006), thematic analysis is a "method for identifying, analyzing and reporting patterns (themes) within data" (p. 79). This analysis was used because it allowed a detailed analysis of the data and identifying relevant themes that can capture the women's experiences.

Braun and Clarke (2006) provided methodological guidelines for thematic analysis. This study employed these recommendations.

Phase 1: The transcripts were examined along with the corresponding audio recording. This helped to re-engage with and become more familiar with the data, highlight important passages, make initial notes, and check transcripts' accuracy.

Phase 2: Initial codes were developed through reading the transcripts. A coding framework was developed during the analysis process (a code name, description, further details).

Phase 3: The codes were organized into potential themes, gathering all data relevant to each potential theme.

Phase 4: Themes and codes were reviewed across the interviews and in the context of the whole data set to ensure accuracy and consistency.

Phase 5: The data were further explored to fit the theme names, re-defining themes, and re-organize data evidence to draw out critical findings from the data. Braun and Clarke (2006) suggest that this process is about "identifying the essence of what each theme is about and determining what aspect of the data each theme captures" (p. 22).

Phase 6: The writing and re-writing of the analysis were undertaken to tell the story of the data relating to the themes, codes, and relevant evidence. Verbatim quotes were also used to help ensure accurate representation of the data.

3.5.5. Achieving trustworthiness

To increase the trustworthiness of the study's findings, strategies recommended by Sharon B. Merriam (as cited in Yazan, 2015) were employed. To enhance internal validity (credibility), data were *triangulated* through using quantitative and qualitative data; *member* *checks* were performed by providing a verbal summary of the discussion, allowing participants to respond regarding the validity of the summary; *peer examination* was requested to discuss the process of the study, emerging findings, and the tentative interpretations with my colleagues. The researcher gave them some transcriptions and made them do the coding and compare the researcher's coding with their coding. Debriefing was done during face-to-face meetings and regular email communications with all supervisors.

An *audit trial* was performed to ensure reliability (dependability and conformability) by providing a detailed account of the methods, procedures, and decision points in carrying out the study using the study protocol. To enhance external validity (transferability), *a thick description* was provided to contextualize the study. Efforts were made to provide a detailed description of the findings with illustrations by quotations to enhance the decision-making for application if necessary. These processes helped the researcher acquire a trustworthy understanding of the participants' experience of appraisal, coping, and psychosocial adjustment.

3.6. Ethical Consideration

Before the commencement of the data collection, necessary approval was obtained from responsible bodies. First, the proposal was reviewed and approved by the School of Social Work, College of Social Sciences, Addis Ababa University. Then, a formal letter was written to TASH, College of Health Sciences, Addis Ababa University, and the protocol were further reviewed and approval was secured from the Oncology Unit. Following this, the head of the Oncology Unit referred to the Outpatient Follow-up Treatment Unit for data collection.

All study participants were briefed about the purpose of the study. Verbal informed consent was obtained from each respondent in the quantitative study before actual data collection after reading the information sheet. Written informed consent was obtained from each participant in the qualitative study. Issues of confidentiality were maintained by removing any identifiers from the questionnaire through a coding system, where numbers will replace the names of participants. The participant's right to refuse or withdraw at any time was respected. There were no risks associated with participating in this study, but there might be slight discomfort to share some experiences due to their illness and treatment. However, participants have been informed about the right to refuse to answer any questions they feel uncomfortable with (Appendix I and II).

CHAPTER FOUR

4. RESULTS

This chapter presents the findings of the study. First, the quantitative results will be presented, and the second section will include the findings of the qualitative study.

4.1. Quantitative Results

This section presents the results of the quantitative data analyses used to examine the research questions posed in this dissertation. First, a description of the respondent's sociodemographic characteristics and clinical markers is given. Then the descriptive statistics for antecedents (meaning in life (presence and search), self-efficacy, perceived social support from family, friend, significant others, and uncertainty), cognitive appraisal (harm/loss, threat, challenge appraisals), coping strategies (problem and emotion-focused), and psychosocial adjustment is presented. Next, sociodemographic and clinical characteristics influencing psychosocial adjustment are presented. The association among antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment is reported in the following section. The findings from mediation analysis using SEM-Path analysis test the total mediating effects of cognitive appraisal and coping strategies on the association between antecedents and psychosocial adjustment. The last section briefly summarizes the significant quantitative findings.

4.1.1. Sociodemographic and clinical characteristics of the respondents

4.1.1.1. Sociodemographic characteristics of the respondents

A total of 303 women were interviewed in this study. After excluding four inconsistent questionnaires, 299 were included in the final analysis, making a response rate of 98.7%. Of the total women included in the analysis, 193 (64.5%) were urban residents, including Addis Ababa, and the remaining 35.5% (n=106) were rural residents. The respondents' ages ranged from 35-68 years, with a mean age of 49.59 (±6.75 SD) years. Fifty-two percent (n=155) of women belonged to the age group of 45-54 years.

The majority of respondents, 86.3% (n=258) were currently married, while the remaining women were widowed (8.7%, n=26) or divorced (5%, n=15). Among the respondents, 26.4% (n=79) can read and write, 25.1% (n=75) attended primary education, 23.1% (n=69) attended secondary education, 14.4% (n=43) attended tertiary education, and 11% (33) are illiterate.

Regarding occupational status, 27.4% (n=82) were housewives, 20.7% (n=62) were self-employed, 19.1% (n=57) engaged in farming/agriculture, 16.1% (n=48) were government employees, 12% (n=36) were employed in private organizations, and 4.7% (n=14) are categorized as others (not employed, stopped working, daily laborer, retired). About 83% (n=249) of the respondents reported a monthly household income of under or equal to 3048.00 ETB. Close to two-third of women (64.5%, n=193) travel more than 100 Km to reach TASH.

The majority (79.3%, n=237) of women travel more than three hours by bus to reach TASH. Of these women, 27.1% (n=81) need to travel seven to ten hours, and 11.4% (n=34) of women travel for more than ten hours to reach TASH. The great majority, 97.3% (n=291), had ever given birth, of whom 45% (n=131) gave birth to more than five children. (Table 1)

Table 1: Socio-demographic characteristics of cervical cancer patients. (n=299)

Variables	Category	Number	Percent
Place of Residence	Rural	106	35.5
	Urban (other)	120	40.1
	Addis Ababa	73	24.4
Age	35-44 years	72	24.1
	45-54 years	155	51.8
	55-64 years	62	20.7
	≥65	10	3.4
Marital Status	Currently Married	258	86.3
	Divorced	15	5.0
	Widowed	26	8.7
Education Status	Illiterate	33	11.0
	Read/Write	79	26.4
	Primary (Grade 1-8)	75	25.1
	Secondary (Grade 9-12)	69	23.1
	Tertiary (Grade 12+)	43	14.4
Occupational Status	Housewife	82	27.4
	Government employed	48	16.1
*Not employed,	Self-employed	62	20.7
stopped working,	Private employed	36	12.0
daily laborer, retired	Farmer/agricultural	57	19.1
	Others*	14	4.7
Average monthly household income	<=3048	249	83.3
	>3048	50	16.7
Ever given birth	Yes	291	97.3
	No	8	2.7
Number of children ever born (n=291)	1-2	33	11.4
	3-4	127	43.6
	≥5	131	45.0

4.1.1.2. Clinical markers of the respondents

Clinical markers including time since diagnosis with cervical cancer, stage of cervical cancer, type of treatment received, comorbid diseases, and type, were recorded. The length of time since diagnosis with cervical cancer for 45% (n=135) of women ranges from thirteen to eighteen months, 32.4% (n=97) of women diagnosed with nineteen to twenty-four months. The mean time after diagnosis was 8.5 months (±5.75 SD). Seventy-five percent (n=224) of participants had stage three cervical cancer, followed by stage two cervical cancer 16.7% (n=50). (Table 2)

Table 2: Clinical markers of cervical cancer patients. (n=299)

Variables	**Response**	**Number**	**Percent**
Time since diagnosis	Less than six months	13	4.3
	Six to twelve months	54	18.1
	Thirteen to eighteen months	135	45.2
	Nineteen to twenty-four months	97	32.4
Stage of cervical cancer	Stage-I	25	8.4
	Stage-II	50	16.7
	Stage-III	224	74.9
Type of treatment received to date	Surgery	25	8.4
	Radiotherapy	245	81.9
	Combination	29	9.7
Comorbidity	Yes	48	16.1
	No	251	83.9
Type of comorbid disease (n=48)	HIV/AIDS	34	70.8
	Others* (*Hypertension, DM)	14	29.2

Table 2 above indicates that treatment types varied considerably, while the most common treatment was radiation (81.9%, n=245) alone, 9.7% (n=29) of women received combination therapy with radiation and chemotherapy, and 8.4% (n=25) of them received surgery. The results showed that 16.1% (n=48) of women had one co-morbidity. The most commonly reported comorbid medical condition was HIV/AIDS (70.8%, n=34), and 29.2% (n=14) were categorized as others.

4.1.2. Antecedent variables

To describe cervical cancer patients' antecedent variables, mean, standard deviation, and range of the meaning in life (presence), meaning in life (search), self-efficacy, perceived social support from family, friends, significant others, and uncertainty variables were computed. The summaries of the variables are presented in Table 3 below.

Table 3: Mean, SD and range scores of cervical cancer patients on antecedent variables

Variable	**Mean**	**SD**	**Range**
Meaning in Life (Presence)	16.32	6.04	25 (5-30)
Meaning in Life (Search)	23.45	4.55	25 (5-30)
Self-Efficacy	17.85	6.04	26 (10-36)
Perceived Social Support (Total)	53.58	14.25	72 (12-84)
Perceived Social Support Family	21.15	4.12	24 (4-28)
Perceived Social Support Friends	15.80	5.33	24 (4-28)
Perceived Social Support Significant Others	16.63	5.79	24 (4-28)
Uncertainty	79.36	6.36	36 (60-96)

As shown in Table 3 above, the mean score of meaning in life (presence) and meaning in life (search) were (16.32±6.04) and (23.45±4.55), respectively. This study showed that the sample group had experienced a lower level of presence of meaning in life and a higher level of search of meaning in life in the ideal mean score of the scale.

The total scores on the general self-efficacy scale in this study ranged from 10 to 36, with a mean of 17.85 (±6.04). These data suggest that the respondents had low self-efficacy compared to the ideal mean score concerning their capabilities across life contexts.

The actual total scores of the perceived social support in this study ranged from 12 to 84, with a mean of M=53.58 (SD=14.25). Using the scoring criteria of the scale (Zimet, et al., 1988) the results indicate respondents in this study perceived medium levels of social support. The mean score of perceived social support from family was 21.15 (±4.12), from friends 15.80 (±5.33), and significant others 16.63 (±5.77). Thus, respondents perceived a higher level of social support from family and a medium level of perceived social support from significant others and friends.

The mean score for the uncertainty was 79.36 with 6.36 standard deviations. The actual scores in this study ranged from 60 to 96. These indicate the respondents scored in the higher range of possible scores, meaning that respondents had more significant uncertainty regarding their illness.

4.1.3. Cognitive appraisal and coping strategies

To describe cervical cancer patients' cognitive appraisal and coping strategies, mean, standard deviation and range of the harm/loss appraisal, challenge appraisal, threat appraisal, problem-focused coping, and emotion-focused coping were computed. The summaries of the variables are presented in Table 4 below.

Table 4: Mean standard deviation and range scores of cervical cancer patients' cognitive appraisal and coping strategies

Variable	**Mean**	**SD**	**Range**
Harm/Loss Appraisal	20.80	2.46	14 (11-25)
Challenge Appraisal	10.75	2.05	12 (3-15)
Threat Appraisal	21.95	2.24	11 (14-25)
Problem Focused Coping Strategies	14.01	8.46	18 (8-26)
Emotion Focused Coping Strategies	24.09	7.21	17 (28-45)

Table 4 above indicates that the mean scores of harm/loss appraisal, challenge appraisal, and threat appraisal were (20.80±2.46), (10.75±2.05), and (21.95±2.24) respectively. Scores for harm/loss appraisal and threat appraisal were in the higher range of possible scores, meaning that respondents in this study had a high amount of harm/loss and threat appraisal. However, the score for challenge appraisal was toward the lower range for that variable, meaning that respondents in this study had a low amount of challenge appraisal.

In addition, the table depicted that the mean scores of problem-focused coping strategies and emotion-focused coping strategies were (14.01±8.46) and (24.09±7.21). The result indicates that emotion-focused coping strategies were more frequently employed coping strategies by cervical cancer patients.

4.1.4. Psychosocial adjustment

For describing cervical cancer patients' psychosocial adjustment, mean, standard deviation, and range were computed. The overall psychosocial adjustment score ranged from 35-88, with a mean score of 60.94 and a standard deviation of 10.40. A higher score indicates more significant psychosocial adjustment difficulties. These data suggest that participants in this study had experienced greater difficulty in their overall psychosocial adjustment than the ideal score. The summary is presented in Table 5 below.

Table 5: Mean, standard deviation and range scores of cervical cancer patients on psychosocial adjustment

Variable	**Mean**	**SD**	**Range**
Psychosocial Adjustment	60.94	10.40	53 (35-88)

4.1.5. Sociodemographic characteristics influencing psychosocial adjustment

To look into differences in psychosocial adjustment based on sociodemographic characteristics of the respondents, a series of independent sample t-tests and ANOVA tests were computed. The result indicated that place of residence, age, marital status, and occupational status showed a statistically significant difference in psychosocial adjustment.

In this study, significant associations were observed between psychosocial adjustment and place of residence [F (2, 296) = 2.916, p=.043]. Despite reaching statistical significance, post hoc comparisons using the Tukey HSD test indicated that only the mean score for patients who live in an urban area (AA) (M=59.40, SD=11.15) was significantly different from patients who live in rural areas (M=62.73, SD=9.682). Patients who live in urban areas (AA) exhibited significantly better psychosocial adjustment in comparison to patients who live in rural areas. There were no other significant differences between the other groups.

Regarding age groups of patients, there were statistically significant differences in psychosocial adjustment [F (3, 295) =9.870, p=.000] among age groups. The Tukey HSD test revealed that patients aged 35 up to 44 exhibited significantly better psychosocial adjustment (M=58.67, SD=11.19) compared to patients in the age group of 45 up to 54 [M=63.25, SD=9.32; p=.008]. However, patients in the age group of 35 up to 44 exhibited significantly poor psychosocial adjustment compared to patients in the age group of above 65 [M=48.00, SD=10.24; p=.009]. Similarly, patients in the age group of above 65 portrayed better psychosocial adjustment compared to those in the age group of 45 up to 54 [M=63.25, SD=9.32; p=.000] and age group of 55 up to 64 [M=59.90, SD=9.99; p=.003].

Table 6 shows that patient's marital status was significantly associated with psychosocial adjustment [F (2, 296) =30.258, p=.000]. The Tukey HSD test pointed out that patients who are married reported significantly better psychosocial adjustment (M=48.19, SD=7.49; p=.007) in comparison to patients who are divorced (M=62.58, SD=9.61) and widowed patients (M=54.87, SD=10.82; p=.000). There were no significant differences between patients who are divorced and widowed patients on psychosocial adjustment score.

There were statistically significant differences in psychosocial adjustment [F (5, 293) =6.379, p=.000] among patients' occupation groups. The Tukey HSD test pointed out that patients who were housewives reported significantly better psychosocial adjustment (M=56.87, SD=10.29) in comparison to self-employed patients [M=62.81, SD=9.20; p=.006] and patients who were farmers [M=65.75, SD=8.39; p=.000]. Similarly, patients who were private employees

[M=58.06, SD=12.86; p=.008] portrayed poor psychosocial adjustment in comparison to patients who were farmers. There were no other significant differences between the other groups. Summaries of the results with significant differences are presented in Table 6 below.

Table 6: Differences in the level of psychosocial adjustment by socio-demographic characteristics of cervical cancer patients

Variables	**Response**	**Mean**	**SD**	**F**	**p-value**
Place of residence	Rural	62.73	9.68	2.916	.043
	Urban (other)	60.89	9.84		
	Urban (AA)	59.40	11.15		
Age	35-44 years	58.67	11.19	9.870	.000
	45-54 years	63.25	9.32		
	55-64 years	59.90	9.99		
	≥65	48.00	10.24		
Marital Status	Currently Married	48.19	7.49	30.258	0.00
	Divorced	62.58	9.64		
	Widowed	54.87	10.82		
Occupational Status	House wife	56.87	10.29	6.379	.000
	Government employed	61.17	9.20		
	Self-employed	62.81	9.69		
	Private employed	58.44	12.86		
	Farmer/agricultural	65.75	8.39		
	Others*	62.64	9.04		

4.1.6. Clinical markers influencing psychosocial adjustment

To look into differences in psychosocial adjustment based on clinical markers of the respondents, a series of independent sample t-tests and ANOVA tests were computed. The result indicated that time since diagnosis, stage of cervical cancer and type of treatment received showed a statistically significant difference in psychosocial adjustment.

As can be seen from Table 7 below, time since diagnosis with cervical cancer was significantly associated with psychosocial adjustment [$F(3, 295) = 5.194$, $p=.002$]. Post-hoc comparisons using the Tukey HSD test indicated that cervical cancer patients who were diagnosed with cancer less than six months reported significantly better psychosocial adjustment ($M=52.85$, $SD=10.59$) in comparison to patients who got diagnosed between thirteen and eighteen months [$M=62.43$, $SD=9.83$; $p=.007$] and patients who got diagnosed between nineteen and twenty-four months [$M=61.54$, $SD=10.12$; $p=.022$]. Patients diagnosed with cancer between six and twelve months [$M=58.11$, $SD=11.08$; $p=.044$] reported significantly better psychosocial adjustment compared to patients who got diagnosed between thirteen and eighteen months.

Significant associations were also observed between the stage of cervical cancer and the psychosocial adjustment of patients [$F(2, 296) = 12.992$, $p=.000$]. Tukey HSD test pointed out that cervical cancer patients who had stage-I cancer reported significantly better psychosocial adjustment ($M=51.48$, $SD=7.93$) in comparison to patients who had stage-II cancer [$M=61.45$, $SD=10.05$; $p=.000$] and patients who had stage-III cancer [$M=63.42$, $SD=10.69$; $p=.000$].

Table 7 below also indicated a statistically significant difference in psychosocial adjustment [$F(2, 296) =12.660$, $p=.000$] among patients' types of treatment. Tukey HSD test indicated that patients who had received surgical treatment reported significantly better psychosocial adjustment (M=51.48, SD=7.93) in comparison to patients who received radiotherapy treatment [M=60.07, SD=10.01; p=.000] and patients who were receiving combination treatment with radiation and chemotherapy [M=62.01, SD=10.20; p=.005]. Summaries of the results with significant differences are presented in Table 7 below.

Table 7: Differences in the level of psychosocial adjustment by clinical markers of cervical cancer patients

Variables	**Response**	**Mean**	**SD**	**F**	**p-value**
Time since diagnosis	Less than 6 months	52.85	10.59	5.194	.002
	6 to 12 months	58.11	11.08		
	13 to 18 months	62.43	9.83		
	19 to 24 months	61.54	10.12		
Stage	Stage-I	51.48	7.93	12.992	.000
	Stage-II	61.45	10.05		
	Stage-III	63.42	10.69		
Type of treatment received to date	Surgery	51.48	7.93	12.660	.000
	Radiotherapy	60.01	10.01		
	Combination	62.07	10.20		

4.1.7. Relationship among antecedents, cognitive appraisal, coping strategies and psychosocial adjustment

Correlation analysis using Pearson Product-Moment was used to examine the relationships among the antecedents (uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant other), cognitive appraisal (harm/loss, challenge, threat), coping strategies (emotion-focused coping strategies and problem-focused coping strategies), and psychosocial adjustment. The summaries of the analysis results are presented in the following four tables.

Table 8: Relationship between antecedents and cognitive appraisal components

		1	2	3	4	5	6	7	8	9	10
1	Uncertainty	1									
2	Self-efficacy	-.307**	1								
3	Meaning in life (presence)	-.450**	.155**	1							
4	Meaning in life (search)	-.235**	.614**	.123*	1						
5	Family support	-.281**	.569**	.141*	.516**	1					
6	Friend support	-.223**	.517**	.076	.470**	.631**	1				
7	Significant other support	-.233**	.478**	-.010	.420**	.649**	.609**	1			
8	Harm/Loss appraisal	.571**	-.366**	-.452**	-.300**	-.385**	-.289**	-.300**	1		
9	Challenge appraisal	-.201**	.638**	-.100*	.627**	.472**	.375**	.385**	-.202**	1	
10	Threat appraisal	.494**	-.458**	-.433**	-.334**	-.414**	-.347**	-.339**	.547**	-.266**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As can be seen from Table 8 above, uncertainty had strong and positive relationship with harm/loss appraisal (r= .571, p <0.01), moderate and positive relationship with threat appraisal (r= .494, p <0.01) but moderate and negative relationship with challenge appraisal (r= -.201, p <0.01). These indicate that those patients who are more uncertain about their situation are more to appraise their illness as harm/loss or threat and less to appraise their illness as a challenge.

Table 8 shows that self-efficacy had moderate and negative relationship with harm/loss appraisal ($r = -.366$, $p < 0.01$) and threat appraisal ($r = -.458$, $p < 0.01$) but strong and positive relationship with challenge appraisal ($r = .638$, $p < 0.01$). These imply that patients with high self-efficacy are less likely to appraise their illness as harm/loss or threat and more to appraise their illness as a challenge.

The table also shows that meaning in life (presence) had moderate and negative relationship with harm/loss appraisal ($r = -.452$, $p < 0.01$), challenge appraisal ($r = -.100$, $p < 0.05$), and threat appraisal ($r = -.433$, $p < 0.01$). These indicate that those patients who have more meaning in life (presence) are less to appraise their illness as harm/loss, challenge, or threat. Meaning in life (search) had moderate and negative relationship with harm/loss appraisal ($r = -.300$, $p < 0.01$) and threat appraisal ($r = -.334$, $p < 0.01$) but strong and positive relationship with challenge appraisal ($r = .627$, $p < 0.01$). These imply that those patients who have more meaning in life (search) are less to appraise their illness as harm/loss or threat but are more to appraise their illness as a challenge.

Lastly, Table 8 indicates that perceived family support had negative relationship with harm/loss appraisal ($r = -.385$, $p < 0.01$) and threat appraisal ($r = -.414$, $p < 0.01$) but positive relationship with challenge appraisal ($r = .472$, $p < 0.01$). Perceived friend support had negative relationship with harm/loss appraisal ($r = -.289$, $p < 0.01$) and threat appraisal ($r = -.347$, $p < 0.01$) but positive relationship with challenge appraisal ($r = .375$, $p < 0.01$). Perceived significant other support had negative relationship with harm/loss appraisal ($r = -.300$, $p < 0.01$) and threat appraisal ($r = -.339$, $p < 0.01$) but positive relationship with challenge appraisal ($r = .385$, $p < 0.01$). These imply that those patients who perceive more family support, friend support, and significant other support are less to appraise their illness as harm/loss or threat but are more to appraise their illness as a challenge.

Table 9: Relationship between antecedents and coping strategy components

		1	2	3	4	5	6	7	8	9
1	Uncertainty	1								
2	Self-efficacy	-.307**	1							
3	Meaning in life (presence)	-.450**	.155**	1						
4	Meaning in life (search)	-.235**	.614**	.123*	1					
5	Family support	-.281**	.569**	.141*	.516**	1				
6	Friend support	-.223**	.517**	.076	.470**	.631**	1			
7	Significant other support	-.233**	.478**	-.010	.420**	.649**	.609**	1		
8	Problem-focused coping	-.423**	.616**	.119*	.605**	.605**	.549**	.562**	1	
9	Emotion-focused coping	-.149**	.484**	-.122*	.392**	.367**	.377**	.338**	.630**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As can be seen from Table 9 above, uncertainty had a moderate and negative relationship with problem-focused coping strategies (r= -.423, p <0.01), weak and negative relationship with emotion-focused coping strategies (r= -.149, p <0.01). These indicate that the more patients are uncertain about their illness, the less they use problem-focused and emotion-focused coping strategies.

The table also shows that self-efficacy had strong and positive relationship with problem-focused coping strategies (r= .616, p <0.01), moderate and positive relationship with emotion-focused coping strategies ($r = .484$, $p < 0.01$). These indicate that the more patients have self-efficacy, the more they use problem-focused and emotion-focused coping strategies.

Table 9 above depicts that meaning in life (presence) had a weak and positive relationship with problem-focused coping strategies ($r = .119$, $p < 0.05$), weak and negative relationship with emotion-focused coping strategies ($r = -.122$, $p < 0.05$). These indicate that the more patients have meaning in life (presence), the more they use problem-focused coping, and the more patients have meaning in life (presence), the less they use emotion-focused coping strategies. On the other hand, meaning in life (search) had strong and positive relationship with problem-focused coping strategies ($r = .605$, $p < 0.01$), moderate and positive relationship with emotion-focused coping strategies ($r = .392$, $p < 0.01$). These indicate that the more patients have meaning in life (search), the more they use problem-focused and emotion-focused coping strategies.

The above table also shows that perceived family support had a strong and positive relationship with problem-focused coping strategies ($r = .605$, $p < 0.01$), moderate and positive relationship with emotion-focused coping strategies ($r = .367$, $p < 0.01$). Friend support had strong and positive relationship with problem-focused coping strategies ($r = .549$, $p < 0.01$), moderate and positive relationship with emotion-focused coping strategies ($r = .377$, $p < 0.01$). Significant other support had strong and positive relationship with problem-focused coping strategies ($r = .562$, $p < 0.01$), moderate and positive relationship with emotion-focused coping strategies ($r = .338$, $p < 0.01$). These imply that patients who perceive more family support, friend support, significant other support use problem-focused and emotion-focused coping strategies.

Table 10: Relationship between antecedents and psychosocial adjustment

		1	2	3	4	5	6	7	8
1	Uncertainty	1							
2	Self-efficacy	-.307**	1						
3	Meaning in life (presence)	-.450**	.155**	1					
4	Meaning in life (search)	-.235**	.614**	.123*	1				
5	Family support	-.281**	.569**	.141*	.516**	1			
6	Friend support	-.223**	.517**	.076	.470**	.631**	1		
7	Significant other support	-.233**	.478**	-.010	.420**	.649**	.609**	1	
8	Psychosocial adjustment	.336**	-.169**	-.329**	-.034	-.082	-.034	-.060	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As can be seen from Table 10 above, uncertainty had a moderate and positive relationship with psychosocial adjustment (r= .336, p <0.01). This implies that an increase in patients' uncertainty in their illness is associated with a moderate increase in their psychosocial adjustment difficulties. Self-efficacy had a small and negative relationship with psychosocial adjustment (r= -.169, p <0.01), implying that increased self-efficacy is associated with a small decrease in psychosocial adjustment difficulties.

The table above also shows that meaning in life (presence) had a moderate and negative relationship with psychosocial adjustment (r= -.329, p <0.01). This implies that an increase in the presence of meaning in life is associated with a moderate decrease in psychosocial adjustment difficulties. On the other hand, meaning in life (search), perceived family, friend, and significant other support had no significant relationship with psychosocial adjustment.

Table 11: Relationship between cognitive appraisal, coping strategies and psychosocial adjustment

		1	2	3	4	5	6
1	Harm/Loss appraisal	1					
2	Challenge appraisal	-.202**	1				
3	Threat appraisal	.547**	-.266**	1			
4	Problem focused coping	-.495**	.603**	-.533**	1		
5	Emotion focused coping	-.206**	.342**	-.265**	.630**	1	
6	Psychosocial adjustment	.383**	.119*	.331**	-.190**	-.115*	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As can be seen from Table 11 above, harm/loss appraisal had moderate and negative relationship with problem-focused coping strategies (r= -.495, p <0.01) and emotion-focused coping strategies (r= -.206, p <0.01). This implies that an increase in harm/loss appraisal is associated with a moderate decrease in the use of problem-focused and emotion-focused coping strategies. Harm/loss appraisal had moderate and positive relationship with psychosocial adjustment (r= .383, p <0.01). These indicate that increased harm/loss appraisal is associated with a moderate increase in psychosocial adjustment difficulties.

The above table indicates that challenge appraisal had a strong and positive relationship with problem-focused coping strategies (r= .603, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .342, p <0.01). This implies that the more patients appraise their illness as a challenge, the more they use problem-focused and emotion-focused coping strategies. Challenge appraisal had a small and positive relationship with psychosocial adjustment ($r= .119$, $p <0.05$). These indicate that an increase in challenge appraisal is associated with a small increase in psychosocial adjustment difficulties.

The table also shows that threat appraisal had a strong and adverse relationship with problem-focused coping strategies ($r= -.533$, $p <0.01$), moderate and antagonistic relationship with emotion-focused coping strategies ($r= -.265$, $p <0.01$). This implies that the more patients appraise their illness as a threat, the less they use problem-focused and emotion-focused coping strategies. Threat appraisal had a moderate and positive relationship with psychosocial adjustment ($r= .331$, $p <0.01$). These indicate that increase in threat appraisal is associated with a moderate increase in psychosocial adjustment difficulties.

Finally, Table 11 indicates that both problem-focused coping strategies and emotion-focused coping strategies had small and negative relationship with psychosocial adjustment ($r= -.190$, $p <0.01$), ($r= -.115$, $p <0.05$) respectively. These indicate that increase in the use of problem-focused coping strategies or emotion-focused coping strategies is associated with a small decrease in psychosocial adjustment difficulties.

4.1.8. Predictions among antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment

To examine the predictions among variables, hierarchical multiple regressions were computed. Uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friends, and significant others were examined solely as predictor variables. Harm/loss appraisal, challenge appraisal, threat appraisal, problem-focused coping, and emotion-focused coping were analyzed as predictor and criterion variables. Psychosocial adjustment is examined solely as a criterion variable. Variables were included in multiple regressions based on their significant revealing associations within the ANOVA, t-test, and Pearson product-moment correlation results. In the hierarchical multiple regression analysis, sociodemographic variables were entered in stage one, clinical markers in stage two, and TSAC predictor variables in stage three. A *p-value* of 0.05 or less was used to decide if the degree of prediction was significant. Assumptions of the tests for each model were conducted, and the detailed descriptions are presented in Appendix XIV.

4.1.8.1. Prediction of cognitive appraisal

To examine the prediction of cognitive appraisal components, three regression models were computed where (1) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others were regressed on harm/loss appraisal; (2) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others were regressed on challenge appraisal; and (3) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others were regressed on threat appraisal.

As can be seen from Table 12 below, in the first step of the model, place of residence and level of education explained a significant portion of the variations in harm/loss appraisal ($F(2,296) = 17.522$, $p<0.01$, $R^2=.106$). In step 2, the results indicate that time since diagnosis and type of treatment received explained an additional 18% of the variation in harm/loss appraisal ($F(4,294) = 29.066$, $p<0.01$). In step 3, the results indicate that uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friends, and significant others explained an additional 23% of the variation in harm/loss appraisal ($F=27.228$,

$p<0.01$). However, self-efficacy (ß= -.074, t= -1.217, p= 0.225), meaning in life (search) (ß= -.061, t= -1.106, p= 0.270), perceived social support from family (ß= -.109, t= -1.548, p= 0.123), friend (ß= .006, t= .059, p= 0.953), and significant others (ß= -.046, t= -.414, p= 0.679) do not significantly contribute to explaining the variations in harm/loss appraisal. Specifically, uncertainty had the highest (ß= .285, $p<0.01$) contribution in explaining the patient's harm/loss appraisal. Summaries of the results are presented in Table 12 below.

Table 12: Hierarchical linear regression analysis on results of cognitive appraisal (Harm/Loss)

	B	**SE**	**β**	**t**	**Sig.**	**R^2**	**R^2A**	**R^2C**	**F value**
Step 1						**.106**	**.100**		**17.522****
Place of residence	.574	.171	.184	3.353	.001				
Level of education	-.531	.110	-.266	-4.839	.000				
Step 2						**.283**	**.274**	**.178****	**29.066****
Place of residence	.402	.156	.129	2.580	.010				
Level of education	-.394	.100	-.197	-3.926	.000				
Time since diagnosed	.472	.153	.158	3.078	.002				
Type of treatment received	1.355	.198	.360	6.827	.000				
Step 3						**.511**	**.492**	**.227****	**27.228****
Type of treatment received	1.038	.176	.276	5.900	.000				
Uncertainty	.065	.012	.285	5.602	.000				
Meaning in life (presence)	-.095	.020	-.235	-4.667	.000				

As can be seen from Table 13 below, in the first step of the model, level of education and number of children explained a significant portion of the variations in challenge appraisal ($F_{(2,296)}=36.701$, $p<0.01$, R^2=.199). In step 2, the results indicate that time since diagnosis and stage of cancer don't significantly contribute to explaining the variations in challenge appraisal.

In step 3, the results indicate that uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friends, and significant others explained an additional 36% of the variation in challenge appraisal (F=33.857, p<0.01). However, perceived social support from friend (ß= -.195, t= -1.889, p= 0.060) and significant others (ß= .033, t= .092, p= 0.387) do not significantly contribute to explaining the variations in challenge appraisal. Specifically, self-efficacy had the highest (ß= .392, p<0.01) contribution in explaining the patient's challenge appraisal. Summaries of the results are presented in Table 13 below.

Table 13: Hierarchical linear regression analysis on results of cognitive appraisal (Challenge)

	B	**SE**	**β**	**t**	**Sig.**	**R^2**	**R^2A**	**R^2C**	**F value**
Step 1						**.199**	**.193**		**36.701****
Level of education	.536	.099	.322	5.432	.000				
Number of children	-.225	.070	-.190	-3.196	.002				
Step 2						**.201**	**.190**	**.002**	**18.498****
Level of education	.554	.101	.333	5.488	.000				
Number of children	-.223	.071	-.188	-3.124	.002				
Step 3						**.565**	**.548**	**.364****	**33.857****
Uncertainty	-.019	.009	-.099	-2.106	.036				
Self-efficacy	.133	.020	.392	6.788	.000				
Meaning in life (presence)	-.089	.016	-.264	-5.566	.000				
Meaning in life (search)	.160	.024	.356	6.781	.000				
Family support	.073	.033	.146	2.217	.027				

As can be seen from Table 14 below, in the first step of the model, place of residence and level of education explained a significant portion of the variations in threat appraisal (F (2,296) =19.972, p<0.01, R^2=.119). In step 2, the results indicate that time since diagnosis, stage of cancer, and type of treatment received explained an additional 12% of the variation in threat appraisal (F (5,293) =18.633, p<0.01). However, the cancer stage (ß= -.033, t= -.397, p= 0.691) does not significantly explain the variations in threat appraisal.

In step 3, the results indicate that self-efficacy, uncertainty, meaning in life (presence), meaning in life (search), perceived social support from family, friends, and significant others explained an additional 23% of the variation in threat appraisal (F =20.976, p<0.01). However, meaning in life (search) (ß= -.018, t= -.317, p= 0.751), perceived social support from family (ß= -.071, t= -.972, p= 0.332), friend (ß= -.034, t= -.296, p= 0.767), and significant others (ß= -.059, t= -.499, p= 0.618) do not significantly contribute to explaining the variations in threat appraisal. Specifically, meaning in life (presence) had the highest (ß= -.257, p<0.01) contribution in explaining the patient's threat appraisal. Summaries of the results are presented in Table 14.

Table 14: Hierarchical linear regression analysis on results of cognitive appraisal (Threat)

	B	**SE**	**β**	**t**	**Sig.**	**R^2**	**R^2A**	**R^2C**	**F value**
Step 1						**.119**	**.113**		**19.972****
Place of residence	.408	.155	.144	2.634	.009				
Level of education	-.567	.099	-.312	-5.713	.000				
Step 2						**.241**	**.228**	**.122****	**18.633****
Level of education	-.475	.096	-.261	-4.966	.000				
Time since diagnosis	.456	.151	.168	3.013	.003				
Type of treatment received	1.011	.258	.295	3.927	.000				
Step 3						**.468**	**.446**	**.227****	**20.976****
Type of treatment received	.795	.223	.232	3.574	.000				
Uncertainty	.038	.011	.181	3.398	.001				
Self-efficacy	-.079	.023	-.213	-3.361	.001				
Meaning in life (presence)	-.095	.019	-.257	-4.903	.000				

4.1.8.2. Prediction of coping strategies

To examine the prediction of coping strategy components, two regression models were computed (1) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, significant others, harm/loss appraisal, challenge appraisal, and threat appraisal were regressed on emotion-focused coping strategies; (2) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, significant others, harm/loss appraisal, challenge appraisal, and threat appraisal were regressed on problem-focused coping strategies.

As can be seen from Table 15 below, in the first step of the model, marital status, level of education, and the number of children explained a significant portion of the variations in emotion-focused coping strategies ($F(3,295) = 15.642$, $p<0.01$, $R^2 = .137$). However, marital status (ß= -.022, t= -.397, p= 0.691) do not significantly contribute to explaining the variations in emotion-focused coping strategies. In step 2, the results indicate that stage of cancer explained an additional 3% of the variation in emotion-focused coping strategies ($F(4,294) = 14.318$, $p<0.01$).

In step 3, the results indicate that self-efficacy, uncertainty, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others, harm/loss, challenge, and threat appraisals explained an additional 16% of the variation in emotion-focused coping strategies ($F = 9.660$, $p<0.01$). However, uncertainty (ß= -.006, t= -.101, p= 0.920), meaning in life (search) (ß= .129, t= 1.810, p= 0.071), perceived social support from family (ß= .045, t= .528, p= 0.598), harm appraisal (ß= .061, t= .611, p= 0.542), challenge appraisal (ß= -.021, t= -.282, p= 0.778), and threat appraisal (ß= -.090, t= -.917, p= 0.360) do not significantly contribute in explaining the variations in emotion-focused coping strategies.

Specifically, perceived social support from the family had the highest (ß= .361, p<0.01) contribution in explaining variations in patients' emotion-focused coping strategies. Summaries of the results are presented in Table 15 below.

Table 15: Hierarchical linear regression analysis on results of emotion-focused coping strategies

	B	**SE**	**β**	**t**	**Sig.**	**R^2**	**R^2A**	**R^2C**	**F value**
Step 1						**.137**	**.128**		**15.642****
Level of education	2.374	.518	.289	4.581	.000				
Number of children	-.717	.363	-.122	-1.975	.049				
Step 2						**.163**	**.152**	**.026****	**14.318****
Level of education	2.140	.517	.260	4.138	.000				
Stage of cancer	-2.696	.896	-.167	-3.011	.003				
Step 3						**.323**	**.289**	**.160****	**9.660****
Stage of cancer	-3.081	.917	-.190	-3.360	.001				
Self-efficacy	.457	.133	.273	3.436	.001				
Meaning in life (presence)	-.260	.106	-.155	-2.455	.015				
Friend support	.686	.248	.361	2.765	.006				
Significant other support	-.465	.234	-.266	-1.983	.048				

As can be seen from Table 16 below, in the first step of the model, marital status, level of education, and the number of children explained a significant portion of the variations in problem-focused coping strategies ($F (3,295) = 62.434$, $p<0.01$, $R^2=.388$). In step 2, the results indicate that stage of cancer explained an additional 3% of the variation in problem-focused coping strategies ($F (4,294) = 52.859$, $p<0.01$). In step 3, the results indicate that self-efficacy, uncertainty, meaning in life (search), meaning in life (presence), perceived social support from family, friend, significant others, harm/loss, challenge, and threat appraisals explained an additional 30% of the variation in problem-focused coping strategies ($F = 51.220$, $p < 0.01$).

However, social support from significant others (ß= .049, t= .901, p= 0.368), friend (ß= .037, t= .439, p= 0.661), harm appraisal (ß= -.105, t= -1.622, p= 0.106), and threat appraisal (ß= -.093, t= -1.473, p= 0.142) do not significantly contribute in explaining the variations in problem-focused coping strategies. Specifically, self-efficacy had the highest (ß= .246, $p < 0.01$) contribution in explaining variations in problem-focused coping strategies. Summaries of the results are presented in Table 16 below.

Table 16: Hierarchical linear regression analysis on results of problem-focused coping strategies

	B	SE	β	t	Sig.	R^2	R^2A	R^2C	F value
Step 1						**.388**	**.382**		**62.434****
Marital status	-1.975	.757	-.124	-2.609	.010				
Level of education	3.274	.407	.427	8.052	.000				
Number of children	-1.281	.285	-.234	-4.495	.000				
Step 2						**.418**	**.410**	**.030****	**52.859****
Marital status	-1.759	.742	-.110	-2.372	.018				
Education status	3.039	.402	.397	7.564	.000				
Number of children	-1.185	.279	-.217	-4.240	.000				
Stage of cancer	-2.708	.696	-.180	-3.892	.000				
Step 3						**.716**	**.702**	**.298****	**51.220****
Level of education	1.139	.311	.149	3.658	.000				
Stage	-1.212	.553	-.080	-2.192	.029				
Uncertainty	-.110	.036	-.126	-3.047	.003				
Self-efficacy	.384	.080	.246	4.788	.000				
Meaning in life (presence)	-.191	.064	-.123	-2.991	.003				
Meaning in life (search)	.251	.096	.121	2.627	.009				
Family support	.176	.141	.108	2.248	.021				
Challenge appraisal	.581	.224	.126	2.593	.010				

4.1.8.3. Prediction of psychosocial adjustment

A multiple regression model was computed to examine the prediction of psychosocial adjustment where uncertainty, self-efficacy, meaning in life (presence), harm/loss appraisal, challenge appraisal, threat appraisal, problem-focused coping strategies, and emotion-focused coping strategies were regressed on psychosocial adjustment.

As can be seen from Table 17 below, in the first step of the model, place of residence, age, marital status, and occupational status explained a significant portion of the variations in psychosocial adjustment (F (4,294) =19.013, $p<0.01$, R^2=.206). In step 2, the results indicate that time since diagnosis, stage of cancer, and type of treatment received explained an additional 8% of the variation in psychosocial adjustment (F (7,291) =16.964, $p<0.01$). However, time since diagnosis (ß= .065, t= 1.197, p= 0.232) and stage of cancer (ß= .083, t= 1.081, p= 0.280) do not significantly contribute in explaining the variations in psychosocial adjustment.

In step 3, the results indicate that self-efficacy, uncertainty, meaning in life (presence), harm/loss appraisal, challenge appraisal, threat appraisal, problem-focused coping strategies, and emotion-focused coping strategies explained an additional 19% of the variation in psychosocial adjustment (F=17.047, $p<0.01$). However, threat appraisal (ß= -.031, t= -.364, p= 0.716) does not significantly explain psychosocial adjustment variations. Specifically, self-efficacy had the highest (ß= -.210, $p<0.01$) contribution to explain variations in patients' psychosocial adjustment. Summaries of the results are presented in Table 17 below.

Table 17: Hierarchical linear regression analysis on results of psychosocial adjustment

	B	SE	β	t	Sig.	R^2	R^2A	R^2C	F value
Step 1						**.206**	**.195**		**19.013****
Place of residence	1.935	.805	.126	2.405	.017				
Age	.342	.105	.190	3.248	.001				
Marital status	-8.805	1.188	-.428	-7.411	.000				
Occupation	1.316	.416	.173	3.159	.002				
Step 2						**.290**	**.273**	**.084****	**16.964****
Age	.256	.103	.142	2.489	.013				
Marital status	-8.952	1.132	-.435	-7.910	.000				
Occupation	1.566	.402	.206	3.899	.000				
Treatment received	3.845	1.376	.207	2.795	.006				
Step 3						**.475**	**.447**	**.185****	**17.047****
Marital status	-9.387	1.014	-.456	-9.260	.000				
Occupation	1.138	.354	.150	3.217	.001				
Uncertainty	.122	.065	.108	1.866	.043				
Self-efficacy	-.422	.142	-.210	-2.963	.003				
Meaning in life (presence)	-.290	.114	-.144	-2.547	.011				
Harm/Loss appraisal	.228	.445	.208	2.309	.022				
Challenge appraisal	.831	.378	.140	2.201	.029				
Problem focused coping	-.266	.108	-.206	-2.465	.014				
Emotion focused coping	.198	.070	.165	2.822	.005				

4.1.9. The mediating role of cognitive appraisal and coping strategy in the association between antecedents and psychosocial adjustment

An SEM-Path analysis was conducted using AMOS software to examine the total mediating effects of cognitive appraisal and coping strategies components in the relationship between antecedents and psychosocial adjustment components. In the analysis, self-efficacy, uncertainty, and meaning in life (presence) were entered as exogenous variables. Challenge appraisal and problem-focused coping strategy were entered as exogenous and endogenous, and psychosocial adjustment (health care) was entered as an endogenous variable.

In the analysis, self-efficacy is posited to, directly and indirectly, affect the psychosocial adjustment component (health care) through challenge appraisal and problem-focused coping strategy. Uncertainty in the model was posited to, directly and indirectly, affect the psychosocial adjustment component (health care) through challenge appraisal and problem-focused coping strategy. It was also posited that meaning in life (presence) directly and indirectly affect the psychosocial adjustment component (health care) through challenge appraisal and problem-focused coping strategy.

Concerning the model fit, in the initial model (Appendix XVI) most of the model fit measures indicated a perfect fit of the model, except the RMSEA (.335). As a result, attempts to improve the model were made by deleting the insignificant effects. Thus, the model fit indices indicated that the trimmed model had a good fit. The χ^2 test was insignificant (p=.232) and χ^2/=1.431, df= 1. The Comparative Fit Index (CFI) was 0.999, General Fit Index (GFI) was 0.998, Normed Fit Index (NFI) was 0.998, and the Root-mean-square error of approximation (RMSEA) was 0.038. All parameters were estimated using a maximum likelihood estimate.

Assumption of normality and outliers were also met. The mediational path regression model was examined, and the summaries are presented in Table 18 below.

Table 18: Mediation analysis results using regression path models

Variables in the model	**Direct effect**	**Indirect effect**	**Result**
Self-efficacy→ Challenge appraisal	.641**		
Uncertainty→ Challenge appraisal	-.118**		
Meaning in life (Presence)→ Challenge appraisal	-.252**		
Challenge appraisal→ Problem-focused coping	.215**		
Uncertainty→ Problem-focused coping	-.260**		
Self-efficacy→ Problem-focused coping	.512**		
Meaning in life (Presence)→ Problem-focused coping	-.084*		
Problem focused coping→ Psychosocial adjustment (HC)	-.224**		
Challenge appraisal→ Psychosocial adjustment (HC)	.391**		
Self-efficacy→ Challenge appraisal→ Problem-focused coping→ Psychosocial adjustment (HC)		.105*	Full mediation
Uncertainty→ Challenge appraisal→ Problem-focused coping→ Psychosocial adjustment (HC)	.113**	-.068**	Partial mediation
Meaning in life (Presence)→ Challenge appraisal→ Problem-focused coping→ Psychosocial adjustment (HC)	-.398**	.018 (ns)	No mediation

**. Significant at the 0.01 level.

*. Significant at the 0.05 level.

The result of the path analysis indicates that self-efficacy indirectly influences psychosocial adjustment (health care). In this analysis, it was found that self-efficacy had a direct positive effect on challenge appraisal (ß= .641, $p<0.01$) and problem-focused coping strategy (ß= .512, $p<0.01$). It was also found that challenge appraisal had a direct positive effect on problem-focused coping strategy (ß= .215, $p<0.01$) and psychosocial adjustment (health care) (ß= .391, $p<0.01$). On the other hand, the problem-focused coping strategy had a direct negative effect on psychosocial adjustment (health care) (ß= -.224, $p<0.01$). In addition, it was found that the non-significant association between self-efficacy and psychosocial adjustment (health care) becomes significant when the association is indirect through challenge appraisal and problem-focused coping strategy (ß= .105, $p<0.05$), implying complete mediation.

The results found that uncertainty had a direct positive effect on psychosocial adjustment (health care) (ß= .113, $p<0.01$). It was also found that uncertainty had a direct negative effect on challenge appraisal (ß= -.118, $p<0.01$) and problem-focused coping strategy (ß= -.260, $p<0.01$). Coupled with this, the significant positive association between uncertainty and psychosocial adjustment (health care) (ß= .113, $p<0.01$) decreased in magnitude when it is indirect through challenge appraisal and problem-focused coping strategy (ß= -.068, $p<0.01$), thus suggesting partial mediation.

In addition, it was found that meaning in life (presence) had a direct negative effect on psychosocial adjustment (health care) (ß= -.398, $p<0.01$). On the other hand, meaning in life (presence) had a direct negative effect on challenge appraisal (ß= -.118, $p<0.01$) and problem-focused coping strategy (ß= -.084, $p<0.05$). In addition, it was found that the direct effect of meaning in life (presence) on psychosocial adjustment (health care) (ß= -.398, $p<0.01$) becomes non-significant when mediated through challenge appraisal and problem-focused coping strategy ($ß= .018$, $p=.445$) suggesting no mediation.

Generally, the mediation analysis portrays that challenge appraisal and problem-focused coping strategy fully mediated the association between self-efficacy and psychosocial adjustment (health care). In addition, challenge appraisal and problem-focused coping strategy partially mediated the association between uncertainty and psychosocial adjustment (health care). On the other hand, challenge appraisal and problem-focused coping strategy do not mediate the association between meaning in life (presence) and psychosocial adjustment (health care). Figure 2 below presents the results.

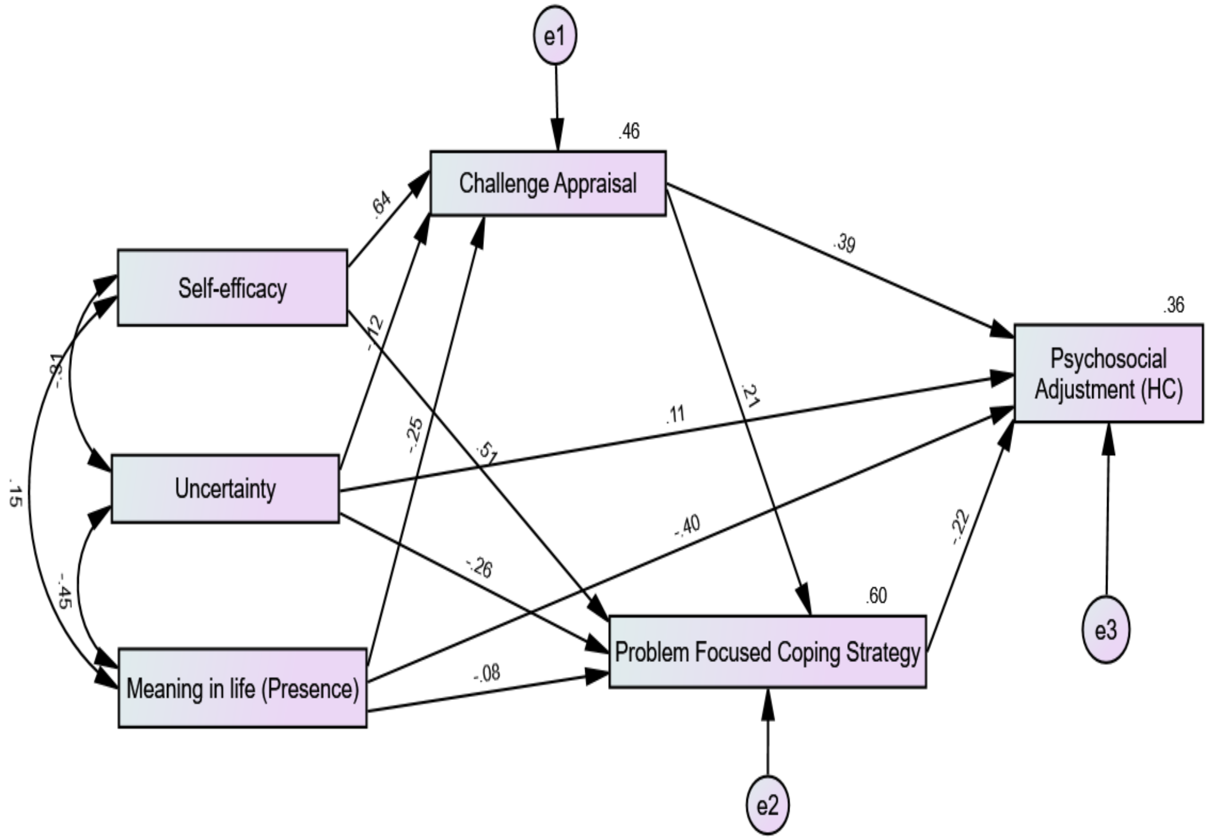

Figure 2: Mediating effects of cognitive appraisal and coping strategy components in the relationship between antecedents and psychosocial adjustment components.

4.1.10. Summary

In this quantitative part results, cervical cancer patients in this study had experienced more serious difficulty in their overall psychosocial adjustment. Both emotion-focused coping strategies problem-focused coping strategies were employed. Respondents in this study had a high amount of harm/loss and threat appraisal and a low amount of challenge appraisal. The respondents had low self-efficacy and greater uncertainty regarding their illness. They had experienced a lower level of presence of meaning in life and a higher level of search for meaning in life. They also perceived a higher level of social support from family and a medium level of perceived social support from friends and significant others.

The result of the t-test and ANOVA indicated sociodemographic characteristics, including place of residence, age, marital status, and occupation status, were found to influence overall psychosocial adjustment. In addition, clinical markers, including time since diagnosis, stage of cancer, and type of treatment received, were also found to influence overall psychosocial adjustment.

The result of Pearson correlation indicates a small to strong positive and negative relationship between meaning in life (presence), meaning in life (search), uncertainty, self-efficacy, perceived social support from family, friend, significant others, harm/loss appraisal, challenge appraisal, threat appraisal, emotion-focused coping strategies, problem-focused coping strategies, and psychosocial adjustment.

In hierarchical multiple regression analysis, self-efficacy, uncertainty, meaning in life (presence), harm/loss, challenge appraisal, problem-focused, and emotion-focused coping strategies predicted overall psychosocial adjustment. Self-efficacy, uncertainty, meaning in life (search), meaning in life (presence), perceived social support from significant others, and challenge appraisals predicted problem-focused coping strategies. The variables self-efficacy, meaning in life (presence), and perceived social support from family predicted emotion-focused coping strategies. Self-efficacy, uncertainty, and meaning in life (presence) predicted threat appraisal. Uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), and perceived social support from family predicted challenge appraisal. The variables uncertainty and meaning in life (presence) predicted harm/loss appraisal.

The AMOS mediation analysis revealed that challenge appraisal and problem-focused coping strategies fully mediated the association between self-efficacy and psychosocial adjustment (health care). In addition, challenge appraisal and problem-focused coping strategies partially mediated the association between uncertainty and psychosocial adjustment (health care). On the other hand, challenge appraisal and problem-focused coping strategies do not mediate the association between meaning in life (presence) and psychosocial adjustment (health care).

4.2. Qualitative Results

This section of the chapter presents findings resulting from a qualitative analysis of the interviews. Participants' sociodemographic and clinical data are provided, and themes arising from the interviews are described and illustrated.

4.2.1. Participants' sociodemographic and clinical characteristics

A total of 11 women participated in the qualitative study. An attempt was made to achieve the maximum variation of participants by considering the sociodemographic and clinical characteristics (age, marital status, occupation, place of residence, duration of diagnosis, stage of cancer, and type of treatment). The age of the women ranges between 39 and 62 (with a mean of 49 years). Nine of the respondents are married, and seven are urban residents. Of all the women, eight have got some form of schooling ranging from elementary to tertiary, and the remaining three are illiterate.

Concerning women's occupations, four of them were housewives, and three were self-employed at the time of the interview. All women had primary non-metastatic cervical cancer at entry and had been diagnosed with cervical cancer from between six and twenty-four months (with a mean of 14.82 months), and five of them are in stage III. In terms of treatments, five of them did radiation therapy. Table 19 below presents the demographic and clinical variables of the participants in the qualitative study.

Table 19. Sociodemographic and clinical characteristics of the participants (n=11).

Code	**Age**	**Marital status**	**Residence**	**Education**	**Occupation**	**Cancer stage**	**Time since Dx**	**Type of Rx received**
P-1	51	Married	Urban/AA	Secondary	Gov. Emp.	II	9 months	Radiotherapy
P-2	43	Married	Urban	Primary	Housewife	II	$1^{6/12}$ year	Radiotherapy
P-3	39	Married	Urban	Secondary	Self Emp.	I	1 year	Surgery
P-4	62	Widowed	Urban	Illiterate	Housewife	III	10 months	Radiotherapy
P-5	55	Married	Rural	Illiterate	Farmer	III	2 years	Combination
P-6	41	Married	Urban/AA	Primary	Self Emp.	I	11 months	Surgery
P-7	53	Married	Urban	Primary	Housewife	II	$1^{9/12}$	Radiotherapy
P-8	56	Married	Rural	Rea/write	Housewife	III	2 years	Combination
P-9	48	Divorced	Urban	Tertiary	Gov. Emp.	III	1 year	Combination
P-10	46	Married	Rural	Illiterate	Farmer	III	2 years	Combination
P-11	45	Married	Rural	Primary	Self Emp.	II	$1^{3/12}$	Radiotherapy

4.2.2. Findings of the qualitative study

The results of the qualitative findings were organized into five significant variables: appraisal, personal aspects, environmental situations, coping strategies, and psychosocial adjustment.

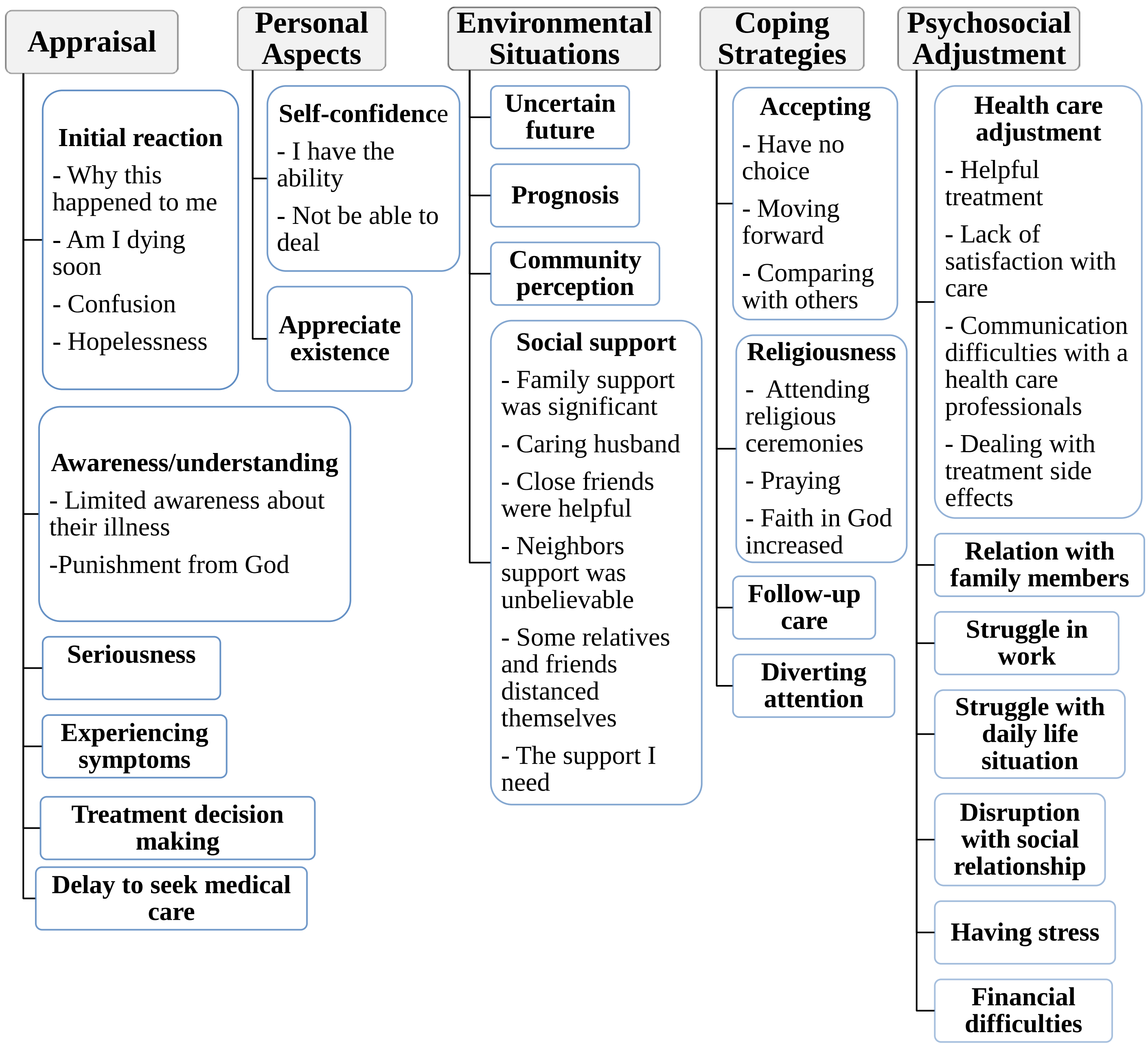

Figure 3: Description of the themes and subthemes

4.2.2.1. Appraisal

From the interview records, six themes have emerged regarding cervical cancer patients' appraisal: initial reaction, awareness/understanding, seriousness, experiencing symptoms, treatment decision making, and delay to seek medical care. The themes and the various subthemes that emerged are described in detail below.

Theme 1: Initial Reaction

When they first heard about the cervical cancer diagnosis, women tried to remember their reactions. When women heard that they were diagnosed or learned they had cervical cancer, their initial reactions were wide-ranging. Four sub-themes about women's initial reaction to the diagnosis were drawn from the data collected. These are: Why does this happen to me, Am I dying soon, confusion, and hopelessness.

Why Me?

Women do not expect that their illness will be cancer. It is clear that, for most women, it is not easy to admit to being diagnosed with cancer. They repeatedly asked themselves what could be the reason for having such a disease and their initial reaction was shock and difficulty believing. The women reported a variety of reactions, as illustrated in the following quotation:

> *"At that time, I couldn't believe what I have heard … 'Cancer', I asked myself why this happens to me, and I was shocked and felt numb for a long time."* (Participant 3)
>
> *"In my lifetime I haven't imagined I will be diagnosed with cancer … at no time I have expected such tragedy will occur to me … you know it is so painful to hear that."* (Participant 6)

For most of the women, being diagnosed with cancer was an unexpected situation, and it was the first painful moment they experienced during the course of cancer.

Dying Soon

When women are diagnosed with cancer, the first thing that comes to their mind is that they felt like they are dying soon. For some of them, their fear of death was anticipated as sadness and the feeling that their kids might not be able to survive without them. This was evidenced in the following statement by one of the women:

> *"I thought this was the end for me, so I felt sad … Soon I remembered my children … I cried a lot. I don't think they could survive if I am not around … Still, I cry whenever I think of that."* (Her eyes filled with tears) (Participant 9)

Another woman also described her feeling in the following statement:

> *"I remember when the doctor told me that I have cancer, the first thing I asked him was 'am I going to die?' … because I heard that people with cancer couldn't live …"* (Participant 11)

As indicated by most of the women, being diagnosed with cervical cancer was immediately related to the sense that they are going to die shortly.

Confusion

Women were also confused regarding the illness at the time of cervical cancer diagnosis. They were confused about their disease, its type, how to deal with it, and others were confused about treatment. These feelings of confusion are well described in the following statements by two women:

> *"When he (the health care professional) told me about my illness, I became numb…I was confused…I don't understand even what he was saying after that."* (Participant 1)

> *"After hearing that my disease is cancer, there were a lot of questions raising in my head that I couldn't get an answer, such as…what this disease is… can I get cure … how am I going to live."* (Participant 10)

For them, being diagnosed with cervical cancer was experienced by confusion regarding the illness itself and its treatment.

Hopelessness

Almost half of the women explained hopelessness about their fate after being diagnosed with cervical cancer. They described a feeling of sadness and disappointment when they heard about their cancer. This was reported mostly because women expressed a lack of information regarding their illness and were unclear about the consequences. One woman showed this response by saying:

> *"When I hear that I have cancer, I became so sad … I didn't expect the result to be cancer, no one wants to hear that."* (Participant 2)

Another woman described experiencing hopelessness about her situation in this way:

> *"During that time, I had a lot of customers, and I was planning to expand further my business … when I was diagnosed with cancer, I felt that it is not worth having hope about the business I was working on.*" (Participant 6)

The reported reactions above indicated that women appraised their diagnosis as involving a stressful situation. They came to view their situation as harm, loss, threat when they think of their diagnosis and follow-up treatment.

Theme 2: Awareness/Understanding

Almost all women do not have enough information and have a misunderstanding about cervical cancer. Two sub-themes about participants' awareness about their illness were drawn from the data collected and these are limited awareness about their illness and punishment from God.

Limited awareness

Women reported a lack of awareness or understanding of issues related to cervical cancer. Even, for two women, they heard about cervical cancer for the first time during their diagnosis. Having an unexpected diagnosis of cervical cancer and having low awareness or understanding left women in stress about their situation. The following quotations illustrate this point:

> *"I worried a lot … I don't have information regarding the disease … I couldn't find someone with the disease in my area. But when I came here (Tikur Anbessa Specialized Hospital), I saw many people having cancer and getting treatment."* (Participant 5)

> *"I am coming from a rural area, I didn't even hear what cervical cancer is, I thought of my disease as "mitch" (sun-stroke), but when the health care professional told me they found it in me … I asked him, 'what is that?' I felt worried."* (Participant 8)

Punishment from God

Such a lack of awareness or understanding of issues related to their illness made most women believe that the cause of their illness was some wrongdoing in their past life. And they believed that as a result of their wrongdoing, it is a punishment from God. Some of them also thought that their cancer was written for them. Two women explained it in this way:

> *"I didn't consider myself as a bad individual… what did I do wrong … In my life, I am struggling to raise my children … I thought this is a punishment from God."* (Her eyes filled with tears) (Participant 1)

> *"I think I may have done something in the past that upset my God … but I couldn't think of any wrongdoing … so I always think that this should not be my fate."* (Struggling to control her tear) (Participant 3)

From the women's response, it is understood that most of them had minimal awareness and misunderstanding regarding cervical cancer and even some of them attributed the cause of their illness with some wrongdoing in the past and being punished by God. To alleviate this, they reported that some tried to search for information from different sources by asking the relatives, local health care professionals, and mass media (radio and television health programs).

Theme 3: Seriousness

Women consider cervical cancer is a severe illness. They reported that it had affected all aspects of their life. They explained this by stating the consequences they encountered. For instance, two women stated as:

> *"It is a severe disease …it makes me lose my strength…I am always fatigued…I can't move here and there as I do it in the old days."* (Participant 7)

> *"The illness I have is very severe, and it has changed everything in my life."* (Participant 4)

Theme 4: Experiencing Symptoms

Women with cervical cancer reported having experienced different symptoms. Women's most frequently reported symptoms are having excessive bleeding, foul smell discharge coming out of their reproductive organs, and pain during intercourse. One of the women describes the symptoms she experienced as:

> *"I repeatedly had bled through my reproductive organ … I thought it was just a short-term condition… but it continued… it was different from the menstrual bleeding I used to have … when I tell my relative about the symptom, she told me it was 'mitch' (sun-stroke), and I took some cultural treatment, but the bleeding didn't stop"* (Participant 10)

Another woman expressed how she experienced smelling discharge through her reproductive organ and the effect brought on her as:

> *"I have a discharge which has a bad smell coming out of my reproductive organ … I tried to clean it by water, and even I cleaned it with holy water, but still the bad smell couldn't disappear, I didn't know what was happening, for this reason, I always fear to be near to people."* (Participant 4)

To get relief from symptoms, women reported taking different actions. Most of the women reported using cultural medication and holy water. They described that even though they have tried the above actions, the symptoms persist, and it became severe on most women.

Theme 5: Treatment Decision Making

Women explained various ways of treatment decision-making to seek care from health institutions. The decisions relied on their husbands or family/relatives or, for a few, through discussion with local health care professionals. One woman explained how her husband helped her in decision-making as:

> *"It was my husband who heard about the treatment of cancer from the radio and believed that it will be good for me to get cured … Then we talked about it and decided that I have to get the treatment from health care institution, the hospital in our area referred me to this hospital (Tikur Anbessa Specialize Hospital)."* (Participant 2)

Few women reported that their relatives influenced the decision to seek treatment from health care institutions. The following statement evidences this:

> *"My nephew is a health care professional. We called him by phone and told him that I had been diagnosed with cervical cancer. And he recommended that I should begin treatment as soon as possible from the hospital, so I began my treatment here (Tikur Anbessa Specialize Hospital)."* (Participant 6)

Theme 6: Delay to Seek Medical Care

There has been a delay in most women's decision-making to seek medical care. Some women reported not considering seeking medical care, believing that the illness will heal by itself without treatment. One of the women reported this belief:

> *"I didn't consider that the illness would be cancer … I thought it would be healed by itself in a short period, so I waited a lot of time … but as time went it didn't disappear … then I decided to seek care from a hospital."* (Participant 7)

Most of the women also reported that they had tried traditional practices for alleviating their illness. Even though women from urban areas have practiced traditional medicine before deciding on modern medicine, this was primarily a case for all women from rural areas. One of them described the reality behind it as:

> *"I tried traditional herbal medicine before coming here. I tried the traditional herbs, going from place to place, but I was not cured. It was then that I tried to seek care from the hospital."* (Participant 10)

During the discussion, women also confessed that they had repeatedly tried cultural and religious practices before seeking care from health institutions. For some women, seeking care from a health institution was considered the last option they had. One of the women evidenced this in the following statement:

> *"Before I decide to seek medical care from a hospital, I have tried different kinds of traditional medicinal practice and religious practice. However, I could not get relief, and even my illness got worse. Then, I came here as the last choice after everything I tried failed."* (Participant 5)

Women who experienced delayed diagnosis reported that they regret not seeking care from health institutions early. They felt that their illness might not be like this if they had been diagnosed earlier. For example, a woman described her regret in this way:

> *"I think I should have decided to go to a health center when I experienced the pain … I believe that the decision to go to the cultural practice was wrong, and I wish things would be different if I came here early."* (Participant 8)

From the above responses, it is clear that women decided to seek care from health institutions after the cultural practices or religious practices they tried were unsuccessful in bringing cures for them. It was also observed that women living in urban areas sought earlier care from health institutions. In addition, most women stated that their limited understanding of cervical cancer resulted in delayed health-seeking decisions.

4.2.2.2. Personal Aspects

Two themes have emerged from the interview records regarding cervical cancer patients' personal aspects: self-confidence and appreciate existence. The themes and the various subthemes that emerged are described in detail below.

Theme 1: Self-Confidence

Women who participated in the study had a difference in self-confidence in dealing with their situations. Two sub-themes about self-confidence were drawn from the interview data, and these are: I have the ability and not be able to deal with the situation.

I Have the Ability

Less than half of the women described a sense of self-confidence in their ability gained from experiencing cervical cancer, and they could deal with the situation. The following statement indicates how their experience led to a sense of self-confidence:

> *"I think experiencing the condition helped me to rely on myself and ability to deal with these things."* (Participant 6)

Another woman indicated that:

> *"I have learned that there are things you need to do by yourself to change your situation from experiencing this illness. I think you just need to believe in your ability and struggle with the situation."* (Participant 1)

Few participants believed in their inner ability and esteem to deal with their illness difficulties. These women showed their belief in their strength to deal with the situation. Two of them described how their situation could be managed as follows:

> *"Even though my condition is difficult, I will never stop struggling to overcome the situation I am in."* (Participant 11)

> *"I have passed a lot of ups and downs in my life … this illness will not break me; I will do everything to take back my previous life."* (Participant 1)

Not Be Able to Deal With

On the other hand, few women responded that their situation is challenging and might not be able to deal with it. They reported that they couldn't adapt to their situation, and it was difficult for them to manage it with their ability. One woman described her situation as:

> *"I don't think I can handle this entire burden, I just can't … everything is collapsing on me … I gave everything to God. He (God) knows everything."* (Participant 4)

Another woman stated how she lost her strength to fight the illness as:

> *"Being diagnosed with cancer and receiving the follow-up treatment made me lose my strength. I have no longer strength to confront it. I don't think so … it is though, you know."* (Tears filled in her eyes.) (Participant 5)

Theme 2: Appreciate Existence

Women expressed that they tried to have experienced their existence even though they had cancer in them. This is reflected in a variety of ways. The women indicated about having increased their level of interest to live more. Few women also reported a hopeful attitude about their future to engage with important life goals.

> *"I keep looking for my future … believing that I will have a satisfying life after this situation… I look forward to seeing my children grow and be successful in their life."* (Participant 1)

Four women used to think positively so that they would get back to their usual life soon. One of the women evidenced this in the following statement:

> *"The condition I am in maybe the worst thing that could happen to a woman, but I am hopeful that I will return to my usual life I have before cancer."* (Participant 9)

Other women also expressed making efforts to make life as normal as possible. Few of them return to their lives to their usual routine for their families, especially for the sake of their children living with them at home. One woman said this:

> *"I think I just have to make things normal, though I strangled a lot with the side effects of the treatment, I should go back to work again … I still have children to feed."* (Participant 7)

Experiencing the illness has also helped women identify and appreciate what was positive in their lives, set priorities, and appreciate their existence. The women believe in having a positive attitude about their existence and having future goals in their life.

4.2.2.3. Environmental Situations

Three themes have emerged from interview data regarding cervical cancer patients' environmental situations: uncertain future, prognosis, and community perception. These themes are described in detail below.

Theme 1: Uncertain Future

Some women described feeling uncertain about their treatment outcome. They reported uncertainty about when the treatment will end, their recovery, the damage to their body, and other issues. As one woman mentioned:

> *"I am not certain regarding the result of the treatment I am getting. The process changed regularly, and I cannot predict my situation with such regular changes."* (Participant 5)

Participants discussed living with uncertainty due to not knowing the aspects of their illness and treatment. They reported their everyday life as full of unpredictable situations because they didn't know their prognosis. For instance, one woman said that:

> *"Honestly speaking I do not know enough about my condition … I am not sure what to do … I should wait."* (Participant 11)

Few women also expressed being changed by their cancer experience in repeatedly worrying when they will get into a bad situation or even dying or not getting back to normal life.

Theme 2: Prognosis

Half of the women who participated in the interview believe in their cure as a result of the treatment and the efforts made by the health care practitioners. They felt that their prognosis is dependent on what health care professionals doing for them.

> *"I will have good progress if the health care professionals are doing what they can do for me. It depends on the treatment they are giving to me. I hope my progress will be effective if I continue like this."* (Participant 2)

Apart from all these, some women believe that their cure only depends on the will of God. One of them stated that:

> *"I just gave everything to God … I am in his hand, based on his mercy I might get cured."* (Participant 4)

Theme 3: Community Perception

The women also described how the community member's beliefs affected their cervical cancer experience. This resulted in women feeling stigmatized. This also resulted in women putting up with insensitive comments about their illness. It is evidenced in the following quotes:

> *"There is a lack of awareness about cancer in my area. Cancer is considered a curse; nobody wants to talk about it. They associate someone having cancer with death … so they consider it as there is no need of treatment."* (Participant 11)

> *"When some people visit me, they say that I must have done something bad to offend God, and they thought of my illness as a punishment."* (Participant 8)

As indicated above, women described that the community they live in considered cancer a deadly disease that cannot be cured by medication. Many women emphasize that there is a need to increase awareness and change the community's attitude towards cervical cancer for the community to solve the lack of understanding and misconception regarding the illness, and people will be more attentive to the illness.

Theme 4: Social Support

Participants discussed their social support experience after the diagnosis and during follow-up treatment for cervical cancer. Regarding social support, six subthemes have emerged: family support was significant, caring husband, close friends were helpful, neighbors support was unbelievable, some relatives and friends distanced themselves, and the support I need. These subthemes are described in detail below.

Family Support was Significant

Women reported that the most crucial support they perceived was from their families. Women also expressed the importance of social support from close friends and neighbors. Most of the women described that they have good social support. Having social support from their family or friends and neighbors helped them greatly. As one woman described:

> *"If my family were not supportive, getting the treatment will not be possible. Especially, my brother helped with the money for travel and accommodation here in Addis Ababa during my follow-up treatment in this hospital (Tikur Anbessa Specialize Hospital)."* (Participant 9)

Women also mentioned that their families accompany them during their stay here in this hospital for follow-up treatment. This is reflected in the following excerpt:

> *"My sisters are always with me during my stay here in this hospital, and it will be a tough situation without them."* (Participant 1)

For many women, having support to get relief from the daily household activity or pressure was very helpful. One of the women expressed her experience with this kind of support and how it helped her as:

> *"I constantly feel exhausted to perform household activities. Since my diagnosis, my little sister has been living with us to do all the household activities … I don't know what I could do without her…I wish her to have a blessed life in the future."* (Tear filled in her eyes) (Participant 7)

Caring Husband

Participants expressed how the support from their husbands helped to deal with their illness stress. This is shown in the following statement:

> I was repeatedly sick and was examined by local health care professionals. They told us to go to Tikur Anbessa for further investigation and treatment. I was not willing to come to this hospital. My husband persuaded me to come, and he stayed with me until I got the treatment, and he is still here during my follow-up treatment. (Showed pointing at where her husband is standing) (Participant 2)

Another way of support described by one woman was the support with the sharing of household activities by her husbands.

> *"My husband performs all the household activities. We don't have a maid to support us with the housework. He is the one taking care of the children when I am here for follow-up treatment."* (Participant 1)

Of the nine currently married women, six of them were happy with the support they received from their husbands. They reported that this kind of support from their husbands felt them so cared for. For instance, one woman stated that:

> *"I think my greatest support I received comes from my husband, he takes care of the children and me…he always tells me to concentrate on my cancer care…still he is a kind husband for me."* (Participant 6)

Close Friends were Helpful

Some women gained support from close friends who were significant contributors to the follow-up treatment. In addition to being with them to support them emotionally, the women even received money for transportation from their close friends. As a woman mentioned:

> *"My friends in the neighborhood know that I am suffering from cancer and in follow-up treatment here in this hospital. They contributed and gave me money every time I have a treatment schedule for my stay here in Addis Ababa."* (Participant 5)

Another woman reported how this support helped her a lot:

> *"One day when I was preparing to travel here, my friends visited me and gave me 2000 ETB. I cried a lot since I do not have enough money on my hand. I feel good to have close friends who are helpful."* (Participant 9)

The other way women felt supported was their reassurance from friends through phone calls. One woman described this:

> *"My friends and relatives give me a phone call. They ask me about my situation, my children and everything. It was helpful for me to talk to them and reminds me that I was not forgotten."* (Participant 2)

Neighbors Support was Unbelievable

For women with cervical cancer, daily life was a double burden in addition to cancer treatment. There is still household work: cooking meals, caring for kids, cleaning, going to market and getting help from other people (family members, friends, or neighbors) resulted in relief from this pressure.

One type of support expressed by women happened when neighbors brought them meals. Women were relieved from cooking for families. This was also helpful when women were in the hospital for follow-up treatment. A woman described it as:

> *"My neighbors take a turn and bring a meal to us when I feel sick and stay on a bed; it was such kind support I get from them. And you know, even though they don't have much, they share with us whatever they have cooked."* (Participant 8)

Women also described that the other support they got was going to the market to buy foodstuffs. A woman expressed her relief of going to the market by saying:

> *"I have a close friend whom I consider her as my sister … she is the one who always visits the market to buy everything essential for us. You don't know how much this relieved me from going to the market."* (Participant 1)

The various ways of social support during this period of diagnosis and treatment helped women, whether through helping financially, daily household activities, emotional or calling them on the phone was essential in relieving them from experiencing a load of stress helps them improve coping and adaptation. The women also described that they highly valued all types of social support.

Some Relatives and Friends Distanced Themselves

Unfortunately, three participants experienced that their relatives and close friends tended to avoid them despite their need for care, resulting in feeling lonely and losing hope. In contrast to becoming a good supporter, the women also mentioned how their previous good friends and relatives avoided themselves after their cancer diagnosis. One woman explained it as:

> *"I was surprised and sad at the same time to see my friends whom I thought would be supportive just let me down. Even some of them did change their way when they see me in the road … they feel like I can transmit the disease to them … It hurts a lot when they do that on me."* (Participant 6)

Another woman explained how extended family members distanced themselves after their illness from the family:

> *"I haven't imagined my relatives will turn their back on me like this. They have not even asked me once when I was admitted to the hospital. I don't know their reason … but it is good to know who they are … I will never forgive them for what they did to me"* (Participant 10)

The women reported that when they expected support from family or friends is not present; it brought feelings of sadness and anger during this time of need. Some participants received overwhelming support initially, but the support faded away as time goes. A woman described this as:

> *"During my diagnosis, there was plenty of support from my friends and relatives. As time passed, most of my friends and relatives were not able to continue their support. But I understand that they are struggling with their own lives and may not get time to visit me."* (Participant 3)

As described above, even though the women find themselves being supported at the beginning and need this social support over the prolonged time of cancer treatment, as time goes on, this social support reduced significantly.

The Support I Need

The participants strongly stressed the importance of having support from health care professionals, but openly informing their concerns with them was difficult. They expressed that in their treatment process, help should have to be offered respectfully and discussion should have to be there about their various concerns so that they can have a successful and trusted health care follow-up.

The participants also stressed that having complete and trusted their caregivers should well acknowledge information support that can be obtained through discussion with them. For instance, one woman describes the support from the health care professionals as:

> *"The doctors who treat me were not kind. I felt uncomfortable talking about my concerns. I don't see any caring behavior from them."* (Participant 9)

When discussing their support need, participants considered information and advice from health care professionals as the most critical support they needed. After the diagnosis, they need information that is valuable in helping them to differentiate and clear out between rumors and reality regarding their illness and the treatment.

For instance, one of the women described her struggle in finding the support she needs:

> *"I had worries concerning my treatment to talk with the health personnel, I have experienced financial difficulties with the cost of travel and accommodation … but it is very problematic for me to discuss with them or find an organization who can support me …"* (Participant 7)

In this regard, participants described that they did not receive any reading materials (leaflets, brochures) about cervical cancer from the hospital. Women also reported no support provided from social services or voluntary organizations for helping them economically or psychologically during follow-up treatment for cervical cancer.

4.2.2.4. Coping Strategies

Women reported using varieties of strategies to cope with their illness. Regarding coping strategies, four themes have emerged: accepting, religiousness, follow-up care, and diverting attention. The themes and the various subthemes that emerged are described in detail below.

Theme 1: Accepting

The women reported having denied the reality of their cervical cancer diagnosis when presented to them by the health care professional. At the initial diagnosis, women could not accept their situation. As time goes by, they begin to accept their illness and the need for treatment. Three sub-themes about acceptance of their illness were drawn from the interview data. These are: having no choice, moving forward, and comparing with others.

Having No Choice

Some women reported that they accept their illness because they do not have any other choice. Two women explained their acceptance through time and the need for treatment in the following statements:

> *"You know … it was difficult to accept …* but *I have no choice … then I start to think of what kind of treatment would help me cure my illness."* (Participant 3)

> *"I deny it for many days, but I came to think that what other choice do I have … I don't have any … so what can I do rather than accepting the situation"* (Participant 1)

Moving Forward

Some women described thinking of moving forward with their life. They reported that thinking about moving forward as a means helped them cope with their illness. The following quotations indicated the situation they are in:

> *"Now I believe that this isn't the end of the world, I didn't give up on myself yet, no I haven't…I convince myself that I need to move forward with my routine life."* (Participant 2)

> *"I don't want to worry about the past. I have made myself to give concern for the life I have in the future."* (Participant 7)

Comparing with Others

Women also reported that comparing themselves with someone else who has a worse illness helped them feel good about their condition. This helped them encouragingly view their illness, and hence it has reduced the stress associated with their condition. One woman said this:

> *"At this moment, I am active, and I don't need assistance from another person to move here and there… I know other patients who have worse conditions than me … though I may not be as active as I was before the illness, I am doing my best."* (Participant 11)

One of the women explained given her age, weakening her body and health is expected. She had accepted her situation with some difficulties.

> *"You know I am on my way towards the end, it may be a challenging situation for me if this happened at my young age, but I have lived a lot of my life, so I accept my situation."* (Participant 4)

Almost all the women did have trouble accepting the diagnosis immediately, but as time goes, they accepted their cervical cancer diagnosis and the need for treatment. Even for some, there was no choice but just to accept the diagnosis, thinking of what could be the treatment. Women think that their cervical cancer has many life-threatening implications on them. Similarly, women also did not deny their emotional reaction to their diagnosis, although several of them appeared to make attempts to minimize the strength of their reaction over time. As indicated in the above statements, accepting their situation was one of the coping strategies used by women.

Theme 2: Religiousness

All the women consider themselves religious people and used several religious practices to help them cope with their illness. Three sub-themes about religiousness were drawn from the interview data, and these are: attending religious ceremonies, praying, and faith in God increased.

Attending Religious Ceremonies

All women mentioned they had performed or attended different religious ceremonies. They mentioned that these religious activities helped ease their feelings. One of the participants described this as:

> *"I usually visit a church to participate in religious ceremonies, and at the end, I drink holy water. I believe that this gave me a good feeling and hope."* (Participant 8)

Almost all the women felt that holding religious beliefs helped them deal with their cancer diagnosis and treatment.

> *"I have faith in God … having the mercy of my God is helping me alleviate the pain related with my treatment."* (Participant 11)

Praying

Women reported that they were praying and listening to religious songs at home. According to them, these religious praying and listening to religious songs helped lift their feelings and relieve the stress they were experiencing. One of the participants described how her praying helped her in the following statement:

> *"I am a Christian, and I always pray to my God. This helped me a lot … I get a relief from doubting my creator."* (Participant 5)

Some women prayed because they believed that praying would help them reduce stress and the fear of death. A woman explained this as:

> *"I always pray to my God for his forgiveness. I have been doing this every day before sleeping … praying always helped me a lot to reduce my worry and feel better afterwards."* (Participant 10)

Most of them also described that they prayed for a cure because their situation is in the hands of their God. One of the participants described this as:

> *"I believe in God, and I believe that the Almighty will not let me down like this, I trust him … I heard from church that He healed many people with different disease … I always believe that He will also heal me."* (Participant 8)

Faith in God Increased

While all women reported holding religious beliefs before being diagnosed with cervical cancer, some women spoke of how their faith in their love for God has increased after being diagnosed with cervical cancer. For example, one woman said this:

> *"I was not like such a strongly religious person before my diagnosis, but after that, I regularly go to church … I pray a lot, and sometimes I talk with my pastor to pray for me."* (Participant 3)

During further discussion, the women expressed that even though some of them felt their illness as a punishment for wrongdoing by their God, they did not lose their faith in God's mercy. They continued to pray and engage in religious activities in their community. By doing this as a coping mechanism, these women reported that they were able to relieve themselves from the distress of diagnosis and treatment of cervical cancer.

According to them, having faith in their Gods restored their hope and enabled them to adjust themselves, and empowered them to deal with the current challenging life situation they are experiencing. Their faith in God had a very big role in their coping and adjustment for women. Through going in this challenging situation, faith was an essential means that helped them tolerate and struggle with their situation.

Theme 3: Follow Up Care

To cope with their illness, most women reported that they were adequately adhering to the follow-up care and practicing the recommendations by the health care professionals. They were coming on the scheduled day of the follow-up through passing many difficulties and travelling for many hours or days from outlying areas. Some women also showed their commitment by coming to the hospital even if they were feeling very sick. Such kinds of commitment were observed in the following statement:

> *"There are many difficulties I go through to be here for my treatment … I understand that I will get cured if I properly follow the treatment… that is why I will not be absent from my follow-up appointment."* (Participant 1)

> *"At the start of my treatment, I was not convinced in having the treatment. But over time I realized that whatever it is, proper follow-up treatment is necessary so that I can be cured."* (Participant 7)

Most of the women also felt that they take the opportunity to take care of their health appropriately. They reflected how they changed their health behavior related to diet, practicing the advice of the health care professionals, following check-ups appropriately. Even for some women, these practices are now essential parts of their life.

> *"I always practice what my health care professional advised me … I read leaflets about cancer when I got a chance … there are some behaviors I also let go … I also try to have a balanced diet as much as possible to maintain my health."* (Participant 3)

Theme 4: Diverting Attention

Women reported that they kept themselves busy with other activities so that they did not have time to think about their illness. Many women also make an effort not to think about cancer and try to forget about it. They used this strategy by keeping themselves busy and regular to make them feel better. The following quotations indicated how participants used to stop thinking about their situation as a strategy to make them feel better:

> *"I don't give time for myself to think about my cancer…I kept my mind busy…moving around the back of the house…watering the garden…vegetables…and so on."* (Participant 10)

> *"When my mind starts thinking about my condition, I quickly engage myself in cleaning the house or cooking or do other things to stop the thought."* (Participant 9)

> *"I try not to sit and think about my situation; instead, I have repeatedly been engaging myself in doing something; doing housework, going to the neighbors, and so on."* (Participant 2)

During further discussion, these strategies used by the participants to distance themselves and stop thinking about their situation to make them feel better to have helped them for only a shorter period.

4.2.2.5. Psychosocial Adjustment

Women reported a variety of psychosocial adjustments difficulties with their illness and treatment. Being diagnosed with cervical cancer was a life-threatening experience for the women, and their life changed in one or another way following the diagnosis of cervical cancer. Seven themes were drawn from the collected data related to psychosocial adjustment: health care adjustment, relation with family members, struggle in work, daily life situation, social relationship, having stress, and financial difficulties. The themes and the various subthemes that emerged are described in detail below.

Theme 1: Health Care Adjustment

Four sub-themes about health care adjustment were drawn from the interview data. These are helpful treatment, lack of satisfaction with care, communication difficulties with health care professionals, and dealing with treatment side effects.

Helpful Treatment

The women indicated that, even though their illness has put a strain on them, they feel that the treatment they are receiving will help them overcome their illness soon and get back to the way they were before. One woman described:

> *"Nowadays I think that I am getting well … the improvements in my health are the result of my treatment."* (Participant 2)

According to the women, they have lost hope about their recovery at the time of diagnosis. Nowadays, half of them restored their hope of recovery, as they have relatively felt better about their illness compared to what they have in the beginning. Other women mentioned that they restored their hope of recovery since they undertook the treatment.

Few (three) of the women had experiences of their cervical cancer treatment is going as they expected. Those women who felt that the medical staff had done all they could have done for them were able to have hope for positive treatment outcomes. On the other hand, few women noted that the doctors cared for and encouraged them to have a favorable view of their progress. The following explanations evidence this.

> *"The doctor who treats me is very caring. He always listens to my concerns and gives me advice. When I came for follow up, I always ask the nurses to take me to him."* (Participant 3)

> *"I believe that most of the health professionals are helping us to get well. I know if they continue with their help, I am going to get well soon."* (Participant 1)

Few women also experienced gratitude for the medical personnel providing the treatment. One woman described her experience in this way:

> *"For me, most of the health professionals who treated me here in this hospital are kind. They did give me all the care. It was beneficial for me to see such understanding … I am so grateful for the caregivers."* (Participant 2)

Though half of them agreed about the helpfulness of the treatment, one participant does not agree that the treatment is effective in relieving the problematic health condition, and it is further destroying her wellbeing.

> *"Though I am taking the treatment, I don't think that it is helping me to cure my condition … I am further losing my wellbeing day to day … I don't know how I am going to continue with the treatment."* (Participant 5)

Lack of Satisfaction with Care

Even though women hoped that their treatment helped them, most of them were not satisfied with their healthcare experience. They described that the health care professionals were not supportive and caring. The health care professionals did not explain all aspects of their illness, and they were not assured regarding their treatment side effects. They felt that the healthcare professionals were not attentive to their needs. Women expressed harry and chaos in the reception/waiting area and card room. The following excerpt shows this response well:

> *"Those workers in the waiting area and card room were not kind. They do not have ethics at all. We show up early in the morning, but we may not get service until noon. Traveling from far area for treatment and looking at such things makes me think that it is better if I stayed home."* (Participant 9)

Another woman described her experience with health care as:

> *"There are some professionals in the reception who showed a lack of respect and kindness. I was so disappointed and even tried to leave once. This is what I usually experience during my follow-up treatment."* (Participant 5)

In addition, women also described they have waited for a long period (months) to receive the medical service here in this hospital because of delay in receiving their diagnosis result and interruption of radiation treatment. The following excerpt showed their difficulties in getting the treatments:

> *"I have waited for many months to get the medical care … they repeatedly give me appointments by saying my result is not ready … there are also a lot of people waiting to get the treatment."* (Participant 11)

> *"There is repeated interruption with the treatment I receive (Radiation therapy) … the say that the machine is broken… sometimes after coming here, I may not receive the service … I think the hospital should do something."* (Participant 7)

Communication difficulties with Health Care Professionals

Women also expressed the importance of receiving cervical cancer information from health care professionals to adjust to their situation. Though the women believe that the vital source of such information is health care professionals, this does not happen. This unable them to have adequate information about cervical cancer, side effects, how to deal with other situations.

> *"Some of us are without adequate information about our illness and rely on rumors about our illness and uncertainty about our situation, the health care professional should have to clarify things for us."* (Participant 9)

Women have reflected various experiences regarding their communication with health care professionals. Most participants described that they have less information, though they want to know more about their illness and treatment. Most women described their treatment care as lacking intimacy and proper communication and kindness, which makes them unsatisfied with the follow-up care. Some women reported that the doctors did not communicate their illness or treatment well.

> *"Though I have asked repeatedly why I am taking medicine, the health care professionals told me very little."* (Participant 10)

All women reported not receiving adequate counseling and emotional support when they receive their diagnosis and treatment. One woman said this:

> *"… He (the health care provider) just told me he doesn't have time to discuss in detail about my illness."* (Participant 6)

Most women found that communication with health care professionals was more difficult. The communication was very shallow, directive type, and they found it confusing. Many women felt less empathy with their health care professionals, which made them feel less comfortable and uncertain with the treatment choice and decision. The absence of rapport established with the health care professionals leads women to feel less reassured in the treatment process, satisfied with the care received, experience adjustment difficulties.

Dealing with Treatment Side Effects

The time of treatment was a challenging experience for women as this was when they faced physical, psychological, social changes and side effects related to the treatment. The treatment regimens were challenging to tolerate for women, resulting in frustration with adjusting to a new identity as a cancer patient.

They described that treatment-related side effects had negatively affected all of them. Side effects began to appear as soon as they began treatment. Patients experienced the side effects of the treatment such as fatigue, nausea, loss of appetite, etc. These side effects were very challenging and have limited their physical activities. As evidenced in the following excerpt:

> *"I repeatedly feel tiredness and lost my appetite. I couldn't do things the way I did them before my illness."* (Participant 1)

The women also stated that the treatment side effects negatively affected their lives. They felt they were quickly got tired and could not work as they had done before their illness. A 56-year-old woman explained it as:

> *"During my treatment, I feel exhausted, my body does not feel good. I told my doctor, and he said to me 'it was just a side effect'. This has deteriorated my body function"* (Participant 8)

Though women have such difficulties related to the treatment side effects, they are trying as much as they can to manage the problems.

> *"Currently, I have concentrated my effort to manage the difficulties related to the treatment side effects."* (Participant 2)

Many women experienced various hardships during cervical cancer diagnosis and follow-up treatment. In addition, they experienced problems with their sexual functioning and in a few of them, this resulted in an argument with their husbands. This hardship posed challenges, especially the treatment side-effects that led the women to experience adjustment difficulties.

Theme 2: Relation with Family Members

All women expressed their cancer had brought adverse effects or burdens on their family members. Their diagnosis of cancer made the family members with great concern and confusion. A woman explained how her son reacted with her diagnosis:

> *"During my diagnosis with this disease, I have a son learning in 11th grade. He just cannot focus on his study… he could not be able to see me getting tired and feeling pain. He wanted to be near me and dropped out of school because he was repeatedly absent to stay with me."* (Participant 8)

Women acknowledged the family also experienced emotional distress in the hardships because of their cervical cancer. They described empathy and closeness to their children as necessary in relieving the distress and hardship situation. Some women also described the situation as creating a greater sense of closeness with family members. It contributed to increased affection for family, more significant support to the family, and improved communication with family members. One woman said this:

> *"I believe that the closeness with my children and my husband was important in reliving the difficulties related with my condition."* (Participant 1)

They also expressed difficulties in their relationship with their husbands after their diagnosis of cervical cancer and during follow-up treatment sessions openly. Their illness also affected their husbands. Nevertheless, for some of them through their illness journey, the presence of emotional connectedness, discussion about the problems, and caring for each other helped them get the strength to adjust to their situation. One woman described how her husband helped her adjust to her situation as:

> *"I don't have words to express how my husband gave me love and care during this time … we always talk about our situation … things we should do; this gave me strength to adjust myself with my illness process."* (Participant 3)

Theme 3: Struggle in Work

Women who participated in this study reported that they had encountered interference with their ability to do their jobs because of their illness and treatment. Moreover, this resulted in creating a problem in their work environment. One woman said this:

> *"There is some disagreement with my supervisor as a result of my frequent absence from work due to my illness."* (Participant 9)

Women also discussed how cancer and treatment changed their ability to work. The following statements described how they struggle with their work capacity:

> *"Previously I work on the farm … but nowadays I feel exhausted to travel there. This hindered my capacity to work."* (Participant 10)

> *"My capacity was affected by cancer and its treatment. I used to work a lot of hours without a break, but currently it is challenging to work because I feel exhausted easily."* (Participant 5)

Other women stated how having her own business helped her not to worry about absenteeism from work in the following statement:

> *"I have a small business. I have one worker. When I feel sick, she helps me work. If I don't own the business and employed elsewhere, I probably get fired for being absent repeatedly from work."* (Participant 6)

Women also mentioned the relationship they have with their co-workers. A woman who is a government employee said that:

> *"During my stay here in this hospital for treatment, there is a gap in my work due to my absence. My co-worker was very helpful and helped me fill the gap by performing my task. If she couldn't help me, I may lose my job."* (Participant 9)

Another woman described her relationship with her supervisor as:

> *"My manager where I work was very nice to me after he came to know that I was suffering from cancer. He helped me through, providing sick-leave during the months I was in treatment. I wish all supervisors were that supportive like him."* (Participant 1)

Theme 4: Struggle with Daily Life Situation

The women were very concerned about their duties in the household. In addition to the challenges of cancer, the women have experienced struggling in their daily lives due to fatigue and other side effects of the treatment. Some participants expressed that their female child had to take over more household responsibilities, which creates an additional burden for them. As one woman described:

> *"My cancer and the treatment affected my capacity to perform the activities in the house. My children have tried to help me, but many things are left undone waiting for me."* (Participant 5)

Another woman replied the difficulty encountered adjusting with her daily life during the treatment session:

> *"My daily life situation is interrupted as a result of cancer … during my treatment session, the pain I experience has impacted me not to move in the house and do some activities"* (Participant 4)

Theme 5: Disruption with Social Relationships

Women reported that they had experienced disruption in their social relationships. The decrease in social interaction was due to feeling ill and being fatigued all the time to go out. Few participants even reported that their relationships with their friends and neighbors had been significantly affected. One woman showed this response by saying:

> *"My social interaction is not the same as it used to be … now I don't engage in social activities like going to funerals, mourning someone's death, drinking coffee with my neighbors … it is terrible for me not participating in those social practices …"* (Participant 4)

Others reported that they re-evaluated their lifestyles, participated in social activities and took appropriate action to maintain their wellbeing.

> *"I am trying to make things right for my health. I have changed my habit, started doing some activities with my neighbor, going out to mourn someone's death and thinking that is beneficiary."* (Participant 2)

Theme 6: Having Stress

Women described that they are experiencing stress because of worrying about their treatment outcome, their children, losing their jobs, and the physical damage that may result from the treatment. One woman showed this response by saying:

> *"As I am a mother, I repeatedly worry about my children … if I die or become inactive, they could not take care of themselves, I don't know what to do"* (Participant 6)

Another woman expressed her fear of losing her job as:

> *"As a result of my repeated absence from work, I don't know how far my supervisor could tolerate my situation … I have a great fear that I may be unable to continue working there."* (Participant 9)

Few of them mentioned feeling sad, losing interest in things they did before, and becoming easily angry in simple situations. One woman reflects this as:

> *"… currently I become simply annoyed with things in my surrounding… my behavior is not the same, I don't know why this is happening"* (Participant 11)

During the discussion, women also stated that they worry about their physical appearance, especially their hair following treatment. A woman frankly said regarding this experience:

> *"I have heard here in this hospital from other patients that the treatment will cause a hair fall … I always look in the mirror and worry about it repeatedly."* (With laughter) (Participant 10)

From the women's response, it is understood that most of them worried about different issues related to their illness and treatment. They also reported that there is no counseling service for helping them alleviate their stress during follow-up treatment for cervical cancer.

Theme 7: Financial Difficulties

The great concern expressed by women, especially those coming from distant areas, is their inability (financially) to cover the cost of travel and accommodation here in Addis Ababa when they regularly come for follow-up treatment. They suffered a lot due to financial scarcity resulting from their illness.

All participants have expressed their concern regarding financial difficulties during the follow-up treatment. As mentioned by one woman:

> *"As a result of expensive travel and accommodation costs during my follow-up treatment, I am experiencing financial difficulties. We are almost finishing our savings and I don't know what to do."* (Participant 7)

In the worst cases, few women mentioned that they have borrowed a significant amount of money or sold their belongings to get money to cover the cost of transportation, accommodation, and medical treatment. A woman clearly stated this in the following statement:

> *"Currently it is beyond our capacity to cover the travel and accommodation costs for myself and my husband during the follow-up treatment… we are out of options … my husband sold a cow to cover the cost …"* (Participant 8)

Some women described being sent for investigation outside the hospital to private health institutions, which significantly impacted them financially, as private health institutions are expensive. One of the women stated:

> *"There are times we are required to go to a private health institution for some laboratory service since it is not available here … the service charge is expensive there … it will be perfect if we receive the service here."* (Participant 5)

The women also indicated that the financial burden is also associated with a long waiting period for receiving treatment by staying here in Addis Ababa. They strongly suggested that the government should provide the medical services in their nearby towns. This is indicated in one of the woman's statements:

> *"I believe that the government should have to open the service in other towns which are close to us, our suffering will be reduced."* (Participant 2)

Most women believe that they have to provide for their families, and they can only do this when they are healthy. The fate of their family and their treatment was the main worry for some women because of the financial difficulties they are experiencing. Few of them expressed that they have a strong sense of responsibility to their families, as they are the primary breadwinner in the household.

4.2.3. Summary

The findings of the qualitative study indicated that most women experienced difficulties in psychosocial adjustment as suggested by the themes and subthemes 'lack of satisfaction with health care, 'dealing with treatment side effects, 'relation with family members, 'struggle in work, ‘struggle with daily life, ‘having stress, ‘disruption with social relationship’, and ‘financial difficulties.

The qualitative study depicted that woman employed various strategies to cope with their illness by the identifying the qualitative themes ‘accepting’, ‘religiousness’, ‘follow-up care’, and ‘diverting attention. Another overwhelming point here is the subtheme ‘comparing with others’ where some women compared themselves with someone having worse conditions than them to feel better about their situation.

The initial reaction or stressful appraisal of diagnosis and treatment of cervical cancer is indicated by the subthemes ‘why this happened to me, ‘am I dying soon, ‘confusion’, and ‘hopelessness’ in which most of the women were shocked and not daring to accept being diagnosed with cancer. Besides, patients experience confusion and hopelessness when they know that they have cancer.

The qualitative study revealed participants had very limited awareness and misunderstanding in terms of causal attribution. This was captured in the subtheme ‘punishment from God’, where women attributed the cause of their illness with some wrongdoing in the past and being punished by God. The qualitative analysis revealed a theme ‘delay in seeking health care, which is reflected because of lack of awareness about cervical cancer symptoms and repeated practice of religious/traditional rituals.

Regarding personal aspects, in respect of the self-confidence response was a subtheme ‘not be able to deal with’ where more than half of women responded that their situation is challenging and might not be able to deal with it and ‘I have the ability where few believed in their ability gained from experiencing cervical cancer, and they could deal with the situation.

Few of them used to think positively to get back to their everyday life soon. Moreover, few participants highlight the situation women are in, helping them identify and appreciate what is positive in their lives, set priorities in their lives, and appreciate their existence. In addition, few of them have decided to remain engaged with essential life goals.

Concerning environmental situation, the qualitative study also identified the theme ‘uncertain future’, which revealed that women were uncertain about their treatment outcome due to a lack of information related to their illness and treatment. Regarding prognosis, women believe in their cure as a result of the treatment and the efforts made by the health care practitioners. Apart from all these, some women believe that their cure only depends on the will of God. In addition, women described a lack of understanding and misconception regarding cervical cancer in the community they are living in and emphasized that there is a need to increase awareness and change the community’s attitude towards cervical cancer.

The most common responses of experience of social support from family, friends, and significant others were the subthemes ‘family support was significant’, ‘caring husband’, ‘close friends were helpful’, and ‘neighbors support was unbelievable’ in which participants speak of help from friend or neighbors resulted in relieving them from housework related pressure. On the other hand, few of them experienced that both their relatives and close friends tended to avoid them despite their need for care in the subtheme ‘some relatives and friends distanced themselves. It was also reported that women find overwhelming support initially, but the support fades away as time goes.

The results of the qualitative analysis identified a subtheme, ‘the support I need’ in which participants strongly stressed the importance of having information support from health care professionals. They expressed that in their treatment process, help should have to be offered respectfully, and discussion should have to be there about their various concerns so that they can have a successful and trusted health care follow-up. Other support needs identified were the need for support from social services or voluntary organizations for helping them address the economic and psychological difficulties.

CHAPTER FIVE

5. DISCUSSION

This chapter discusses the significant quantitative and qualitative findings of the present study in relation to the research questions, previous research findings, and the study's theoretical framework.

5.1. Description of Antecedents, Cognitive Appraisal, Coping Strategies, and Psychosocial Adjustment

This section discusses findings related to describing women's psychosocial adjustment, coping strategies (problem-focused and emotion-focused), cognitive appraisal, perceived social support, uncertainty, meaning in life, and self-efficacy.

5.1.1. Psychosocial adjustment among women

The findings in both quantitative and qualitative studies, in general, indicate that being diagnosed and receiving follow-up treatment for cervical cancer incurred a psychosocial adjustment difficulty among women.

In the quantitative study, the overall psychosocial adjustment scores suggest that most patients had psychosocial adjustment problems to illness, with the mean being 60.94 (±10.40). Women in this study have higher psychosocial adjustment problems compared with a study done among breast cancer patients in Turkey by Çürük et al. (2020) and in Korea by Jang and Kim (2018), where the mean score was found to be 56.0 (±9.5) and 48.97 (±12.22) respectively. Another study conducted among cancer patients undergoing treatment in Iran found a mean psychosocial adjustment score of 50.1 (±17.18) (Taghadosi et al., 2017). A significant difference in the score might occur as the above studies included breast cancer and all cancer patients while the current study included cervical cancer patients. In addition, the observed variation could be due to the economic differences between the studied population, or people with cultural and value differences may behave differently towards an illness.

The findings of the qualitative study are in parallel with the quantitative study findings, which indicated that most women experienced difficulties in psychosocial adjustment as suggested by the subthemes ‘lack of satisfaction with health care, ‘dealing with treatment side effects, ‘struggle in work and daily life, ‘having stress, ‘disruption in the social relationship’, and ‘financial difficulties. Similar findings had been reported by other qualitative studies in Ethiopia (Kebede & Kebede, 2017; Tadesse, 2015), in Zambia (Ntinga and Maree, 2015), and Nepal (Shrestha et al., 2020) that reported patients experienced physical consequences of the treatment, struggling with the socio-economic impact, distress associated with the side effects, and social stigma related to cervical cancer. Earle et al. (2008) indicated that all patients’ needs could not be met by efforts done only on prolonging treatment and focusing only on survival. This suggests that integrating psychological and social services with medical care is essential to help women experience better psychosocial adjustment.

In the quantitative study, patients had psychosocial adjustment difficulties with the health care orientation component. The qualitative finding also indicated that even though women hoped that the treatment they were receiving was helping them, most of them were not satisfied with their healthcare experiences, suggested by the subthemes ‘lack of satisfaction with health care and ‘dealing with treatment side effects. Participants describe a long waiting period, and they did not get appropriate information, inadequate counseling, and emotional support regarding their illness, treatment, and side effects. In addition, it was also reported that the follow-up treatment lacked intimacy and proper communication from the health care personnel. Because of the reasons above, women could lack satisfaction with the follow-up treatment, leading to adjustment difficulties.

Previous studies conducted in TASH indicated that cancer patients are experiencing long waiting times to get curative treatment (Rick et al., 2019; Tadesse, 2015), repeated service interruption (Haileselassie, Mulugeta, Tigeneh, Kaba, & Labisso, 2019), and communication challenges between patients and health care professionals (Kebede et al., 2020; Sibeoni et al., 2018). After the diagnosis, patients need information that is valuable in helping them to differentiate and clear out between rumors and reality regarding their illness and the treatment. This could be why the qualitative participants considered information and advice from health care professionals as the most crucial support they need. Therefore, service providers should have empathy and openly communicate with patients in addressing their concerns which may enhance the relationship between the two and satisfaction with the service.

The presence of greater adjustment difficulties in domestic, vocational, social environment, and psychological distress in the quantitative study are further supported by the identification of the qualitative themes ‘struggle with daily life situation’, ‘struggle in work’, ‘disruption in the social relationships’, and ‘having stress’ because of cancer and side effects of the treatment. Similar findings in Ethiopia had reported that treatment-related side effects could lead to such difficulties among cancer patients (Nugusse et al., 2021; Tadesse et al., 2018). Studies abroad among cervical cancer patients also found similar findings (Khalil et al., 2015; Thapa et al., 2018; Pfaendler et al., 2015). Habinshuti et al. (2020) indicated that such side effects and complications need proper care and follow-up. This indicates that cervical cancer affects patients' physical health and the psychological and social health aspects, and thus, the follow-up treatment needs to focus on restoring the patients' overall health.

In the current study, 'financial difficulties' are identified via theme analysis as adjustment difficulties experienced because of the illness and treatment. The cost of long-distance travel, accommodation and laboratory fees in private health institutions were reported as expensive. Similarly, studies by Hailu and Mariam (2013) and Tadesse (2015) found out that cervical cancer resulted in a substantial financial problem on patients resulting in an inability of bearing costs related to treatment and accommodation. Similar **s**tudies conducted among other types of cancer patients showed that numerous patients are exposed to high healthcare spending with considerable medical and transportation costs (Bona et al., 2021; Hassen et al., 2019; Kasahun et al., 2020). This might result from limited physical access to cervical cancer treatment facilities and impaired productivity of patients due to their illness. This calls for expansion of service to regional towns, provision of support services such as transportation reimbursement, and health insurance scheme to the poorest patients may address the financial burden.

5.1.2. Coping strategies

The quantitative and qualitative study depicted that woman employed various strategies to cope with their illness and treatment. The quantitative study identified that patients were inclined to utilize both problem-focused and emotion-focused coping strategies. According to Lashbrook et al. (2018), individuals with cancer could use diverse coping mechanisms concurrently and at different times to cope with the difficulties they experienced. A similar finding had been reported from a study among breast cancer patients where patients used both problem-focused and emotion-focused coping (Oancea et al., 2018; Pan et al., 2019). According to Stephenson et al. (2021), problem-focused coping represents strategies to manage a stressful situation, while emotional-focused coping describes strategies used to regulate emotions caused by an event or condition.

The result revealed that patients in this study utilized more emotion-focused coping strategies than problem-focused coping strategies. This indicates that patients perceive that the diagnosis of cervical cancer and its treatment is something that must be endured as opposed to fixed or altered (Lazarus & Folkman's, 1984). Contrary findings had been reported in a study in Turkey (Tuncy, 2014) and Thailand (Anusasananun et al. 2013), where cancer patients applied more problem-focused coping strategies. These discrepancies could result from patients' differences in background, type of cancer, and stage of cancer may influence the coping methods that patients choose to use.

The use of a variety of coping strategies is further supported by the identification of the qualitative themes 'accepting', 'religiousness', 'follow-up care', and 'diverting attention. Similar results had been reported from studies abroad. For instance, a study conducted in Egypt reported that 'acceptance', 'religious' and 'emotional support' were used by many women (Elsheshtawy et al., 2014). Other studies among cancer patients also informed the use of coping strategies including 'acceptance', 'self-control', 'positive reframing', 'wishful thinking' was employed by the majority (Aguado et al., 2013; Paterson, Jones, Rattray, & Lauder, 2013).

Engaging in religious practices like praying, reading holy books, participating in religious ceremonies was expected by the women so that their illness would not get worse and get cured soon. These practices also resulted as a source of strength and lifting their feeling. In line with the findings of this study, previous qualitative studies reported women with cancer attended church, prayed for healing, visited worship centers, and asked God for strength in Ghana (Iddrisu, Aziato, & Dedey, 2019), Singapore (Devi & Foy, 2019), and the USA (Lynn, Yoo, & Levine, 2014). This indicates having faith in their religion was an important aspect of coping strategies used by cancer patients.

The other finding worth mentioning here is the subtheme ‘comparing with others’ where some women compared themselves with someone having worse conditions than them to feel better about their situation. For example, those women with active mobility compared themselves with those bedridden and felt better. A similar finding had been reported from a study among cancer patients in Ghana (Iddrisu et al. 2019), in the USA (Bouchard et al. 2019), and UK (Starkings, Jenkins, and Shilling, 2019), where patients felt better when comparing themselves to someone facing other serious illness or died as a result of their illness. According to Armaou, Schumacher, and Grunfeld (2018), ‘downward comparison’ is beneficial as individuals comparing themselves to people who are not doing as well as themselves may experience an increased feeling of wellbeing. Thus, helping patients to appreciate what was positive in their life could enable them to cope better with their illness.

5.1.3. Cognitive appraisal

In the quantitative study, respondents had a high amount of harm/loss and threat appraisal and a low amount of challenge appraisal. This adverse reaction indicates that women primarily appraised the illness and treatment as harm/loss, threat, or challenge (Lazarus & Folkman, 1984). Likewise, in a study among breast cancer patients (Bigatti et al. 2012), it was found that respondents had a higher appraisal score of harm/loss. Thus, in this study, being diagnosed with cervical cancer and receiving follow-up treatment was likely resulting in a decision by women that the diagnosis and treatment of cervical cancer are stressful.

The stressful appraisal of diagnosis and treatment of cervical cancer in the quantitative study is further supported by the qualitative study subthemes ‘why this happened to me, ‘am I dying soon, ‘confusion’, and ‘hopelessness’ in which most of the women were shocked and not daring to accept being diagnosed with cervical cancer. In addition, most of them associated cancer as an incurable illness that leads to immediate death. Similar findings were reported from previous studies in Ethiopia. For example, a qualitative study done by Kaba et al. (2021) found that patients experienced feelings of confusion, anxiety, and fear during a cancer diagnosis. Previous research in Kenya indicated that fear of death was the commonest reaction to the diagnosis of cervical cancer (Nugutu & Nyamongo, 2015). The result of the qualitative thematic analysis also added insight into the participant’s need for proper counseling during disclosure of diagnosis results.

In terms of causal attribution, the qualitative study revealed participants had very limited awareness and misunderstanding. This was captured in the subtheme ‘punishment from God’, where women attributed the cause of their illness with some wrongdoing in the past and being punished by God. This had been reported in previous studies. A qualitative study in China revealed that cancer patients attributed the cause of their cancer to sins committed earlier in life (Chen, Liu, Li, & Su, 2017). Likewise, another qualitative study in Palestine found that patients believed the cause of cancer was a test from God (Hammoudeh, Hogan, & Giacaman, 2016). This limited awareness and misunderstanding among the respondents could also be found in the community. This could be another way to stigmatize cancer, resulting in women covering up their illness.

The qualitative analysis also revealed a theme 'delay in seeking health care, reflecting a lack of awareness about cervical cancer symptoms and repeated practice of religious/traditional rituals. Similar to these findings, previous studies among cervical and other cancer patients in Ethiopia reported a lack of awareness of symptoms (Dereje et al. 2019; Zeleke, Anley, and Kefale, 2019), financial problems (Gebremariam et al. 2019; Hailu and Mariam, 2013), feeling no pain, seeking or reliance on cultural and/or religious treatment (Gebremariam et al. 2019; Koboto et al. 2020**)** were stated as a reason for the delay to seek medical care. These could be one of the main reasons cancer patients present in the advanced/late stage of the disease (75% of respondents in the quantitative study part were diagnosed at stage III cervical cancer). Thus, enhancing cervical cancer awareness campaigns to alleviate knowledge gaps and misconceptions should be considered to help reduce delays in seeking medical care and stigmatization in the community.

5.1.4. Personal and environmental antecedents

5.1.4.1. Self-efficacy

The quantitative study results demonstrated that women had a low level of self-efficacy concerning their inner ability and esteem to deal with their illness difficulties. This was also in line with the qualitative finding subthemes 'not be able to deal with' where more than half of women responded that their situation is very difficult and might not be able to deal with it and 'I have the ability' where few believed in their ability gained from experiencing cervical cancer, and they could deal with the situation. According to Borjalilu et al. (2017), fear about their competency was an important reason people perceived lower self-efficacy. Communication between clinicians and patients is essential for cancer patients perceived self-efficacy. Thus, in the current study low self-efficacy could result as most women in this study found that communication with health care professionals was more difficult, very shallow, directive type, and confusing.

5.1.4.2. Perceived social support

Women in the quantitative study scored a higher level of perceived social support from family and a medium level of perceived social support from friends and significant others. This finding is in line with other studies (Ozdemir & Tas Arslan, 2018; Yağmur & Duman, 2016), where family members are often evaluated as the main source of support. This finding is higher than patients with breast cancer in Pakistan by Ashraf et al. (2018) where perceived social support scores from family, friends, and significant others were low. The finding scores on perceived social support from family, friends, and significant others were lower than a study conducted among breast cancer patients in Ethiopia (Wondimagegnehu et al., 2019). The difference in the findings could be attributed to the types of illnesses investigated and the timing of survivorship.

The higher score of perceived social support from family in the quantitative study is in line with the qualitative result subthemes ‘family support was significant’ and ‘caring husband’ where women perceive that the most critical source of support was from family members. The results of the qualitative analysis identified a subtheme ‘the support I need’ in which participants strongly stressed the importance of having information support from health care professionals. Therefore, health care professionals and social workers have to assign adequate time and have a relational tool that enables them to help patients adjust to their illness.

5.1.4.3. Meaning in life

In the quantitative study, women experienced a lower level of presence of meaning in life and a higher level of search of meaning in life in the ideal mean score of the scale. This means that fewer women perceive their lives as significant and purposeful. Moreover, in the qualitative study findings, few participants quote highlights the situation women are in, helping them identify and appreciate what is positive in their lives, set priorities in their lives, and appreciate their existence. In addition, few of them have decided to remain engaged with essential life goals. A study conducted among chronically ill patients indicated a similar finding that many respondents found it challenging to experience meaning in life (Dezutter et al., 2013). Thus, as indicated in both findings, attention should be given to patients in helping them have meaningfulness in their life.

5.1.4.4. Uncertainty in illness

Findings of the quantitative study had revealed that most of the participants in this study perceived high levels of uncertainty. Coupled with this, the qualitative study further supported the quantitative finding by identifying the theme ‘uncertain future’, which revealed that women were found to be uncertain about their treatment outcome due to a lack of information related to their illness and treatment. A similar finding had been reported from a study among cancer patients in Thailand (Anusasananun et al. 2013) and South Korea (Lee & Park, 2020).

According to Anusasananun et al. (2013), “uncertainty of a situation is often evaluated as stressful because one cannot recognize clearly what is going to occur” (p. 150). In addition, Shaha, Cox, Talman, and Kelly (2008) found out that feelings of uncertainty might present even after completing treatment because of long-term effects and fear of recurrence of cancer. As indicated by Ng, Ong, Jegadeesan, Deng, and Yap (2017), uncertainty can be minimized through the appropriate orientation of patients preceding their treatment by health professionals. In line with this, the results of the qualitative theme also added insight into the necessity for addressing knowledge gaps among cervical cancer patients.

5.2. Sociodemographic and Clinical Variables Influencing Psychosocial Adjustment

5.2.1. Sociodemographic variables influencing psychosocial adjustment

The quantitative analysis indicated that place of residence, age, marital status, and occupational status influenced cervical cancer patients' psychosocial adjustment.

The present study shows that place of residence influenced psychosocial adjustment. Patients who live in urban areas exhibited significantly better psychosocial adjustment than patients who live in rural areas. Similarly, previous studies among patients with cancer in Turkey (Çürük et al., 2020) and in China (Thapa et al., 2018) reported that patients who lived in rural areas were significantly had worse psychosocial adjustment and quality of life. This may be explained by the fact that women in urban areas have increased access to health information through different media and relatively have low barriers due to distance and transportation to a health facility as compared to rural women.

There was a significant difference between the age of the women and their psychosocial adjustment score, and women in the age group of ≥ 65 portrayed better psychosocial adjustment than other groups. This was also reflected in the qualitative analysis, where one of the old women's statements highlights that the condition is expected at her age and trying to adjust. This is again in line with the findings of other studies where older cancer survivors have been found to experience better psychosocial adjustment than younger survivors (Anusasananun et al., 2013; Brunault et al., 2016). In addition, older women having better adjustment might be that they had experience managing the challenging situations in their lives. Thus, service providers need to assess and address young women's unique needs through specific interventions during the follow-up treatment.

This study has found that married patients had a significantly better psychosocial adjustment than patients who were divorced or widowed. These are reflected in the qualitative study finding as captured in the subtheme 'caring husband' where women expressed how their husbands were important in sharing household activities, accompanying them during follow-up treatment helped them deal with their illness stress. Çürük et al. (2020) had reported similar findings in a study where psychosocial adjustment of married cancer patients was significantly better than that of other patients.

The women's occupational status influenced their psychosocial adjustment in the present study. Patients who were housewives reported significantly better psychosocial adjustment. These align with the qualitative study participant's quotes suggesting that they have encountered interference with their ability to do their jobs because of their illness and treatment. In addition, this resulted in creating a problem in their work environment. A local study by Baraki et al. (2020) found that unemployed cancer patients significantly showed a reduced depression level compared to other groups. The finding in the current study may be because housewives may not have job-related strain and may get enough time to take care of themselves, which may be helpful in adjustment.

5.2.2. Clinical markers influencing psychosocial adjustment

The current study found that the time since diagnosis, cancer stage, and treatment type influenced the patient's psychosocial adjustment.

The results in the present study showed that time since diagnosis influenced women's psychosocial adjustment. Patients diagnosed in less than six months reported fewer psychosocial adjustment difficulties than those with a more extended period of diagnosis. However, previous studies found no association between time since diagnosis and psychosocial adjustment (Rizalar et al., 2014; Ashraf et al., 2018; Çürük et al., 2020). A possible explanation could be that these patients are at the beginning of the treatment phase, not yet experienced the difficulties related to prolonged treatment schedule and treatment side effects. This result indicates that patients in the prolonged treatment schedule and treatment side effects require more care for adjusting to their situation.

In this study, the cervical cancer stage influenced psychosocial adjustment. Patients who had stage-I cervical cancer had fewer psychosocial adjustment difficulties than patients who had stage II or III cancer. This finding is consistent with previous studies among cervical cancer patients in Ghana (Kyei et al. 2020) and Malaysia (Azmawati, Najibah, Hatta, and Norfazilah, 2014) revealed that early staged cancer patients described better wellbeing than patients who had a late stage of cancer. A possible explanation is that patients who present at the late cervical cancer stage might have established further severe symptoms that could affect the adjustment process.

In the present study, the type of treatment received influenced psychosocial adjustment, and patients treated with surgery had fewer psychosocial adjustment difficulties than patients who received radiotherapy or combination treatment. Previous studies have identified that surgery has been linked with improved function and well-being in cervical cancer patients (Kyei et al., 2020) and other types of cancer patients (Tadesse et al., 2018). This result may be related to surgical treatment might have given women a sense of being cured and relieved them from experiencing side effects related to the treatment.

5.3. Association among Antecedents, Cognitive Appraisal, Coping Strategies, and Psychosocial Adjustment

5.3.1. Predictors of psychosocial adjustment

This study results of the hierarchical multiple regression analysis revealed that the variables self-efficacy, uncertainty, meaning in life (presence), harm/loss appraisal, challenge appraisal, problem-focused coping strategies, and emotion-focused coping strategies predicted overall psychosocial adjustment.

The present study results showed that women with a high level of self-efficacy have fewer psychosocial adjustment difficulties. The qualitative finding also revealed that the participants who believed in their inner ability and esteem helped them deal with their illness difficulties. The present study's findings follow previous research that revealed perceived self-efficacy positively influences psychosocial adjustment (Rottmann et al., 2010; Shelby et al., 2014). Similarly, it was also reported by Lazarus and Folkman (1984) that high levels of perceived control are associated with more favorable psychological adjustment. This calls for health care service providers to increase the self-confidence of cervical cancer patients, which might enable them for a better psychosocial adjustment experience.

The current study results showed that women who had experienced the presence of meaning in life have fewer psychosocial adjustment difficulties. The qualitative finding also revealed that having sense in life has helped women have a positive attitude about their existence and have future goals in their life. This study confirmed previous research that reported the presence of meaning in life as a potential predictor of better well-being among individuals suffering from chronic disease (Dezutter et al., 2013; Sherman & Simonton, 2012; Steger, 2012). This calls for the need to have intervention during the follow-up treatment schedule on helping patients to develop meaning in their life that will be helpful to facilitate adjustment with their situation.

In the present study, uncertainty regarding the treatment outcome or the future predicted a great psychosocial adjustment difficulty, and these are reflected in qualitative study participants' statements. Living with uncertainty because of not knowing the characteristics of their illness and treatment leads them to repeated difficulty with their everyday lives. In line with this, previous studies reported that increased uncertainty adversely affects cancer patients' adjustment or quality of life (Eisenberg et al., 2015; Sammarco, 2009; Sammarco & Konecny, 2008). Therefore, assessing uncertainty and providing appropriate information will be helpful for patients to have better adjustment throughout the follow-up treatment.

The quantitative finding showed that cognitive appraisal of harm/loss, a challenge among women predicted psychosocial adjustment difficulties. Similar to the present study's findings, the study among patients with cancer by Mazanec et al. (2011) reported that cognitive appraisal of threat, harm/loss among cancer patients was significantly associated with poor adjustment. Chan et al. (2012) asserted that cognitive appraisal is an important predictor of quality of life in the dialysis population. Similarly, Herrero et al. (2008) reported that the use of cognitive appraisal of harm predicted higher anxiety levels. Thus, to help improve patients' psychosocial adjustment, activities targeted at reducing stress appraisal might be helpful.

This study associated emotion-focused coping strategies with greater psychosocial adjustment difficulties. The finding reflects the theoretical works that suggested emotion-focused coping strategies were related to poorer psychosocial adjustment (Lazarus & Folkman, 1984). Similarly, a study among cancer patients reported a higher emotion-focused coping was related to lower quality of life (Shakeri et al., 2015; Pan et al., 2019; Yahaya et al., 2015), lower psychological and social wellbeing (Tuncay, 2014), and decreased functional status (Khalili et al., 2013). This indicates a need for reducing the use of emotion-focused coping strategies so that women might have better psychosocial adjustment.

However, in the current study, problem-focused coping strategies were significantly associated with lower psychosocial adjustment difficulties. Similar to this finding, problem-focused coping strategies were a significant predictor of physical well-being (Tuncay, 2014) and functional well-being (Maleknia & Kahrazei, 2015). Contrary to the present study's findings, no significant association was reported between problem-focused coping and quality of life (Khalili et al., 2013; Shakeri et al., 2015) in cancer patients. The difference in findings might be attributed to the measurement used or type of cancer and stage examined.

From the findings of the present study, it was depicted that antecedent component (self-efficacy, meaning in life (presence), and uncertainty), cognitive appraisal (harm/loss, challenge appraisal), and coping strategy (emotion-focused coping strategy and problem-focused coping strategy) are important predictors of psychosocial adjustment. These findings follow the suggestions made by Lazarus and Folkman's (1984) theory of stress, appraisal, and coping.

5.3.2. Predictors of coping strategies

This study found that self-efficacy, meaning in life (presence), perceived social support from a friend, and significant others significantly predict the use of emotion-focused coping strategies. Whereas self-efficacy, uncertainty, meaning in life (presence), meaning in life (search), perceived social support from family, and challenge appraisal significantly predict problem-focused coping strategies.

In the present study, challenge appraisal was a significant predictor of a problem-focused coping strategy. This fact is consistent with the Lazarus and Folkman (1984) theory that persons are more likely to use problem-focused coping in conditions appraised as a challenge. On the contrary, the cognitive appraisal was not a significant predictor of emotion-focused coping strategy. This result indicated the Lazarus and Folkman (1984) view of coping as contextual influenced by cognitive appraisal of the actual difficulties in the encounter and resources for managing them.

The present study revealed that self-efficacy significantly predicted both problems-focused coping strategies and emotion-focused coping strategies. This indicates the higher professed self-efficacy women have, and they adopt various coping strategies to manage the impact of cervical cancer diagnosis and treatment imposed on psychosocial adjustment. This finding supports the statement by Hoffman et al. (2013) that indicated, "General self-efficacy may increase flexibility and creativity in identifying coping strategies effective for dealing with cancer" (p. 254).

In this study, women with higher perceived self-efficacy predicted more use of problem-focused coping strategies than emotion-focused coping strategies. Badana et al. (2019) revealed a significant and direct association among self-efficacy and coping styles (emotion-focused and problem-focused) in women with breast cancer. It would be of value to understand patients' self-efficacy in helping them experience appropriate coping strategies.

The present study found that uncertainty predicted a reduced use of problem-focused coping strategies. This indicates a woman with a high level of uncertainty will have impaired use of problem-focused coping strategies. Lazarus and Folkman (1984) evidenced that illness uncertainty hinders patients' coping strategies. Similarly, a study among individuals with chronic illness by Vilhena et al. (2014) revealed that the lower level of uncertainty predicted the higher use of the active coping mechanisms. Therefore, it is essential to minimize uncertainty regarding treatment or the future to help patients experience efficient use of coping strategies.

However, though there is a direct effect in this study, uncertainty did not predict emotion-focused coping strategies. Contrary to these findings, the study on breast cancer patients by Anusasananun et al. (2013) found that high levels of uncertainty significantly positively correlated with emotion-focused coping. The difference might have resulted as common coping approaches were not included in measuring emotion-focused coping and the difference in phase of cancer survivorship.

The result indicates that perceived social support from family predicted using problem-focused coping strategy, while perceived social support from friends and significant others predicted using an emotion-focused coping strategy. Previous studies also reported higher social support level was significantly correlated with higher scores of problem-focused and emotion-focused copings (Long et al., 2020; Roohafza et al., 2014). This demonstrates that women with higher perceived social support found it easier to use several coping strategies to manage the strain. The finding confirmed the idea of Lazarus & Folkman (1984) that perceived high social support helped handle both the root cause of the stress and regulating emotional stress.

From the findings of the current study, it was depicted that antecedent component (self-efficacy, uncertainty, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others), and cognitive appraisal (challenge appraisal) are essential predictors of coping strategy (problem-focused coping strategy and emotion-focused coping strategy). These findings agree with the suggestions made by Lazarus and Folkman's (1984) theory of stress, appraisal, and coping.

5.3.3. Predictors of cognitive appraisal

In this study, antecedents (uncertainty and meaning in life (presence)) predicted harm/loss appraisal, antecedents (uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family) predicted challenge appraisal, and antecedents (uncertainty, self-efficacy, and meaning in life (presence)) predicted threat appraisal.

In this study, self-efficacy had predicted challenge and threat appraisal. This finding was consistent with previous theoretical works of Lazarus and Folkman (1984), which support this finding. The current study's findings revealed that perceived social support predicted cognitive appraisal. Those women who perceived having high social support from family tend to appraise their condition as a challenge. Similarly, a study by Ben-Ezra, Hamama-Raz, Palgi, and Palgi (2015) revealed that perceived social support reduces harm/loss appraisal of illness.

In the present study, uncertainty was found to be a predictor of cognitive appraisal, and this means that uncertainty in illness was found to trigger appraisal components. Following this finding, a study by Anusasananun et al. (2013) among patients with breast cancer revealed that uncertainty of illness is associated with harm and threat appraisals.

The present study's findings showed that antecedent components are important predictors of cognitive appraisal. These findings are in line with the propositions made by Lazarus and Folkman's (1984) theory of stress, appraisal, and coping.

5.4. Mediating Role of Cognitive Appraisals and Coping Strategies on the Association Between Antecedents and Psychosocial Adjustment

This study employed a multiple-mediation analysis involving mediators (cognitive appraisal and coping strategies) to assess the association between antecedents (uncertainty, self-efficacy, and meaning in life) and psychosocial adjustment.

The results of total mediation analysis revealed that challenge appraisal and problem-focused coping strategies fully mediated the association between self-efficacy and psychosocial adjustment (health care). In addition, challenge appraisal and problem-focused coping strategies partially mediated the association between uncertainty and psychosocial adjustment (health care). On the other hand, challenge appraisal and problem-focused coping strategies do not mediate the association between meaning in life (presence) and psychosocial adjustment (health care).

Generally, the SEM-Path analysis tested in this study is consistent with the proposition made by Lazarus and Folkman's TSAC because they had depicted that cognitive appraisal and coping strategies used by cervical cancer patients mediated the association between antecedents and psychosocial adjustment. However, some of the estimated mediating parameters in the analysis did not attain statistical significance in mediating the association between women's causal antecedents and the psychosocial adjustment component they have undergone. This study's application of Lazarus and Folkman's TSAC was only partially supported.

Previous studies that used Lazarus and Folkman's (1984) theory of stress, appraisal, and coping to test the mediation role of cognitive appraisal and coping strategies found mixed results. Some studies found a similar result with the present study. For example, Thiruchelvi and Supriyain (2012) study partially supported the model. They found that only one of the coping strategies (coping self-statement) mediated the relationship between locus of control and wellbeing.

On the other hand, contrary to the present study's findings and the proposition made by Lazarus and Folkman were reported. A study by Song et al. (2016) on prostate cancer patients examined the association between patient's and spouse's appraisal, perceived dyadic communication, and quality of life. They found no mediation effect. Another study by Akker et al. (2016) found that coping styles did not mediate the relationship between multiple sclerosis-related fatigue, appraisal, and societal participation.

The possible explanation for the inconsistent findings of the present study and the findings in other studies could be the measures used to examine antecedents, cognitive appraisal, coping strategies, and psychosocial adjustment. Therefore, subsequent research might attempt to replicate these findings or further investigate to provide compelling evidence regarding the theoretically predicted mediating role of cognitive appraisal and coping strategies on the association between antecedents and psychosocial adjustment of Lazarus and Folkman's (1984) TSAC.

In general, this study revealed essential findings regarding antecedents, appraisal, coping strategies, and psychosocial adjustment issues among cervical cancer patients. In doing this, it has its strength and limitations. One of the strengths is that the use of mixed-methods contributed to a more comprehensive understanding of antecedents, appraisal, coping strategies, and psychosocial adjustment among women with cervical cancer. In addition, the use of path analysis modeling helped better examine and understand the total mediating effects of both appraisal and coping strategies components in the relationship between antecedents and psychosocial adjustment components. Moreover, an adequate sample of women was included in the study. This study also has its limitation in that its cross-sectional nature does not allow for the observation of changes in psychosocial adjustment over time. The women’s recall of data on their appraisal during the diagnosis may be limited.

CHAPTER SIX

6. CONCLUSION AND IMPLICATION FOR SOCIAL WORK AND SOCIAL DEVELOPMENT

6.1. Conclusion

In this study, women were found to have experienced significantly greater psychosocial adjustment difficulties. They have undergone difficulties in health care orientation, lack of satisfaction with the health care experience, dealing with treatment side effects, struggle in work and daily life, stress, disruption in social relationships, and financial difficulties incurred because of their illness and treatment.

A variety of coping strategies employed by women were documented in this study. The result revealed that women in this study utilized both emotion-focused and problem-focused coping strategies. Moreover, the women also used religiousness, accepting, adhering to follow-up care, diverting attention, and comparing with others as a coping strategy.

Regarding appraisal, women were found to appraise their illness negatively and had a strong emotional reaction as soon as they heard their cervical cancer diagnosis. Respondents had a high amount of harm/loss and threat appraisal and a low amount of challenge appraisal. Most women have limited awareness and misunderstanding regarding their illness (issues related to cause, symptoms, and treatments). The fact that women appraised their illness negatively and misconception regarding the illness by themselves and the community leads to utilizing traditional/religious practices, delay in seeking medical care, and experiencing stigma in the community.

In this study, the levels of self-efficacy were found to be lower in which women responded that their situation is very difficult and might not be able to deal with it. Uncertainty was significantly higher, which revealed that women were uncertain about their treatment outcome due to a lack of information related to their illness and treatment. Women have also troubled to experience meaning in life, and only a few have decided to remain engaged with important life goals. The overall perceived social support was found to be moderate, and the most important perceived source was the family. Information and advice from health care professionals were the most crucial support need identified.

In terms of differences based on sociodemographic variables, it is concluded that: patients who live in urban areas exhibited significantly less psychosocial adjustment difficulties compared to patients who live in rural areas; older women showed less psychosocial adjustment difficulties in comparison to younger groups; married women had less psychosocial adjustment difficulties in comparison to those who are divorced/widowed; housewives also had less psychosocial adjustment difficulties.

Regarding the differences based on clinical markers, it is concluded that: women who were diagnosed less than six months had fewer psychosocial adjustment difficulties compared to those with a longer period; women who had stage I cervical cancer reported significantly fewer psychosocial adjustment difficulties in comparison to patients who had advanced stage; women who underwent surgery reported significantly less psychosocial adjustment difficulties in comparison to women who have received other type of treatment.

In line with the TSAC, a high level of self-efficacy, presence of meaning in life, and problem-focused coping strategies were found to have lower psychosocial adjustment difficulties. High-level uncertainty, harm/loss appraisal, challenge appraisal, and emotion-focused coping strategies were associated with more significant psychosocial adjustment difficulties. From these findings, it can be concluded that developing intervention should base on identifying the variables that should be targeted to promote psychosocial adjustment among women with cervical cancer.

In this study, cognitive appraisal (challenge) and coping strategies (problem-focused coping strategies) used by cervical cancer patients mediated the association between antecedents (self-efficacy and uncertainty) and psychosocial adjustment (health care). In addition, antecedents directly influenced psychosocial adjustment. Thus, the personal and environmental antecedents might together influence how women appraise and how women cope, and consequently how they adjust with diagnosis and treatment of cervical cancer. This finding complements the soundness of the TSAC in studying/better understanding psychosocial adjustment among cervical cancer patients.

6.2. Implication for Social Work and Social Development

6.2.1. Implication for Policy (MOH-E, RHB)

- The present study's findings depict that cervical cancer patients' psychosocial adjustment results from a complex interplay of clinical, personal, psychological, and social spheres. Therefore, holistic care intervention strategies that integrate psychosocial services with medical treatment should be considered to help women experience better psychosocial adjustment.
- The current study found that cervical cancer patients had severe financial difficulties related to the cost of long-distance travel, accommodation, laboratory fees in private

health institutions, and long waiting periods to get treatment. Thus, expanding diagnostic and treatment facilities to regional towns should be considered to help women access timely and cost-effective care. In addition, provision of support services (such as transportation reimbursement) and health insurance schemes to the poorest patients to address the financial burden should be considered.

6.2.2. Implication for Practice (TASH, NGOs, HCP, and SWs)

- In this study, high-level uncertainty, harm/loss, challenge appraisal, and emotion-focused coping strategies were associated with more significant psychosocial adjustment difficulties. Thus, interventions designed should be aimed at reducing the uncertainty, harm/loss, challenge appraisal, and use of emotion-focused coping strategies among cervical cancer patients.
- In this study, a high level of self-efficacy, presence of meaning in life, and problem-focused coping strategies were associated with lower psychosocial adjustment difficulties. Hence, interventions designed should be aimed at enhancing self-efficacy, helping patients have meaningfulness in their life and using problem-focused coping strategies, as they are likely to be very effective in promoting better psychosocial adjustment.
- The present study's findings indicated that young women experienced more psychosocial adjustment difficulties. Thus, service providers should assess and address young women's unique needs through specific interventions during the follow-up treatment.
- The study shows that most women were not satisfied with their health care experience. They consider information and advice from a health care professional as the essential support they need. Therefore, service providers should have empathy and openly

communicate with patients in addressing their concerns which may enhance the relationship between the two and satisfaction with the service.

- The findings indicated that most women have limited awareness and misunderstanding regarding their illness. The fact that women appraised their illness negatively and misconception regarding the illness by themselves and the community, leads to utilizing traditional or religious practices, delay in seeking medical care, and experiencing stigma in the community. Thus, enhancing cervical cancer awareness campaigns to alleviate knowledge gaps and misconceptions should help reduce delays in seeking medical care and stigmatization in the community.
- TASH Oncology Center is a well-suited practical setting for social work students. Placing students in a field placement at TASH Oncology Center could create an opportunity for social work students to practice the biopsychosocial approach to address the needs of cervical cancer patients. This can also help students develop the required practical skills and competencies.
- The findings of this study give insight into the need for an interdisciplinary approach between health and social work professionals in supporting the patient and family through understanding the potential implications of cervical cancer diagnosis and treatment, creating and implementing systematic psychosocial support interventions based on women's needs.

6.2.3. Implication for Education

- The use of Lazarus and Folkman's theory of stress, appraisal, and coping in this study can increase students' knowledge of the concepts of appraisal, coping, and psychosocial adjustment in the context of cervical cancer.

- The findings of this study can equip students with new information regarding antecedents, appraisal, coping, and psychosocial adjustment among cervical cancer patients in the Ethiopian context.
- The findings of this study can enhance students understanding of how the personal and environmental antecedents might together influence how women appraise and how women cope, and consequently how they adjust with diagnosis and treatment of cervical cancer.
- This dissertation can give insight into designing a course in the BSW and MSW curricula or specialization program in Oncology Social Work.

6.2.4. Implication for Research

- Longitudinal studies are needed in the future to obtain a complete picture of the patterns or changes of psychosocial adjustment and the determinants over time.
- The mediation analysis tested can be modified by including other variables not addressed in this study to explain the remaining variance of women's psychosocial adjustment.
- Further studies could examine antecedents, appraisal, coping, and psychosocial adjustment experiences in a different sample, including women during post-diagnosis waiting for treatment or those who completed treatment.
- The interventional design could be employed to examine the effects of interventions on predicted variables that affect/enhance psychosocial adjustment among women identified in this study.

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Appendices

Appendix I: Information Sheet for Quantitative Data Collection

Research Title: "Antecedents, Appraisal, Coping Strategies and Psychosocial Adjustment Among Cervical Cancer Patients in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia: A Mixed-Method Study"

Investigator:

- Mr. Anteneh Dirar. PhD student, School of Social Work, AAU

Advisors:

- Dr. Wubegzier Mekonen. Associate Professor, School of Public Health, AAU
- Dr. Zena Berhanu. Assistant Professor, School of Social Work, AAU

Introduction

Good morning/afternoon! My name is ________________. I am collecting data for research conducted by Anteneh Dirar for his partial fulfilment of the requirements for PhD degree in social work and social development. Hence, you are kindly invited to take part in this research project. But before you do so, I will explain for you why the research is being conducted and how it is going to be conducted.

Purpose of the research

The purpose of this study is to assess the antecedents, appraisal, coping strategies and psychosocial adjustment among cervical cancer patients in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia.

Procedures

You are among the 303 cervical cancer patients selected by chance for this study. I will ask you few questions concerning some socio-demographic, clinical markers, social support, self-efficacy, uncertainty, cognitive appraisal, coping strategies, and psychosocial adjustment. The interview will take about 45-60 minutes. So, I request your volunteer participation.

Risks and discomfort

There is no harm because of your participation in the study. There might be slight discomfort to share some of your experiences as a result of your illness. However, we do not wish this to happen and you may refuse to answer any of the questions if you feel uncomfortable. In addition, the research may help you in accessing suitable support systems if required.

Benefits

There will be no direct benefit to you, but based on the information you provide us, we will design strategies to improve the interventions targeted to psychosocial adjustment so as to improve the health outcomes and adherence to therapy.

Confidentiality

The information that we collect in this study will be kept confidential. Your name will not be written in this form and the information we collect from you will not be shown to anyone. Similarly, codes will be used so that your identity will be invisible for a causal reader of the research report. The hard copies will also be kept in a locked cabinet and will not be revealed to anyone, except the investigators.

Right to refuse or withdraw

You can refuse to answer any question to which you are not comfortable. You may stop participating in the interview at any time if not convenient for you without losing any of your rights as a participant. However, your active participation and genuine responses have paramount importance in improving cervical cancer patient’s health services in future.

Dissemination of the research findings

In this study aggregate results will be reported and you will not be responsible for whatever result the study comes up with. The results of this study will form the basis for preparation of reports, academic publications, conference papers and other scientific publications. At the same time, efforts will be exerted to provide feedbacks to relevant policy makers.

Appendix II: Consent Form for Quantitative Data Collection

With due understanding of the aforementioned information, are you willing to participate in the study?

Yes ☐ (tick and proceeded) No ☐ (tick and terminate the interview)

I have been requested to take part in the research and the foregoing information has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to participate in this study and understand that I have the right to withdraw from the interview at any time without in anyway affecting my right to use the health services.

Signature/finger print of the participant

Signature/finger print _________________ date ________________
(Proceed with the interview)

Signature of the interviewer

Signature _________________ date ________________

Signature of the supervisor

Signature _________________ date ________________

In case if you need further clarification, you can communicate the principal investigator Anteneh Dirar through the telephone number: +251-0911-06-03-78.
In case if you have any questions about your rights as a study participant, or if you feel you have not been treated fairly, please contact Dr. Mesele Mengisteab, Head of the School of Social Work through the telephone number: +251-0911-44-58-70.

Appendix III: Quantitative Data Collection Tools

Section 1: <u>Socio-demographic Information</u>

Q#	Questions	Response Category
1.	Place of Residence	1. Urban 2. Rural
2.	How far is your home from this hospital	_______________ Km
3.	How long does it take to come to this hospital?	_______________ Hr.
4.	How old are you now?	_________ Years
5.	What is your marital status now?	1. Single 2. Married/in Union 3. Divorced 4. Widowed
6.	What is your level of education?	1. Illiterate 2. Read/Write 3. Primary (Grade 1-8) 4. Secondary (Grade 9-12) 5. Grade 12+
7.	What is your current occupation?	1. House wife 2. Government employee 3. Self employed 4. Unemployed 5. Other Specify ___________________

8.	What is your average monthly household income?	______________ Birr
9.	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	1. Yes 2. No If No >>> Section 2
10.	How many children do you have?	___________
11.	How many children live with you?	___________

Section 2: <u>Clinical Marker</u> (Filled from Patient Card)

Q#	Questions	Response Category
12.	Time passed since diagnosed with cervical cancer?	1. Less than six months 2. Six to twelve months 3. Thirteen to eighteen months 4. Nineteen to twenty-four months
13.	What is the stage of the disease?	1. Stage-I 2. Stage-II 3. Stage-III
14.	What type of treatment received to date? (Multiple answers are possible)	1. Surgery 2. Chemotherapy 3. Radiotherapy
15.	Any other disease than cervical cancer?	1. Yes 2. No If No >>> Section 3
16.	If yes to Q. 15, what other type of disease the patient has currently?	___________, ____________, __________

Section 4: **Ways of Coping (Revised) Questionnaire (WC-R)** (Folkman & Lazarus, 1985)

Instructions: Identify a stressful encounter that occurred recently, where it took place and what happened. Next, listen each item below and indicate, by using the following rating scale, to what extent you used it in the situation you have just described.				
	Not used	**Used somewhat**	**Used quite a bit**	**Used a great deal**
18. Just concentrated on what I had to do next – the next step.	0	1	2	3
19. I tried to analyze the problem in order to understand it better.	0	1	2	3
20. Turned to work or substitute activity to take my mind off things.	0	1	2	3
21. I felt that time would make a difference – the only thing to do was to wait.	0	1	2	3
22. Bargained or compromised to get something positive from the situation.	0	1	2	3
23. I did something which I didn't think would work, but at least I was doing something.	0	1	2	3
24. Tried to get the person responsible to change his or her mind.	0	1	2	3
25. Talked to someone to find out more about the situation.	0	1	2	3

26. Criticized or lectured myself.	0	1	2	3
27. Tried not to burn my bridges, but leave things open somewhat.	0	1	2	3
28. Hoped a miracle would happen.	0	1	2	3
29. Went along with fate; sometimes I just have bad luck.	0	1	2	3
30. Went on as if nothing had happened.	0	1	2	3
31. I tried to keep my feelings to myself.	0	1	2	3
32. Looked for the silver lining, so to speak; tried to look on the bright side of things.	0	1	2	3
33. Slept more than usual.	0	1	2	3
34. I expressed anger to the person(s) who caused the problem.	0	1	2	3
35. Accepted sympathy and understanding from someone.	0	1	2	3
36. I told myself things that helped me to feel better.	0	1	2	3
37. I was inspired to do something creative.	0	1	2	3
38. Tried to forget the whole thing.	0	1	2	3
39. I got professional help.	0	1	2	3
40. Changed or grew as a person in a good way.	0	1	2	3

41. I waited to see what would happen before doing anything.	0	1	2	3
42. I apologized or did something to make up.	0	1	2	3
43. I made a plan of action and followed it.	0	1	2	3
44. I accepted the next best thing to what I wanted.	0	1	2	3
45. I let my feelings out somehow.	0	1	2	3
46. Realized I brought the problem on myself.	0	1	2	3
47. I came out of the experience better than when I went in.	0	1	2	3
48. Talked to someone who could do something concrete about the problem.	0	1	2	3
49. Got away from it for a while; tried to rest or take a vacation.	0	1	2	3
50. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	0	1	2	3
51. Took a big chance or did something very risky.	0	1	2	3
52. I tried not to act too hastily or follow my first hunch.	0	1	2	3
53. Found new faith.	0	1	2	3

54. Maintained my pride and kept a stiff upper lip.	0	1	2	3
55. Rediscovered what is important in life.	0	1	2	3
56. Changed something so things would turn out all right.	0	1	2	3
57. Avoided being with people in general.	0	1	2	3
58. Didn’t let it get to me; refused to think too much about it.	0	1	2	3
59. I asked a relative or friend I respected for advice.	0	1	2	3
60. Kept others from knowing how bad things were.	0	1	2	3
61. Made light of the situation; refused to get too serious about it.	0	1	2	3
62. Talked to someone about how I was feeling.	0	1	2	3
63. Stood my ground and fought for what I wanted.	0	1	2	3
64. Took it out on other people.	0	1	2	3
65. Drew on my past experiences; I was in a similar situation before.	0	1	2	3
66. I knew what had to be done, so I doubled my efforts to make things work.	0	1	2	3

67. Refused to believe that it had happened.	0	1	2	3
68. I made a promise to myself that things would be different next time.	0	1	2	3
69. Came up with a couple of different solutions to the problem.	0	1	2	3
70. Accepted it, since nothing could be done.	0	1	2	3
71. I tried to keep my feelings from interfering with other things too much.	0	1	2	3
72. Wished that I could change what had happened or how I felt.	0	1	2	3
73. I changed something about myself.	0	1	2	3
74. I daydreamed or imagined a better time or place than the one I was in.	0	1	2	3
75. Wished that the situation would go away or somehow be over with.	0	1	2	3
76. Had fantasies or wishes about how things might turn out.	0	1	2	3
77. I prayed.	0	1	2	3
78. I prepared myself for the worst.	0	1	2	3
79. I went over in my mind what I would say or do.	0	1	2	3

80. I thought about how a person I admire would handle this situation and used that as a model.	0	1	2	3
81. I tried to see things from the other person's point of view.	0	1	2	3
82. I reminded myself how much worse things could be.	0	1	2	3
83. I jogged or exercised.	0	1	2	3

Section 5: <u>Cognitive Appraisal of Health Scale (CAHS)</u> (Kessler, 1998)

Instructions: This part consists of 23 statements. Please listen to each statement carefully and respond to each item based on your appraisal of having cervical cancer. There is a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
84. I have not been able to do what I want to do because of cervical cancer	1	2	3	4	5
85. Cervical cancer is frightening to me	1	2	3	4	5
86. Cervical cancer is not stressful to me	1	2	3	4	5
87. Things will only get worse because of this disease	1	2	3	4	5
88. This disease will not go well	1	2	3	4	5
89. cervical cancer has damaged my life	1	2	3	4	5
90. I am able to do what I want despite having cervical cancer	1	2	3	4	5
91. I have lost interest in the things around me	1	2	3	4	5
92. I have had to give up a great deal because of cervical cancer	1	2	3	4	5
93. I can beat this health problem despite the difficulties	1	2	3	4	5
94. I can control what will happen to me	1	2	3	4	5

95. This health problem won't get me down	1	2	3	4	5
96. I have a sense of loss over the things I can no longer do	1	2	3	4	5
97. I feel I can handle this health problem	1	2	3	4	5
98. I have nothing to lose because of cervical cancer	1	2	3	4	5
99. I have a lot to lose because of cervical cancer	1	2	3	4	5
100. I worry about what will happen to me	1	2	3	4	5
101. Relationships with my family and friends have suffered	1	2	3	4	5
102. I have been harmed in some way because of cervical cancer	1	2	3	4	5
103. I do not think much about cervical cancer	1	2	3	4	5
104. Cervical cancer has caused me to learn more about myself	1	2	3	4	5
105. I have been hurt by being diagnosed with cervical cancer	1	2	3	4	5
106. There is a lot I can do to overcome this health problem	1	2	3	4	5

Section 6: <u>Meaning in Life Questionnaire (MIQ)</u> (Steger et al., 2006)

Directions: Please take a moment to think about what makes your life and existence feel important and significant to you. Please remember that these are very subjective questions and that there is no right or wrong answers. Please listen and answer according to the scale below:						
107. I understand my life's meaning.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
108. I am looking for something that makes my life feel meaningful.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
109. I am always looking to find my life's purpose.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
110. My life has a clear sense of purpose.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
111. I have a good sense of what makes my life meaningful.						
1	2	3	4	5	6	7

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	(Neutral)	Somewhat True	Mostly True	Absolutely True
112. I have discovered a satisfying life purpose.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
113. I am always searching for something that makes my life feel significant.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
114. I am seeking a purpose or mission for my life.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
115. My life has no clear purpose.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True
116. I am searching for meaning in my life.						
1 Absolutely Untrue	2 Mostly Untrue	3 Somewhat Untrue	4 (Neutral)	5 Somewhat True	6 Mostly True	7 Absolutely True

Section 7: General Self-Efficacy Scale (GSE) (Schwarzer & Jerusalem, 1995)

	Not at all true	Hardly true	Moderately true	Exactly true
117. I can always manage to solve difficult problems if I try hard enough	1	2	3	4
118. If someone opposes me, I can find the means and ways to get what I want.	1	2	3	4
119. It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
120. I am confident that I could deal efficiently with unexpected events.	1	2	3	4
121. Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
122. I can solve most problems if I invest the necessary effort.	1	2	3	4
123. I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
124. When I am confronted with a problem, I can usually find several solutions.	1	2	3	4

125. If I am in trouble, I can usually think of a solution	1	2	3	4
126. I can usually handle whatever comes my way.	1	2	3	4

Section 8: <u>Mishel Uncertainty in Illness Scale (MUIS) - </u>(Mishel, 1981)

INSTRUCTIONS: Please listen to each statement. Take your time and think about what each statement says. Then chose a statement that most closely measures how you are feeling TODAY. If you agree with a statement, then you would answer either "Strongly Agree" or "Agree." If you disagree with a statement, then answer either "Strongly Disagree" or "Disagree." If you are undecided about how you feel, then answer "Undecided" for that statement. Please respond to every statement.

	Strongly agree	Agree	Undecided	disagree	Strongly disagree
127. I don't know what is wrong with me.	5	4	3	2	1
128. I have a lot of questions without answers.	5	4	3	2	1
129. I am unsure if my illness is getting better or worse.	5	4	3	2	1
130. It is unclear how bad my pain will be.	5	4	3	2	1
131. The explanations they give about my condition seem hazy to me.	5	4	3	2	1
132. The purpose of each treatment is clear to me.	5	4	3	2	1

133. When I have pain, I know what this means about my condition.	5	4	3	2	1
134. I do not know when to expect things will be done to me.	5	4	3	2	1
135. My symptoms continue to change unpredictably.	5	4	3	2	1
136. I understand everything explained to me.	5	4	3	2	1
137. The doctors say things to me that could have many meanings.	5	4	3	2	1
138. I can predict how long my illness will last.	5	4	3	2	1
139. My treatment is too complex to figure out.	5	4	3	2	1
140. It is difficult to know if the treatments or medications I am getting are helping.	5	4	3	2	1
141. There are so many different types of staff; it's unclear who is responsible for what.	5	4	3	2	1

142. Because of the unpredictability of my illness, I cannot plan for the future.	5	4	3	2	1
143. The course of my illness keeps changing. I have good and bad days.	5	4	3	2	1
144. It's vague to me how I will manage my care after I leave the hospital.	5	4	3	2	1
145. I have been given many differing opinions about what is wrong with me.	5	4	3	2	1
146. It is not clear what is going to happen to me.	5	4	3	2	1
147. I usually know if I am going to have a good or bad day.	5	4	3	2	1
148. The results of my tests are inconsistent.	5	4	3	2	1
149. The effectiveness of the treatment is undetermined.	5	4	3	2	1
150. It is difficult to determine how long it will be before I can care for myself.	5	4	3	2	1

151. I can generally predict the course of my illness.	5	4	3	2	1
152. Because if the treatment, what I can do and cannot do keeps changing.	5	4	3	2	1
153. I'm certain they will not find anything else wrong with me.	5	4	3	2	1
154. The treatment I am receiving has a known probability of success.	5	4	3	2	1
155. They have not given me a specific diagnosis.	5	4	3	2	1
156. My physical distress is predictable; I know when it is going to get better or worse.	5	4	3	2	1
157. I can depend on the nurses to be there when I need them.	5	4	3	2	1
158. The seriousness of my illness has been determined.	5	4	3	2	1
159. The doctors and nurses use everyday language so I can understand what they are saying.	5	4	3	2	1

Section 9: <u>Multidimensional Scale of Perceived Social Support (MSPSS)</u> (Zimet et al., 1988)

Instructions: We are interested in how you feel about the following statements. Listen each statement carefully. Indicate how you feel about each statement.						
160. There is a special person who is around when I am in need. (SO)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
161. There is a special person with whom I can share my joys and sorrows. (SO)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
162. My family really tries to help me. (Fam)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
163. I get the emotional help and support I need from my family. (Fam)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree

164. I have a special person who is a real source of comfort to me. (SO)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
165. My friends really try to help me. (Fri)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
166. I can count on my friends when things go wrong. (Fri)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
167. I can talk about my problems with my family. (Fam)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
168. I have friends with whom I can share my joys and sorrows. (Fri)						
1	2	3	4 Neutral	5	6	7

Very Strongly Disagree	Strongly Disagree	Mildly Disagree		Mildly Agree	Strongly Agree	Very Strongly Agree
169. There is a special person in my life who cares about my feelings. (SO)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
170. My family is willing to help me make decisions. (Fam)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree
171. I can talk about my problems with my friends. (Fri)						
1 Very Strongly Disagree	2 Strongly Disagree	3 Mildly Disagree	4 Neutral	5 Mildly Agree	6 Strongly Agree	7 Very Strongly Agree

I have completed my Interview. Thank you for your cooperation!

Appendix IV: Information Sheet for In-depth Interview

Research Title: "Antecedents, Appraisal, Coping Strategies and Psychosocial Adjustment Among Cervical Cancer Patients in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia: A Mixed-Method Study"

Investigator:

- Mr. Anteneh Dirar. PhD student, School of Social Work, AAU

Advisors:

- Dr. Wubegzier Mekonen. Associate Professor, School of Public Health, AAU
- Dr. Zena Berhanu. Assistant Professor, School of Social Work, AAU

Introduction

Good morning/afternoon! My name is Anteneh Dirar. I am collecting data for research for the partial fulfilment of the requirements for PhD degree in social work and social development. Hence, you are kindly invited to take part in this research project. But before you do so, I will explain for you why the research is being conducted and how it is going to be conducted.

Purpose of the research

The purpose of this study is to assess the antecedents, appraisal, coping strategies and psychosocial adjustment among cervical cancer patients in Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia.

Procedures

You are among the cervical cancer patients selected purposively for this study. I will ask you few questions concerning some socio-demographic, clinical markers, social support, self-efficacy, uncertainty, cognitive appraisal, coping strategies, and psychosocial adjustment. The interview will take about 60-90 minutes. So, I request your volunteer participation.

Risks and discomfort

There is no harm because of your participation in the study. There might be slight discomfort to share some of your experiences as a result of your illness. However, we do not wish this to happen and you may refuse to answer any of the questions if you feel uncomfortable. In addition, the research may help you in accessing suitable support systems if required.

Benefits

There will be no direct benefit to you, but based on the information you provide us, we will design strategies to improve the interventions targeted to psychosocial adjustment so as to improve the health outcomes and adherence to therapy.

Confidentiality

The information that we collect in this study will be kept confidential. Your name will not be written in this form and the information we collect from you will not be shown to anyone. Similarly, codes will be used so that your identity will be invisible for a causal reader of the research report. The hard copies will also be kept in a locked cabinet and will not be revealed to anyone, except the investigators.

Right to refuse or withdraw

You can refuse to answer any question to which you are not comfortable. You may stop participating in the interview at any time if not convenient for you without losing any of your rights as a participant. However, your active participation and genuine responses have paramount importance in improving cervical cancer patient’s health services in future.

Dissemination of the research findings

In this study aggregate results will be reported and you will not be responsible for whatever result the study comes up with. The results of this study will form the basis for preparation of reports, academic publications, conference papers and other scientific publications. At the same time, efforts will be exerted to provide feedbacks to relevant policy makers.

Appendix V: Consent Form for In-depth Interview

With due understanding of the aforementioned information, are you willing to participate in the study?

Yes ☐ (tick and proceeded) No ☐ (tick and terminate the interview)

I have been requested to take part in the research and the foregoing information has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to participate in this study and understand that I have the right to withdraw from the interview at any time without in anyway affecting my right to use the health services.

<u>Signature/finger print of the participant</u>

Signature/finger print _________________ date ________________
(Proceed with the interview)

<u>Signature of the interviewer</u>

Signature _________________ date ________________

In case if you need further clarification, you can communicate the principal investigator Anteneh Dirar through the telephone number: +251-0911-06-03-78.
In case if you have any questions about your rights as a study participant, or if you feel you have not been treated fairly, please contact Dr. Mesele Mengisteab, Head of the School of Social Work through the telephone number: +251-0911-44-58-70.

Appendix VI: In-depth Interview Guide

Section 1: Socio-demographic Information

Q#	Questions
1.	Place of Residence
2.	How far is your home from this hospital
3.	How long does it take to come to this hospital?
4.	How old are you now?
5.	What is your marital status now?
6.	What is your level of education?
7.	What is your current occupation?
8.	What is your average monthly family income?
9.	Now I would like to ask about all the births you have had during your life. Have you ever given birth?
10.	How many children do you have?
11.	How many children live with you?

Section 2: Clinical Marker (Filled from Patient Card)

Q#	Questions
12.	Time passed since diagnosed with cervical cancer?
13.	What is the stage of the disease?
14.	What type of treatment received to date? (Multiple answers are possible)
15.	Any other disease than cervical cancer?
16.	If yes to Q. 15, what other type of disease the patient has currently?

Section 3: Semi-structured Interview Guide

1. How do you describe your appraisal of illness? What do you think causes your illness? What are the main symptoms you experienced? What was your initial reaction when you hear that you are diagnosed with the illness? Do you think your illness is severe? How? How do you decide to seek health care?
2. How do you describe your ability to deal with your situation? What do you think are the future prognosis regarding treatment outcome?
3. What is your experience with the health care services provided in this hospital? Communication with health professionals, understanding of the diagnosis, treatment decision making, follow-up care, satisfaction with care.
4. How has your illness affected your work? How has your illness impacted your daily life or activities? How did you see the future regarding work? Has your illness had any financial impact on you?
5. Has this experience of having diagnosed with cervical cancer affected or changed people around you? What changes have you noticed in your family or friends? Has your relationship with your husband changed since the diagnosis? If so, how?
6. How have you coped with cervical cancer so far? Can you tell me about how the treatment affected you? What particular ways of coping have been most effective for you? How has the way you cope changed over time?
7. How have you experienced psychosocial support in this period? Have you been able to get practical help you have needed? What have you experienced as being the most important aspect of social support? Any inputs from social services/ voluntary organizations?

8. What kind of psychosocial support did you feel you will need most over the treatment period or so? Do you feel able to look after yourself? How could the health or other professionals looking after you best help you to help yourself?
9. Is there anything left that you want to tell me before we conclude our discussion?

I have completed my Interview. Thank you for your cooperation!

Appendix VII: የመረጃ ቅጽ (ለመጠይቅ)

አዲስ አበባ ዩኒቨርሲቲ

ማህበራዊ ሳይንስ ኮሌጅ

ሶሻል ወርክ ትምህርት ቤት

የጥናቱ ርእስ፡- በጥቁር አንበሳ ሆስፒታል የማህፀን በር/ጫፍ ካንሰር ህሙማን ስለማህፀን በር/ጫፍ ካንሰር ያላቸዉ ግንዛቤ፤ህመሙን ለመቋቋም የሚጠቀሙባቸዉ ዘደዎች እና ስነልቦናዊ ማህበራዊ ማስተከከያወች ሁኔታን ስለማወቅ ይሆናል

የተመራማሪው ስም፡ አንተነህ ድራር (የሶሻል ዎርክ 3ተኛ ዲግሪ ተማሪ)

የአማካሪዎች ስም፡ ዶ/ር ዉብእግዜር መኮንን እና ዶ/ር ዜና ብርሀኑ

መግቢያ

ውድ ምላሽ ሰጪ፣ እንደምን አደሩ/ዋሉ፤ የእኔ ስም________________________ይባላል። በአሁን ሰአት ለአቶ አንተነህ ድራር ከአዲስ አበባ ዩኒቨርሲቲ በሶሻል ወርክ እና ሶሻል ዲቨሎፕመንት የሶስተኛ ዲግሪ ማሟያ ጥናት መረጃ በመሰብሰብ ላይ እገኛለሁ:: ስለሆነም በዚህ የጥናት ስራ ዉስጥ ተሳታፊ እንዲሆኑ በአክብሮት ተጋብዘዋል:: ሆኖም ግን በጥናቱ ለምንና እንዴት እንደሚጠና ማብራሪያ እሰጥወተለሁ:: ጥያቄዎች ከሉት ወይንም ተፊ ማሪ ማብራሪያ ከፈለጉ በነጻነት ይጠይቁ:: ጊዜዎትን በመወስድዎ አመሰግናለሁ እንዲሁም የሚያደርጉልኝን ትብብር አደንቃለሁ::

የጥናቱ ዓላማ

የጥናቱ ዋና ዓላማ በጥቁር አንበሳ ሆስፒታል የማህፀን በር/ጫፍ ካንሰር ህሙማን ስለማህፀን በር/ጫፍ ካንሰር ያላቸዉ ግንዛቤ፤ ህመሙን ለመቋቋም የሚጠቀሙባቸዉ ዘደዎች እና ስነልቦናዊ ማህበራዊ ማስተከከያዎች ሁኔታን ለማወቅ ነው።

የጥናቱ አካሄድ

እርስዎ ከ303 የማህጸን በር/ጫፍ ካንሰር ህሙማን በእጣ የተመረጡ ነዎት ከዚህ ቀጥዬ ጥቂት ጥያቄዎች ስለማህፀን በር/ጫፍ ካንሰር ግንዛቤ፤ ህመሙን ለመቋቋም የሚጠቀሙባቸዉ ዘደዎች እና ስነልቦናዊ ማህበራዊ ማስተከከያዎች በተመለከተ እጠይቃሁ። ይህንን መጠይቅ ለመሙላት 45-60 ደቂቃ ይወስድብናል። ስለዚህ ቃለመጠይቁን እንዳከናውን የተገለጸውን ጊዜ እንዲሰጡኝ በትህትና እጠይቃለሁ።

ጉዳት/ያለመመቸት

በዚህ ጥናት ተሳታፊ ስለሆኑ ምንም አይነት ጉዳት አይደርስብወትም፡፡ በመጠይቁ ወቅት **በህመምወ የተነሳ** ያገጠመዎትን **ችግር ሲጠየቁ ስሜትወ ሊረበሽ** ይችላል፡፡ ይህ እንዲሆን ስለማንፈልግ ምቾት የማይሰጥዎ እንዲህ አይነት ጥያቄዎችን አለመመለስ ይችላሉ። **ከዚህ በተጨማሪም አስፈላጊ ሆኖ ከተገኘ የጥናቱ አጥኚ ተስማሚ ድጋፍ እንድያገኙ ሊያ**ግዘወ ይችላል፡፡

ጥቅሞች

በዚጥ ጥናት ውስጥ በመሳተፍዎ ቀጥተኛ የሆነ ጥቅም አያገኙም። ምንም እንኳን ተሳታፊዎች ከዚህ ጥናት ቀጥተኛ የሆነ የሚያገኙት ጥቅም ባይኖርም የእርስዎ በዚህ ጥናት መሳተፍ የማህጸን በር/ጫፍ ህመምተኞችን የስነልቦናና ማህበራዊ ደህንነትን ለማሻሻል እንድናደርግ ይረዳናል።

ምስጥራዊነት

የማንኛውም ጥናት ተሳታፊዎች መረጃ በሚጥራዊነት ይይዛል። የያንዳንዱ ግለሰብ መረጃ ከተመራማሪው እና ከአማካሪው በስተቀር ማንም ሊያየው ሊያገኘውም አይችልም። የሚሰጡት ማንኛውም ምላሽ እና መረጃ ሚስጥራዊነቱ የተጠበቀ ሲሆን የእርስዎ ስም ለእኛ ከሚሰጡት መረጃ ጋር ምንም አይነት ተያያዥንት አይኖረውም። የእርሶን ስም ሳይሆን ለዚህ ጥናት ኮዶችን/ቁጥሮችን የምንጠቀም ሲሆን ይህም ስሞችን እንዳንገልጽ እገዛ ያደርግልናል።

ፈቃደኝነትን ስለማቋረጥ

በዚህ ጥናት ያለመሳተፍ ሙሉ መብት አለዎት። ምቾት የማይሰጥዎን ጥያቄዎች ሙሉ በሙሉ ወይንም በከፊል ላለመመለስ ይችላሉ። ደግሞም በዚህ ጥናት በማኛውም ጊዜ ከፈለጉ ማቋረጥ መብትዎ ነው። ማንኛውም አይነት ማብራሪያ ከፈለጉ በማንኛውም ወቅት መጠየቅ ይችላሉ። ነገር ግን የርስዎ ጥያቄዎችን መመለስና መሳተፍ የማህጸን በር ካንሰር ህመምተኞችን የወደፊት አጠቃላይ የጤና አገልግሎት ያሻሽላል።

የጥናቱን ዉጤት ስለማሰራጨት

በዚህ ጥናት ጥምር ዉጤት ሪፖርት የሚደረግ ሲሆን ጥናቱ ምንም አይነት ዉጤት ያምጣ እርስዎ **ተጠያቂ አይሆኑም፡፡ የጥናቱ ዉጤቶቸ ሪፖርቶችን፤ለህትመት የሚቀርቡ ፅሁፎችን፤ለኮንፈረንስ የሚቀርቡ ወረቀቶችን እና ሌሎች ሳይንሳዊ ህትመቶቸ መነሻ ይሆናሉ፡፡ በተመሳሳይ ከጥናቱ ዉጤት በመነሳት ለፖሊሲ አዉጪዎች ጠቃሚ የሆነ ግብረመልስ ለመስጠትም ከፍተኛ ጥረት ይደረጋል፡፡**

Appendix VIII: የስምምነት ማረጋገጫ ቅጽ (ለመጠይቅ)

በዚህ ጥናት እድሳተፍ ተጠይቄ ከላይ በቀረበዉ በመረጃ ቅጽ የሰፈረው መረጃ ተነበልኛል፡፡ በአጠቃላይ ሂደቱ ላይ ጥያቄ ጠይቄ ተመልሶልኛል፡፡ በዚህ ጥናት ላይ በፈቃደኝነት ለመሳተፍ ተስማምቻለሁ፡፡ ቃለ መጠይቁን በማንኛውም ሰዓት ማቋረጥ ወይም ጥያቄዎችን አለመመለስ አገልግሎት የማግኘት መብቴን እንደማይጎዳ ተረድቻለሁ፡፡

ከላይ በቀረበዉ በመረጃ ቅጽ በተሰጠዎት መረጃ በዚህ ጥናት ለመሳተፍ ፍቃደኛ ነዎት

አዎ ☐ (ምልክት አርገህ/ሽ ቀጥል/ይ) አይ ☐ (ምልክት አርገህ/ሽ አቋርጥ/ጭ)

የመረጃ ሰጭው ፊርማ/የጣት አሻራ---------------------- ቀን--------------------

የመረጃ ሰብሳቢው ስም------------------------------------ ፊርማ-----------------ቀን ------------

የተቆጣጣሪው ስም------------------------------------ ፊርማ-----------------ቀን ----------------

የመጠይቁ መለያ ቁጥር ------------------------------------

ምን አልባት ስለጥናቱና እንዴት እንደሚካሄድ ለበለጠ መረጃ ከፈለጉ ተመራማሪውን አንተነህ ድራር ከዚህ በታች በተጠቀሰው አድራሻ ማግኘት ይችላሉ፡፡ +251-0911-06-03-78

ምን አልባት ስለተሳተፊነት መብት እንዲሁም በአካሄድ ወቅት ላሉት ቅሬት ወይም ጥያቄ ከዚህ በታች በተጠቀሰው አድራሻ ማሳወቅ ይችላሉ፡፡

ዶ/ር መሰለ መንግስተአብ፣ የሶሻል ወርክ ት/ት ቤት ሃላፊ ስልክ +251-0911-44-58-70

Appendix IX: የአማርኛ መጠይቅ

ክፍል 1: ስነህስብና ማህበራዊ መረጃዎች

ጥ#	ጥያቄ	የመልስ ክፍል
1.	የመኖሪያ ቦታ/አካባቢ	1. ገጠር 2. ከተማ 3. አ/አ
2.	የመኖሪያ ቤትዎ ከዚህ ሆስፒታል በግምት ምን ያህል ይርቃል?	________________ ኪ. ሜ
3.	ከመኖሪያ ቤትዎ እዚህ ሆስፒታል ለመምጣት በግምት ምን ያህል ጊዜ ይፈጃል? በህዚብ ትራንስርት	________________ ሰዓት
4.	እድሜዎ ስንት ነው?	_________ አመት
5.	የጋብቻ ሁኔታ?	1. ያላገባች 2. ባለ ትዳር 3. የተፋታች 4. የሞተባት
6.	የትምህርት ደረጃ?	1. ያልተማረች 2. ማንበብና መጻፍ የምትችል 3. የመጀመሪያ ደረጃ (1-8) ክፍል 4. የሁለተኛ ደረጃ (ከ9-12 ክፍል) 5. ከ12ኛ ክፍል በላይ
7.	የስራ ሁኔታ?	1. የቤት እመቤት 2. የመንግስት ተቀጣሪ 3. የግል ስራ 4. የግል ተቀጣሪ 5. ግብርና 6. ሌላ ካለ ይጥቀሱ ________________

8.	መካከለኛ የወር የቤተሰብ ገቢ ምን ያህል ነው?	________________ ብር
9.	ልጅ ወልደው ያውቃሉ?	1. አዎ 2. አላቅም አላቅም ከሆነ ወደ ክፍል 2
10.	ምን ያህል ልጆች አለዎት?	____________
11.	ምን ያህል ልጆች ከርሶ ጋር ይኖራሉ?	____________

ክፍል 2: <u>የህክምና ሁኔታ</u> (ከህመምተኛዉ ካርድ ላይ የሚሞላ)

ጥ#	**ጥያቄ**	**የመልስ ክፍል**
12.	በማህጸን በር ካንሰር ከተያዙ ምን ያህል ጊዜ ሆኖዋቸዋል?	1. ከስድስት ወር በታች 2. ከስድስት ወር -አስራ ሁለት ወር 3. ከአስራ ሶስት ወር እስከ አስራ ስምት ወር 4. ከአስራዘጠኝ ወር እስከ ሀያ አራት ወር
13.	የህመም ደረጃ ስንት ነው?	1. ደረጃ I 2. ደረጃ II 3. ደረጃ III
14.	እስካሁን ምን አይነት ህክምና አግኝተዋል?	1. ቀዶ ህክምና 2. ጨረር 3. ቅልቅል
15.	ከማህጸን በር ካንሰር በተጨማሪ ያሉ ህመሞች?	1. አዎ 2. የለም የለም ከሆነ ወደ ክፍል 3
16.	የጥያቄ 15 መልስ አዎ ከሆነ ምን አይነት ህመም አለባቸዉ?	

ክፍል 4፡ ህመምን የመቋቋሚያ ዘዴዎች (የተከለሰ) መጠይቅ

መመሪያ፡ በቅርቡ ያጋጠመዎትን አስጨናቂ ሁኔታ እንዲሁም የትና ምን እንደተከሰተ ይለዩ ከዛ ቀጥሎ ያሉትን ምርጫዎች ይህንን ጭንቀት ለመቅረፍ የተጠቀሙትን መንገዶች ከተሰጡት መለኪያዎች ጋር የሚዛመደውን ይምረጡ				
	አልተጠቀ ምኩም	**በጥቂቱ ተጠቅምያለሁ**	**በትንሹ ተጠቅምያለሁ**	**በብዙ ተጠቅምያለሁ**
18. ቀጣይ ለሚደረገው ነገር ትኩረት መስጠት	0	1	2	3
19. ችግሩን ይበልጥ ለመገንዘብ ለመመርመር ሞከርኩ	0	1	2	3
20. አእምሮዬን ከነገሮች ለማውጣት ወደ ስራ አተኮርኩ ወይም የማደርጋቸውን ነገሮች ቀየርኩ	0	1	2	3
21. ጊዜ ወስዶ ማየት ይሻላል ስላልኩ መጠበቅን እንደመፍትሄ ወሰድኩ	0	1	2	3
22. ከነገሩ በጎ ነገር ለማግኘት ተስፋ አደረኩ ወይም ግልግል አረኩ	0	1	2	3
23. ይሰራል ብዬ ያላሰብኩትን ነገር አረጉ ግን የሆነ ነገር አድርጌአለሁ	0	1	2	3
24. አእምሮዬን ሊቀይርልኝ የሚችል ሰው ለማግኘት ሞከርኩ	0	1	2	3
25. ስለጉዳዩ የበለጠ ለማወቅ ሌላ ሰው አማከርኩ	0	1	2	3
26. ራሴን ተቸው ወይም ትምርታዊ መግለጫ ለራሴ ሰጠው	0	1	2	3
27. ሽግግሬን ላለማስተጋጎል ሞከርኩ ግን ነገሮች በተወሰነ መልኩ ከፍት ተውኩ	0	1	2	3
28. ተአምር ይከሰታል ብዬ ተስፋ አደረኩ	0	1	2	3
29. እጣ ፈንታዬ ነው አልኩ አንዳንዴ መጥፎ አድል አለኝ	0	1	2	3
30. ምንም እንዳልተፈጠረ አድርጌ ቀጠልኩ	0	1	2	3
31. ስሜቴን ለራሴ ብቻ እንዲሆን ጣርኩ	0	1	2	3
32. የነገሩን መልካም ጎኑ ብቻ ለማየት ጣርኩ	0	1	2	3
33. ከሁልጊዜው በበለጠ ተኛሁ	0	1	2	3

34. ችግሩን ያመጣው ሰው ላይ ንዴቴን ገለጽኩ	0	1	2	3
35. የኔን ስሜት የሚካፈልና የሚረዳኝ ሰው ተቀበልኩ	0	1	2	3
36. ስሜቴን ሊያሻሻል የሚችሉ ነገሮች ለራሴ ነገርኩ	0	1	2	3
37. የሆነ ነገር ለመፍጠር ስሜቴን አነሳሳሁ	0	1	2	3
38. ሁሉንም ነገር ለመርሳት ጣርኩ	0	1	2	3
39. የባለሙያ እርዳታ አገኘሁ	0	1	2	3
40. እንደግለሰብ በጥሩ መልኩ ተለወጥኩ ወይም አደኩ	0	1	2	3
41. ነገሮችን ከማድረጌ በፊት ምን እንደሚፈጠር ለማየት ጠበኩ	0	1	2	3
42. ነገሮች ለማስተካከል ይቅርታ ጠየቁ ወይም የሆነ ነገር አረኩ	0	1	2	3
43. የተግባር እቅድ አዘጋጅቼ እሱን ተከተልኩ	0	1	2	3
44. የምፈልገውን ቀጣይ ጥሩ ነገር ተቀበልኩ	0	1	2	3
45. በተወሰነ መልኩ ፍላጎቴን አወጣሁት	0	1	2	3
46. ችግሩን በራሴ ላይ እንዳመጣሁ ተገነዘብኩ	0	1	2	3
47. ከሂደቱ በፊት ከነበርኩበት ተሽዬ መጣሁ	0	1	2	3
48. ለችግሩ ጠጣር የሖነ መፍትዬ ያመጣል ካልኩት ሰው ጋር ተነጋገርኩ	0	1	2	3
49. ከነገሩ እራሴን አራኩ አረፍኩ ወይ እረፍት ወጣሁ	0	1	2	3
50. ስሜቴን ለማሻሻል ተመገብኩ ጣጣሁ አጨስኩ እጽ ተጠቀምኩ ወይም መድሃኒት ወሰድኩ	0	1	2	3
51. አደገኛ የሆነ ሙከራ ወይም እድል ሞከርኩ	0	1	2	3
52. በችኮላ ወደ ተግባር ላለመሄድ ወይም የመጀመሪያ ግምቴን ላለመከወን ጣርኩ	0	1	2	3
53. አዲስ እምነት አገኘሁ	0	1	2	3
54. ኩራትና ጥንካሬን አስቀጠልኩ	0	1	2	3
55. በህይወቴ አስፈላጊውን ነገር እንደገና አገኘሁ	0	1	2	3

56. ሌሎች ነገሮች ሞከርኩ ጥሩ ውጤት እንዲያመጡልኝ	0	1	2	3
57. ባጠቃላይ ከሰዎች ጋር ላለመሆን ጣርኩ	0	1	2	3
58. ወደ ውስጤ እንዳይገባ ወይም ስለነገሩ ጠልቄ ማሰብ አቆምኩ	0	1	2	3
59. የማከብረውን ዘመዴን ወይም ጓደኛዬን ለምክር ጠየቁ	0	1	2	3
60. ነገሮች መጥፎ እንደሆኑ ሌሎች እንዳያቁ አረኩ	0	1	2	3
61. ነገሩን ቀላል አድርጌ ወሰድኩት ከባድ ነገር አድርጌ አልወሰድኩትም	0	1	2	3
62. ምን እንደሚሰማኝ ከሌላ ሰው ጋር አወራሁ	0	1	2	3
63. የፈለኩትን ነገር ለማድረግ ተሟገትኩ ታገልኩ	0	1	2	3
64. ሌሎች ሰዎች ላይ ተወጣሁ	0	1	2	3
65. በፊት ከነበርኩበት ተመሳሳይ ሁኔታ ተሞክሮ ወሰድኩ	0	1	2	3
66. ምን ማድረግ እንዳለብኝ ስላወኩ ነገሮች እንዲስተካከሉ ጥረቴን በእጥፍ ቀጠልኩ	0	1	2	3
67. ነገሩ እንደተከሰተ አላምንም አልኩ	0	1	2	3
68. በቀጣይ ጊዜ ነገሮች ሌላ እንደሚሆኑ ለራሴ ቃል ገባሁ	0	1	2	3
69. ለችግሩ የተለያዩ መፍትሄዎችን አመነጨሁ	0	1	2	3
70. ምንም ማድረግ ስለማልችል ተቀበልኩት	0	1	2	3
71. የሚሰማኝ ስሜት ከሌሎች ነገሮች ጋር እንዳይገጭ ለመነጠል ሞከርኩ	0	1	2	3
72. የተፈጠረውን ነገር ወይም የተሰማኝን ስሜት እንዲለወጥ ተስፋ አደረኩ	0	1	2	3
73. ስለራሴ የሆነ ነገር ለወጥኩ	0	1	2	3
74. አሁን ካለሁበት የተሸለ ነገር እንዲሆን አለምኩ	0	1	2	3

75. ነገሩ ከላዬ ላይ እንዲሄድልኝ ወይም እንዲያበቃ ተስፋ አደረኩ	0	1	2	3
76. ነገሮች ምን ሊሆኑ እደሚችሉ ቃዠሁ ወይም ተመኘሁ	0	1	2	3
77. ጸለይኩ	0	1	2	3
78. ለባሰው ነገር ራሴን አዘጋጀሁ	0	1	2	3
79. ምን ማድረግ ወይም ማሰብ እንዳለብኝ በአእምሮዬ አሰላሰልኩ	0	1	2	3
80. የማደንቀው ሰው ይህን ችግር እንዴት ሊወጣው ይችላል ብዬ በማሰብ የሱን ተምሳሌትነት ተጠቀምኩ	0	1	2	3
81. ነገሮችን ከሌላ ሰው እይታ አንጻር ለማየት ሞከርኩ	0	1	2	3
82. ከዚህ የባሱ ነገሮች ሊኖሩ እንደሚችሉ እራሴን አሳሰብኩ	0	1	2	3
83. የአካል ብቃት እንቅስቃሴ ወይም እርምጃ አከናወንኩ	0	1	2	3

ክፍል 5፡ ስለጤና ሁኔታ ግንዛቤ መለኪያ

መመሪያ፡ ይህ ክፍል 23 ዐረፍተ ነገሮች አሉት፡፡ አባክዎ ሲነበብልዎ ያዳምጡና ስለ ማህጸን በር ጫፍ ካንሰር መያዝ ያለዎትን ግንዛቤ ይምረጡ፡፡ በዚህ መመሪያ ውስጥ 5 ነጥቦች አሉ ከ (በጣም አልስማማም) እስከ 5 (በጣም እስማማለሁ)					
	በጣም አልስማማም	**አልስማማም**	**ገለልተኛ**	**እስማማለሁ**	**በጣም እስማማለሁ**
84. በማህጸን በር ካንሰር ምክንያት ማድረግ ያለብኝን ነገር ማድረግ አልቻልኩም	1	2	3	4	5
85. የማህጸን በር ጫፍ ካንሰር ለኔ አስፈሪ ነው	1	2	3	4	5
86. የማህጸን በር ካንሰር ለኔ አስጨናቂ አይደለም	1	2	3	4	5
87. በህመሙ ምክንያት ነገሮች መጥፎ እየሆኑ ይሄዳሉ	1	2	3	4	5
88. ህመሙ ጥሩ እየሆነ አይሄድም	1	2	3	4	5
89. የማህጸን በር ካንሰር ህይወቴን ጎድቶታል	1	2	3	4	5
90. ምንም እንኳ የማህጸን በር ካንሰር ቢኖርብኝም ማድረግ የፈለኩትን እንዳላረግ አላገደኝም	1	2	3	4	5
91. ባካባቢዬ ባሉ ነገሮች ላይ ፍላጎት አጥቻለሁ	1	2	3	4	5
92. በማህጸን በር ካንሰር ምክንያት ብዙ ነገሮችን መተው ችያለሁ	1	2	3	4	5
93. ምንም እንኳ እንቅፋቶች ቢኖሩም ይህን በሽታ እወጣዋለሁ (አሸንፈዋለሁ)	1	2	3	4	5
94. እኔ ላይ የሚከሰተውን ነገር መቆጣጠር እችላለሁ	1	2	3	4	5
95. ይህ የጤና ችግር እኔን አይጥለኝም	1	2	3	4	5
96. መስራት የማልችላቸው ነገሮች ለይ ያለኝ ስሜት ጠፍቷል	1	2	3	4	5
97. ይህን የጤና ችግር እንደምወጣው ይሰማኛል	1	2	3	4	5
98. በማህጸን በር ካንሰር ምክንያት ምንም የማጣው ነገር የለም	1	2	3	4	5
99. በማህጸን በር ካንሰር ምክንያት ብዙ ያጣውት ነገር አለ	1	2	3	4	5

100. ምን ሊከሰትብኝ እንደሚችል እያሰብኩ እጨነቃለሁ	1	2	3	4	5
101. ከቤተሰቤና ከጓደኞቼ ጋር ያለኝ ግንኙነት ተጎድቷል	1	2	3	4	5
102. በማህጸንበር ካንሰር ምክንያት በሆነ መልኩ ጉዳት ደርሶብኛል	1	2	3	4	5
103. ስለ ማህጸን በር ካንሰር ብዙም አልጨነቅም	1	2	3	4	5
104. የማህጸን በር ካንሰር ስለኔ ብዙ እንዳውቅ አድርጎኛል	1	2	3	4	5
105. በማህጸን በር ካንሰር በመያዜ ተጎድቻለሁ	1	2	3	4	5
106. ይህን የጤና ችግር ለመቅረፍ ብዙ ማድረግ የምችለው ነገር አለ	1	2	3	4	5

<u>ክፍል 6፡ የህይወት ትርጉም መጠይቅ</u>

ገለጻ፡ እባክዎ ጥቂት ጊዜ ይውሰዱና በህይወትዎ ለመቆየትም አስፈላጊ እና ጥቅም አለው የሚሉትን ያስቡ እነዚህ ጥያቄዎች ከግል ስሜትዎ ጋር የተያያዙና ትክክል ወይም ስህተት የሖኑ መልሶች የሏቸውም፡፡ እባክዎ ያዳምጡና ከተሰጡት የመለኪያ ነጥቦች ይምረጡ						
107. የህይወቴን ትርጉም ተረድቻለሁ						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
108. ህይወቴን ትርጉም እነዲኖረው እንዲሰማኝ የሚያደርግ ነገር እየፈለኩ ነው						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
109. ሁልጊዜ የህይወቴን አላማ ለማግኘት እየፈለኩ ነው						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
110. ህይወቴ ግልጽ አላማ አለው						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
111. ህይወቴ ትርጉም ያለው እንዲሆን የሚያደርግ ጥሩ ስሜት አለኝ						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
112. አርኪ የሆነ የህይወት አለማ አግኝቻለሁ						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
113. ሁልጊዜ ህይወቴ አስፈላጊ ሆኖ እንዲሰማኝ የሖነ ነገር እፈልጋለሁ						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
114. ለህይወቴ አላማ ወይም ተልእኮ እየፈለጉ ነው						
1	2	3	4	5	6	7

ፍጹም ስህተት	በይበልጥ ስህተት	በመጠኑ ስህተት	ገለልተኛ ነኝ	በመጠኑ እውነት	በይበልጥ እውነት	ፍጹም እውነት
115. ህይወቴ ግልጽ የሆነ አላማ የለውም						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት
116. የህይወቴን ትርጉም እየፈለጉ ነው						
1 ፍጹም ስህተት	2 በይበልጥ ስህተት	3 በመጠኑ ስህተት	4 ገለልተኛ ነኝ	5 በመጠኑ እውነት	6 በይበልጥ እውነት	7 ፍጹም እውነት

ክፍል 7፡ አጠቃላይ በራስ ላይ ያለን ዉጤታማነት መለኪያ

	በፍጹም እውነት ያልሆነ	በጥቂቱ እውነት	በመካከለኛ እውነት	በትክክል እውነት
117. በደንብ ጥረት ካረኩ ከባድ ችግሮችን ሁሌም ማስተካከል እችላለሁ	1	2	3	4
118. ሌላ ሰው ከተቃወመኝ የፈለኩትን ነገር ለማግኘት ሌላ መንገድ ማግኘት እችላለሁ	1	2	3	4
119. በአላማዬ ፀንቼ ግቤን ለማሳካት ለኔ ቀላል ነው	1	2	3	4
120. ያልተጠበቁ ነገሮችን በብቃት እንደምወጣ በራሴ እተማመናለሁ	1	2	3	4
121. ለተነሳሽነቴ ምስጋና ይግባውና ያልታሰቡ ነገሮችን እንዴት መያዝ እንዳለብኝ አቃለሁ	1	2	3	4
122. አስፈላጊውን ጥረት ካረጉ አብዛኛው ችግሮቼን እቀርፋለሁ	1	2	3	4
123. የመቋቋም አቅሙ ስላለኝ ችግሮች ሲገጥሙኝ መረጋጋት እችላለሁ	1	2	3	4
124. ከችግሮች ጋር ስጋፈጥ ሁሌም ብዙ መፍትሄዎችን አገኛለሁ	1	2	3	4
125. አስቸጋሪ ሁኔታ ውስጥ ካለሁ ሁሌም ስለመፍትሄ ማሰብ እችላለሁ	1	2	3	4
126. ምንም ነገር በመንገዴ ቢመጣ ሁሌም ነገሮችን መያዝ እችላለሁ	1	2	3	4

ክፍል 8፡ የሚሼል በህመምና እርግጠኛ ያለመሆን መለኪያ- የአዋቂዎች ፎርም

መመሪያ፡ እባክዎ አረፍተ ነገሮችን ያዳምጡ ጊዜ ወስደው እያንዳንዱ አረፍተ ነገር የሚለውን ያስቡ ከዛ ከምርጫዎቹ መካከል ከርሶ ከዛሬው ስሜት ጋር አብሮ የሚሄደውን ይምረጡ፡፡ ከምርጫው ጋር ከተስማሙ በጣም እስማማለሁ ወይም እስማማለሁ የሚለውን ይምረጡ፡፡ በምርጫው ካልተስማሙ በጣም አልስማማም ወይም አልስማማም የሚለውን ይምረጡ ስለሚሰማዎት ስሜት እርግጠኛ ካልሆኑ ያልወሰኑ የሚለውን ይምረጡ፡፡ እባክዎ ሁሉንም ጥያቄዎች ይመልሱ

	በጣም እስማማለሁ	እስማማለሁ	አልወሰንኩም	አልስማማም	በጣም አልስማማም
127. ምን ችግር እንዳለብኝ አላቅም	5	4	3	2	1
128. ብዙ መልስ ያላገኙ ጥያቄዎች አሉኝ	5	4	3	2	1
129. ህመሜ እየተሸለው ወይም እየባሰበት መሄዱን እርግጠኛ አይደለም	5	4	3	2	1
130. የሚሰማኝ ህመም ምን ያህል መጥፎ እንደሆነ ግልጽ አይደለም	5	4	3	2	1
131. ስለሁኔታዬ የሚሰጡኝ መግለጫ ግልጽነት የለውም	5	4	3	2	1
132. የእያንዳንዱ ህክምናዬ አላማ ለኔ ግልጽ ነው	5	4	3	2	1
133. ህመም ሲሰማኝ ሁኔታዬ ምን እንደሆነ አቃለሁ	5	4	3	2	1
134. ነገሮች ለኔ እንደሚደረጉ መች መጠበቅ እንዳለብኝ አላውቅም	5	4	3	2	1
135. የህመሜ ስሜቶች ላይገመት እየቀያየረ ቀጥሏል	5	4	3	2	1
136. የተደረገልኝን ገለጻ ሁሉ ተረድቻለሁ	5	4	3	2	1
137. ሀኪሙ ለኔ የነገረኝ ነገሮች ብዙ ትርጉም ሊኖራቸው ይችላል	5	4	3	2	1

138. ህመሜ ምን ያህል ሊቆይ እንደሚችል መተንበይ ችያለሁ	5	4	3	2	1
139. ህክምናዬ ምን እንደሆነ ለማወቅ በጣም ውስብስብ ነው	5	4	3	2	1
140. እያገኘሁ ያለሁት ህክምና ምን ያል እያዘገኝ ነው የሚለውን ለማወቅ ይከብደኛል	5	4	3	2	1
141. ብዙ የጤና ባለሙያዎች ስላለሉ የትኛው ሀላፊነት እንዳለበት ግልጽ አይደለም	5	4	3	2	1
142. ህመሜ ተገማች ስላልሆነ ስለወደፊቱ ማቀድ አልችልም	5	4	3	2	1
143. የህመሜ ሂደት ተለዋዋጭ ነው፡፡ መጥፎ እና ጥሩ ቀናት አሉ	5	4	3	2	1
144. ሆስፒታሉን ከለቀቁ በኋላ እራሴን እንዴት መንከባከብ እንዳለብኝ ግልጽ አልሆነልኝም	5	4	3	2	1
145. ችግሬ ምን እንደሆነ ብዙ አይነት አስተያየት ተሰጥቶኛል	5	4	3	2	1
146. በኔ ላይ ምን ሊከሰት እንደሚችል ግልጽ አይደለም	5	4	3	2	1
147. ብዙ ገዜ መጥፎ ወይም ጥሩ ቀን እንደሚኖረኝ አውቃለሁ	5	4	3	2	1
148. የምርመራዬ ውጤት ወጥነት የለውም	5	4	3	2	1
149. የህክምናዬ ውጤታማነት ቁርጥ ያለ አይደለም	5	4	3	2	1

150. ራሴን ለመንከባከብ ምን ያህል ጊዜ እንደሚቀረኝ ለመወሰን ከባድ ነው	5	4	3	2	1
151. የህመሜን ሂደት ባጠቃላይ መተንበይ እችላለሁ	5	4	3	2	1
152. በህክምናው ምክንያት ማድረግ ያለብኝ የሌለብን ነገሮች ይቀየራሉ	5	4	3	2	1
153. ምንም ሌላ ችግር በኔ ላይ እንደማያገኙ እርግጠኛ ነኝ	5	4	3	2	1
154. እያገኘሁ ያለሁት ህክምና የመሳካት እድሉ የታወቀ ነው	5	4	3	2	1
155. የተለየ የምርመራ ውጤት አልሰጡኝም	5	4	3	2	1
156. አካላዊ ጭንቀቴ ቀላል ነው መች እንደሚሻለኝና እንደሚብስብኝ አቃለሁ	5	4	3	2	1
157. ነርሶቹ በፈለኳቸው ጊዜ ከኔ ጋር እንደሆኑ እተማመናለሁ	5	4	3	2	1
158. የህመሜ አስከፊነት ተረጋግጧል	5	4	3	2	1
159. ሀኪሞቹና ነርሶቹ በሚገባኝ ቋንቋ ስለሚጠቀሙ የሚሉትን መረዳት እችላሉ፡፡	5	4	3	2	1

<u>**ክፍል 9፡ የማህበራዊ እገዛ/ድጋፍ መገንዘብያ መጠን መለኪያ**</u>

መመሪያ፡ አሁን ለሚከተሉት ዐረፍተነገሮች ያለዎትን ስሜት እንጠይቆታለን፡፡ እያንዳንዱን አረፍተ ነገር በጥሞና ያዳምጡ፡፡ ስለአረፍተነገሮቹ የተሰማዎትን ስሜት በመለኪያው ይግለጹ						
160. በሚያስፈልገን ጊዜ ከኔ ጎን የሚሆን ልዩ ሰው አለ፡፡ (SO)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
161. ደስታዬንና ሀዘኔን የሚካፈለኝ ልዩ የሆነ ሰው አለ፡፡ (SO)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
162. ቤተሰቦቼ በተቻላቸው መጠን ሊያግዙኝ ይሞክራሉ፡፡ (Fam)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
163. ከቤተሰቦቼ የምፈልገውን የስሜት እገዛ አገኛለሁ፡፡ (Fam)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
164. የመጽናኛዬ ምንጭ የሆነ ልዩ ሰው አለኝ፡፡ (SO)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
165. ጓደኞቼ እኔን ለመረዳት በጣም ይጥራሉ፡፡ (Fri)						
1	2	3	4 ገለልተኛ ነኝ	5	6	7

እጅግ በጣም አልስማማም	በጣም አልስማማም	በመጠኑ አልስማማም		በመጠኑ እስማማለሁ	በጣም እስማማለሁ	እጅግ በጣም እስማማለሁ
166. ነገሮች ወደ መጥፎ አቅጣጫ ሲሄዱ በጓደኞቼ እምነት ጥላለሁ፡፡ (Fri)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
167. ስለችግሬ ከቤተሰቤ ጋር መነጋገር እችላለሁ፡፡ (Fam)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
168. ደስታና ሀዘኔን የሚካፈሉኝ ጓደኞች አሉኝ፡፡ (Fri)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
169. ስለ ስሜቴ የሚጨነቅ ልዩ የሆነ ሰው በህይወቴ ውስጥ አለ፡፡ (SO)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
170. ቤተሰቦቼ ውሳኔዎች ለመወሰን በፍቃደኝነት ይረዱኛል፡፡ (Fam)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ
171. ስለችግሬ ከጓደኞቼ ጋር ማውራት እችላለሁ፡፡ (Fri)						
1 እጅግ በጣም አልስማማም	2 በጣም አልስማማም	3 በመጠኑ አልስማማም	4 ገለልተኛ ነኝ	5 በመጠኑ እስማማለሁ	6 በጣም እስማማለሁ	7 እጅግ በጣም እስማማለሁ

መጠይቁን ጨርሻለሁ ስለትብብሮ አመሰግናለሁ!!!

Appendix X: <u>የመረጃ ቅጽ</u> (ለጥልቅ ውይይት)

አዲስ አበባ ዩኒቨርሲቲ

ማህበራዊ ሳይንስ ኮሌጅ

ሶሻል ወርክ ትምህርት ቤት

የጥናቱ ርእስ፡- በጥቁር አንበሳ ሆስፒታል የማህፀን በር/ጫፍ ካንሰር ህሙማን **ስለ**ማህፀን በር/ጫፍ ካንሰር ***ያላቸዉ ግንዛቤ፤ህመሙን ለመቋቋም የሚጠቀሙባቸዉ*** ዘደዎች እና ስነልቦና***ዊ*** ማህበራዊ ***ማ***ስተ**ከ**ከያወች ሁኔታን ስለማወቅ ይሆናል

የተመራማሪው ስም፡ አንተነህ ድራር (የሶሻል ዎርክ 3ተኛ ዲግሪ ተማሪ)

የአማካሪዎች ስም፡ ዶ/ር ዉብእግዜር መኮንን እና ዶ/ር ዜና ብርሀኑ

መግቢያ

ውድ ምላሽ ሰጪ፣ እንደምን አደሩ/ዋሉ፤ የእኔ ስም አንተነህ ድራር ይባላል። **በ*አሁን ሰአት*** ከአዲስ አበባ ዩኒቨርሲቲ **በ**ሶሻል ወርክ እና ሶሻል ***ዲቨሎፕመንት የሶስተኛ*** ዲግሪ ***ማሟያ ጥናት*** እ***ያ***ከናወን**ከ** እገኛ**ለሁ**:: ***ስለሆነም በዚህ የጥናት ስራ ዉስጥ ተሳታኝ እንዲሆኑ በአክብሮት ተጋብዘዋል:: ሆኖም ግን በጥናቱ ለምንና እንዴት እንደሚጠና ማብራሪያ*** እሰጥዎታ**ለሁ**:: ጥያቄዎች **ከሉት** ወይ***ንም ተፊ ማሪ ማብራሪያ*** ከፈለጉ በነፀነት ይጠይቁ:: ጊዜዎትን ***በመ***ወስድዎ ***አመሰግናለሁ እንዲሁም የሚያደርጉልኝን ትብብር አደንቃለሁ::***

የጥናቱ ዓላማ

የጥናቱ ***ዋና*** ዓላማ በጥቁር አንበሳ ሆስፒታል የማህፀን በር/ጫፍ ካንሰር ህሙማን **ስለ**ማህፀን በር/ጫፍ ካንሰር ***ያላቸዉ ግንዛቤ፤ ህመሙን ለመቋቋም የሚጠቀሙባቸዉ*** ዘደዎች እና ስነልቦና***ዊ*** ማህበራዊ ***ማ***ስተ**ከ**ከያ***ዎች*** ሁኔታን ለማወቅ ነው።

የጥናቱ አካሄድ

እርስዎ ከማህጸን በር/ጫፍ ካንሰር ህሙማን በእጣ የተመረጡ ነዎት ከዚህ ቀጥዬ ጥቂት ጥያቄዎች **ስለ**ማህፀን በር/ጫፍ ካንሰር ***ግንዛቤ፤ ህመሙን ለመቋቋም የሚጠቀሙባቸዉ*** ዘደዎች እና ስነልቦና***ዊ*** ማህበራዊ ***ማ***ስተ**ከ**ከያ***ዎች*** በተመለከተ እጠይቃሁ። ይህንን ቃለመጠይቅ 60-90 ደቂቃ ይወስድብናል። ስለዚህ ቃለመጠይቁን እንዳከናውን የተገለጸውን ጊዜ እንዲሰጡኝ በትህትና እጠይቃለሁ።

ጉዳት/ያለመመቸት

በዚህ ጥናት ተሳታፊ ስለሆኑ ምንም አይነት ጉዳት አይደርስብወትም፡፡ በመጠይቁ ወቅት **በህመምወ የተነሳ** ያገጠመዎትን **ችግር ሲጠየቁ ስሜትወ ሊረበሽ** ይች**ላል**፡፡ ይህ እንዲሆን ስለማንፈልግ ምቾት የማይሰጥዎ እንዲህ አይነት ጥያቄዎችን አለመመለስ ይችላሉ፡፡ **ከዚህ በተጨማሪም አስፈላጊ ሆኖ ከተገኘ የጥናቱ አጥኚ ተስማሚ ድጋፍ እንድያገኙ ሊ**ያግዘወ ይች**ላል**፡፡

ጥቅሞች

በዚጥ ጥናት ውስጥ በመሳተፍዎ ቀጥተኛ የሆነ ጥቅም አያገኙም፡፡ ምንም እንኳን ተሳታፊዎች ከዚህ ጥናት ቀጥተኛ የሆነ የሚያገኙት ጥቅም ባይኖርም የእርስዎ በዚህ ጥናት መሳተፍ የማህጸን በር/ጫፍ ህመምተኞችን የስነልቦናና ማህበራዊ ደህንነትን ለማሻሻል እንድናደርግ ይረዳናል፡፡

ምስጥራዊነት

የማንኛውም ጥናት ተሳታፊዎች መረጃ በሚጥራዊነት ይይዛል፡፡ የያንዳንዱ ግለሰብ መረጃ ከተመራማሪው እና ከአማካሪው በስተቀር ማንም ሊያየው ሊያገኘውም አይችልም፡፡ የሚሰጡት ማንኛውም ምላሽ እና መረጃ ሚስጥራዊነቱ የተጠበቀ ሲሆን የእርስዎ ስም ለእኛ ከሚሰጡት መረጃ ጋር ምንም አይነት ተያያዥንት አይኖረውም፡፡ የእርሶን ስም ሳይሆን ለዚህ ጥናት ኮዶችን/ቁጥሮችን የምንጠቀም ሲሆን ይህም ስሞችን እንዳንገልጽ እገዛ ያደርግልናል፡፡

ፈቃደኝነትን ስለማቋረጥ

በዚህ ጥናት ያለመሳተፍ ሙሉ መብት አለዎት፡፡ ምቾት የማይሰጥዎን ጥያቄዎች ሙሉ በሙሉ ወይንም በከፊል ላለመመለስ ይችላሉ፡፡ ደግሞም በዚህ ጥናት በማኛውም ጊዜ ከፈለጉ ማቋረጥ መብትዎ ነው፡፡ ማንኛውም አይነት ማብራሪያ ከፈለጉ በማንኛውም ወቅት መጠየቅ ይችላሉ፡፡ ነገር ግን የርስዎ ጥያቄዎችን መመለስና መሳተፍ የማህጸን በር ካንሰር ህመምተኞችን የወደፊት አጠቃላይ የጤና አገልግሎት ያሻሽላል፡፡

የጥናቱን ዉጤት ስለማሰራጨት

በዚህ ጥናት ጥምር ዉጤት ሪፖርት የሚደረግ ሲሆን ጥናቱ ምንም አይነት ዉጤት ያምጣ እርስዎ **ተጠያቂ አይሆኑም**፡፡ **የጥናቱ ዉጤቶቸ ሪፖርቶችን፤ለህትመት የሚቀርቡ ፅሁፎችን፤ለኮንፈረንስ የሚቀርቡ ወረቀቶችን** እና **ሌሎች ሳይንሳዊ ህትመቶቸ መነሻ ይሆናሉ**፡፡ **በተመሳሳይ ከጥናቱ ዉጤት በመነሳት ለፖሊሲ አዉጪዎች ጠቃሚ የሆነ ግብረመልስ ለመስጠትም ከፍተኛ ጥረት ይደረጋል**፡፡

Appendix XI: የስምምነት ማረጋገጫ ቅጽ (ለጥልቅ ውይይት)

በዚህ ጥናት እድሳተፍ ተጠይቄ ከላይ በቀረበዉ በመረጃ ቅጽ የሰፈረው መረጃ ተነበልኛል። በአጠቃላይ ሂደቱ ላይ ጥያቄ ጠይቄ ተመልሶልኛል። በዚህ ጥናት ላይ በፈቃደኝነት ለመሳተፍ ተስማምቻለሁ። ቃለ መጠይቁን በማንኛውም ሰዓት ማቋረጥ ወይም ጥያቄዎችን አለመመለስ አገልግሎት የማግኘት መብቴን እንደማይጎዳ ተረድቻለሁ።

ከላይ በቀረበዉ በመረጃ ቅጽ በተሰጠዎት መረጃ በዚህ ጥናት ለመሳተፍ ፍቃደኛ ነዎት

አዎ ☐ (ምልክት አርገህ/ሽ ቀጥል/ይ) አይ ☐ (ምልክት አርገህ/ሽ አቋርጥ/ጭ)

የጥልቅ ውይይቱ ተሳታፊ ፊርማ/የጣት አሻራ---------------------- ቀን------------------

የጥልቅ ውይይቱን ያካሄደዉ ስም---------------------------- ፊርማ--------------ቀን -----------

የጥልቅ ውይይቱ መለያ ቁጥር -----------------------------------

ምን አልባት ስለጥናቱና እንዴት እንደሚካሄድ ለበለጠ መረጃ ከፈለጉ ተመራማሪውን አንተነህ ድራር ከዚህ በታች በተጠቀሰው አድራሻ ማግኘት ይችላሉ። +251-0911-06-03-78

ምን አልባት ስለተሳተፊነት መብት እንዲሁም በአካሄድ ወቅት ላሉት ቅሬት ወይም ጥያቄ ከዚህ በታች በተጠቀሰው አድራሻ ማሳወቅ ይችላሉ።

ዶ/ር መሰለ መንግስተአብ፣ የሶሻል ወርክ ት/ት ቤት ሃላፊ ስልክ +251-0911-44-58-70

Appendix XII: የጥልቅ ውይይት መግለጫ

ክፍል 1፡ ስለህዝባዊና ማህበራዊ መረጃዎች

ጥ#	ጥያቄ
1.	የመኖሪያ ቤትዎ የት ነዉ?
2.	መኖሪያ ቤትዎ ከዚህ ሆስፒታል ምን ያህል ይርቃል?
3.	ከመኖሪያ ቤትዎ እዚህ ሆስፒታል ለመምጣት ምን ያህል ጊዜ ይወስዳል? በህዚብ ትራንስርት
4.	እድሜዎ ስንት ነው?
5.	የጋብቻ ሁኔታዎ?
6.	የትምህርት ደረጃዎ ስንት ነው?
7.	የስራ ሁኔታዎ?
8.	መካከለኛ የቤተሰብ የወር ገቢ ምን ያህል ነው?
9.	ልጅ ወልደው ያውቃሉ?
10.	ምን ያህል ልጆች አለዎት?
11.	ምን ያህል ልጆች ከርስዎ ጋር ይኖራሉ?

ክፍል 2፡ የህክምና ሁኔታ (ከህመምተኛዉ ካርድ ላይ የሚሞላ)

ጥ#	ጥያቄ
12.	በማህጸን በር ካንሰር ከተያዙ ምን ያህል ጊዜ ሆኖዋቸዋል?
13.	የህመም ደረጃ ስንት ነው?
14.	እስካሁን ምን አይነት ህክምና አግኝተዋል? (ከአንድ በላይ መልስ ይቻላል)
15.	ከማህጸን በር ካንሰር በተጨማሪ ያሉ በሽታዎች?
16.	የጥያቄ 15 መልስ አዎ ከሆነ ምን አይነት ህመም አለባቸዉ?

<u>**ክፍል 3፡ የቃለመጠይቅ መመሪያ**</u>

1. ስለህመምዎ ያለዎት ግንዛቤ ምን ይመስላል? ያለብዎት ህመም ምንድነዉ? በህመምሙ መያዞ ሲነገርዎት ምን ተሰማዎት? ምልክቶቹስ ምን ነበሩ? በርሰዎ እምነት ህመምዎ ከባድ ነዉ ብለዉ ያስባሉ? ህክምና ለማግኘት እንዴት ወሰኑ?

2. ከህመምዎት ጋር በተያያዘ ላሉ ነገሮች መፍትሄ ለማግኘት በራስዎት ላይ ያለን ዉጤታማነት እንዴት ይገልጹታል? ከዚህ ህመም ለመዳን ማድረግ የምችለዉ ነገር አለ ብለዉ ያስባሉ? እንዴት? ከህመምዎ ጋር በተያያዘ ስለወደፊት ሁኔታዎ ምን ያስባሉ/ይገምታሉ?

3. በሆስፒታሉ ያገኙት የህክምና አገልግሎት ምን ይመስላል? እንዴት አገኙት፤ ከጤና ባለሙያዎች ጋር ያለዎት ግንኙነት፤ የምርመራዎን ውጤት ስለመረዳት ለህክምናው ውሳኔ፣ የጤና ክትትል፣ በአገልግሎቱ እርካታ ማግኘት?

4. ህመምዎ የስራ ሁኔታዎን ጎድቶታል? የቀን ተቀን የኑሮ ሁኔታዎችን እንዴት ጎዳው? በህመምዎ የተነሳ የገንዘብ ቀውስ ገጥሞታል?

5. በማህጸን በር ካንሰር መያዝዎ ባካባቢው ባሉ ሰዎች ላይ ለውጥ አምጥቷል? ምን አይነት ለውጥ? ከቤተሰብዎ ወይም በጓደኞቹ ላይ አይተዋል ከባለቤትዎ ጋር ያለው ግንኙነት ከህመምዎ በኋላ ተለውጧል? እንዴት?

6. የማህጸን በር ካንሰር እንዴት እየተቋቋሙት ነው? ህክምናው እንዴት እንደጎዳዎት ሊነግሩን ይችላሉ? ምን አይት የመቋቋሚያ መንገዶች ውጤታማ ሆኖብዎታል? የመቋቋሚያ መንገዶች ከጊዜ አንጻር እንዴት ተለዋዋጭነት ነበራቸው?

7. ማህበራዊ እገዛ እንዴት አገኙት? ተግባራዊ የሆነ እገዛ እንደሚፈልጉት አግኝተዋል? ምን አይነት የማህበራዊ እገዛ ለርሶ በጣም ጠቃሚ ነበር? ለማህበራዊ አገልግሎት ሰጭዎች ወይም በጎ አድራጎት ድርጅቶች የሚሰጡት ግብአት አለ?

8. ምን አይነት ስነልቦናዊና ማህበራዊ ድጋፍ በህክምና ክትትልና ጊዜና ከዛ በኋላ በጣም አስፈላጊ ነው ብለው ያስባሉ? ራስዎን መንከባከብ እንደሚችሉ ይሰማዎታል? የጤና ሌላ ባለሙያ እርሶ ራስዎን እንዲያግዙ እንዴት ሊረዳዎት ይችላሉ?

9. ዉይይታችንን ከመጨረሳችን በፊት ቀረ የሚሉት ነገር ካለ ሊነግሩኝ ይችላሉ?

መጠይቁን ጨርሻለሁ ስለትብብሮ አመሰግናለሁ!

Appendix XIII: Factor Analysis of the Translated Tools

Factor analysis for the translated Meaning in Life Questionnaire (MLQ)

The principal axis factoring was used for extraction of factors and Promax with Kaiser Normalization was run for rotation. The Kaiser-Meyer-Olkin (KMO) test score was 0.854 and Bartlett's test of sphericity was significant (χ^2 (df= 45) =2657.28, p<0.01) that indicates the sample is adequate. The scree plot indicated that two factors are above Eigen values of 1 that explained 73.42% of the variances in patients' meaning in life. The factor analysis confirms the original two-factorial structure of the meaning in life questionnaire (factor 1- search and factor 2- presence).

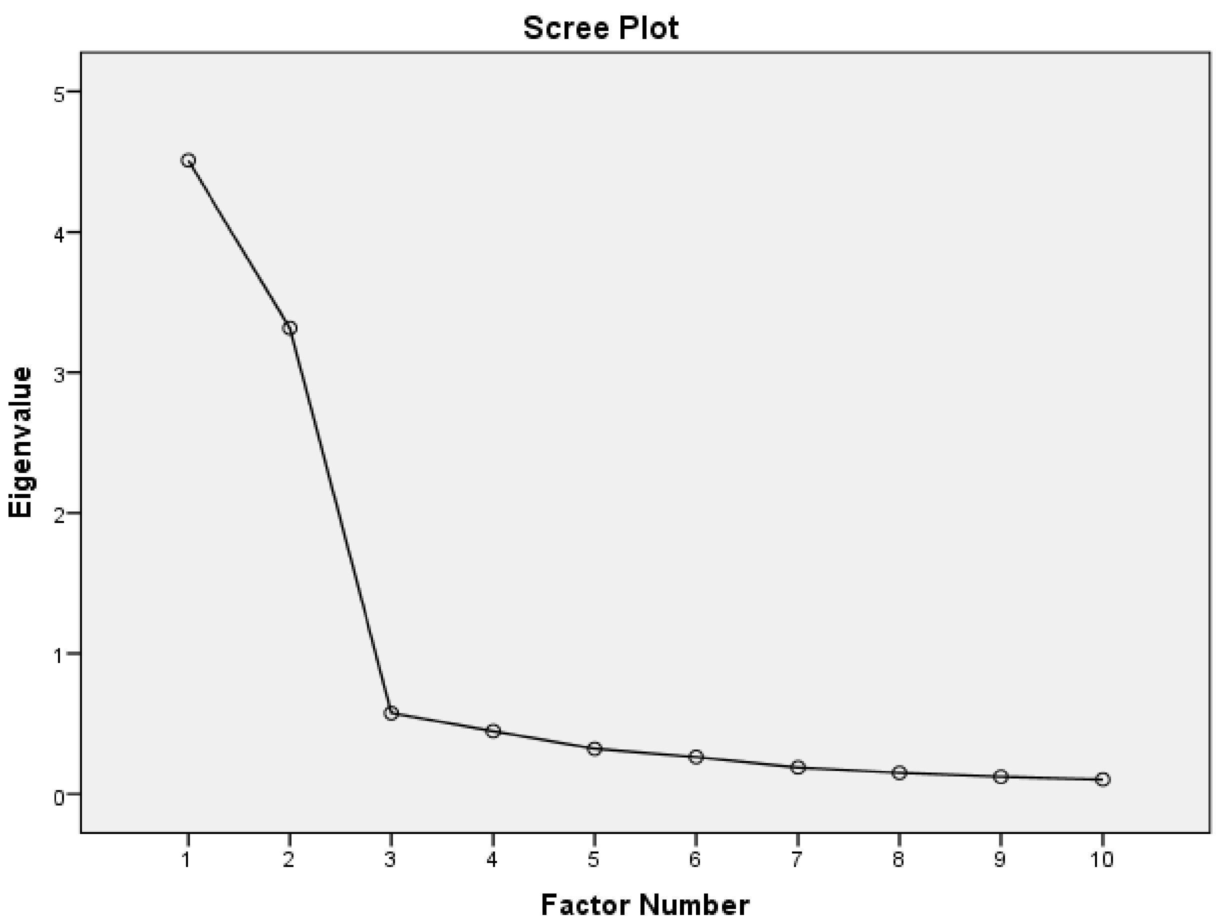


Figure 4: Scree plot of the translated meaning in life questionnaire

Table 20: Pattern matrix of the translated meaning in life questionnaire

Pattern Matrix[a]

	Factor 1	Factor 2
MIQ-8	.889	
MIQ-2	.880	
MIQ-7	.847	
MIQ-10	.842	
MIQ-3	.815	
MIQ-5		.939
MIQ-4		.923
MIQ-6		.904
MIQ-9		.736
MIQ-1		.630

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 3 iterations.

Factor analysis for the translated General Self-Efficacy Scale (GSES)

The principal axis factoring was used for extraction of factors and Promax with Kaiser Normalization was run for rotation. The Kaiser-Meyer-Olkin (KMO) test score was .939 and Bartlett's test of sphericity was significant (χ^2 (df=45) =2727.45 p<0.01) that indicates the sample is adequate. The scree plot indicated one factor are above Eigen values of 1 that explained 68.50% of the variances in patients' general self-efficacy. The factor analysis confirms the original one-factorial structure of the general self-efficacy scale.

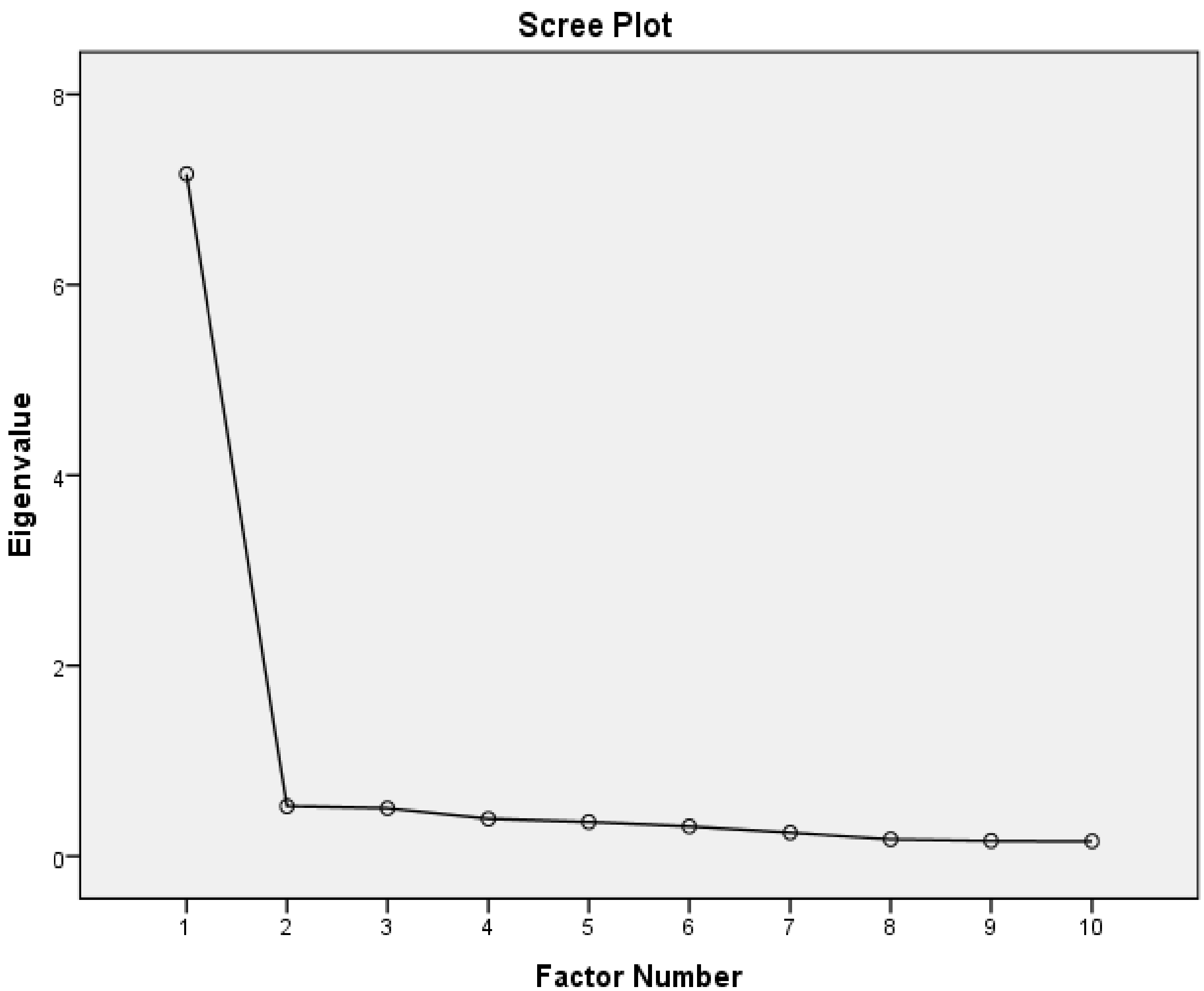


Figure 5: Scree plot of the translated general self-efficacy scale

Table 21: Pattern matrix of the translated general self-efficacy scale

Factor Matrix[a]

	Factor 1
GSE-10	.876
GSE-8	.867
GSE-2	.847
GSE-9	.837
GSE-3	.820
GSE-4	.813
GSE-5	.811
GSE-7	.808
GSE-1	.806
GSE-6	.789

Extraction Method: Principal Axis Factoring.

a. 1 factors extracted. 4 iterations required.

Factor analysis for the translated Multidimensional Scale of Perceived Social Support (MSPSS)

The principal axis factoring was used for extraction of factors and Promax with Kaiser Normalization was run for rotation. The Kaiser-Meyer-Olkin (KMO) test score was .944 and Bartlett's test of sphericity was significant (χ^2 (df=66) =8531.82 p<0.01) that indicates the sample is adequate. The scree plot indicated three factors are above Eigen values of 1 that explained 96.21% of the variances in patients perceived social support. The factor analysis confirms the three-factorial structure of the perceived social support (factor 1- family, factor 2- friend, and factor 3- significant other).

Figure 6: Scree plot of the translated multidimensional scale of perceived social support

Table 22: Pattern matrix of the translated multidimensional scale of perceived social support

Pattern Matrix[a]

	Factor		
	1	2	3
MSPSS-8	.916		
MSPSS-11	.911		
MSPSS-3	.904		
MSPSS-4	.901		
MSPSS-6		.910	
MSPSS-9		.887	
MSPSS-7		.862	
MSPSS-12		.832	
MSPSS-1			.843
MSPSS-2			.835
MSPSS-5			.772
MSPSS-10			.765

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Factor analysis for the translated Cognitive Appraisal of Health Scale (CAHS)

The principal axis factoring was used for extraction of factors and Promax with Kaiser Normalization was run for rotation. The Kaiser-Meyer-Olkin (KMO) test score was .853 and Bartlett's test of sphericity was significant (χ^2 (df=78) =2315.66 $p<0.01$) that indicates the sample is adequate. The scree plot indicated 3 factors are above Eigen values of 1 that explained 62.04% of the variances in patients' appraisal. The factor analysis confirms the three-factorial structure of the cognitive appraisal of health scale (factor 1- threat, factor 2- harm/loss, and factor 3- challenge).

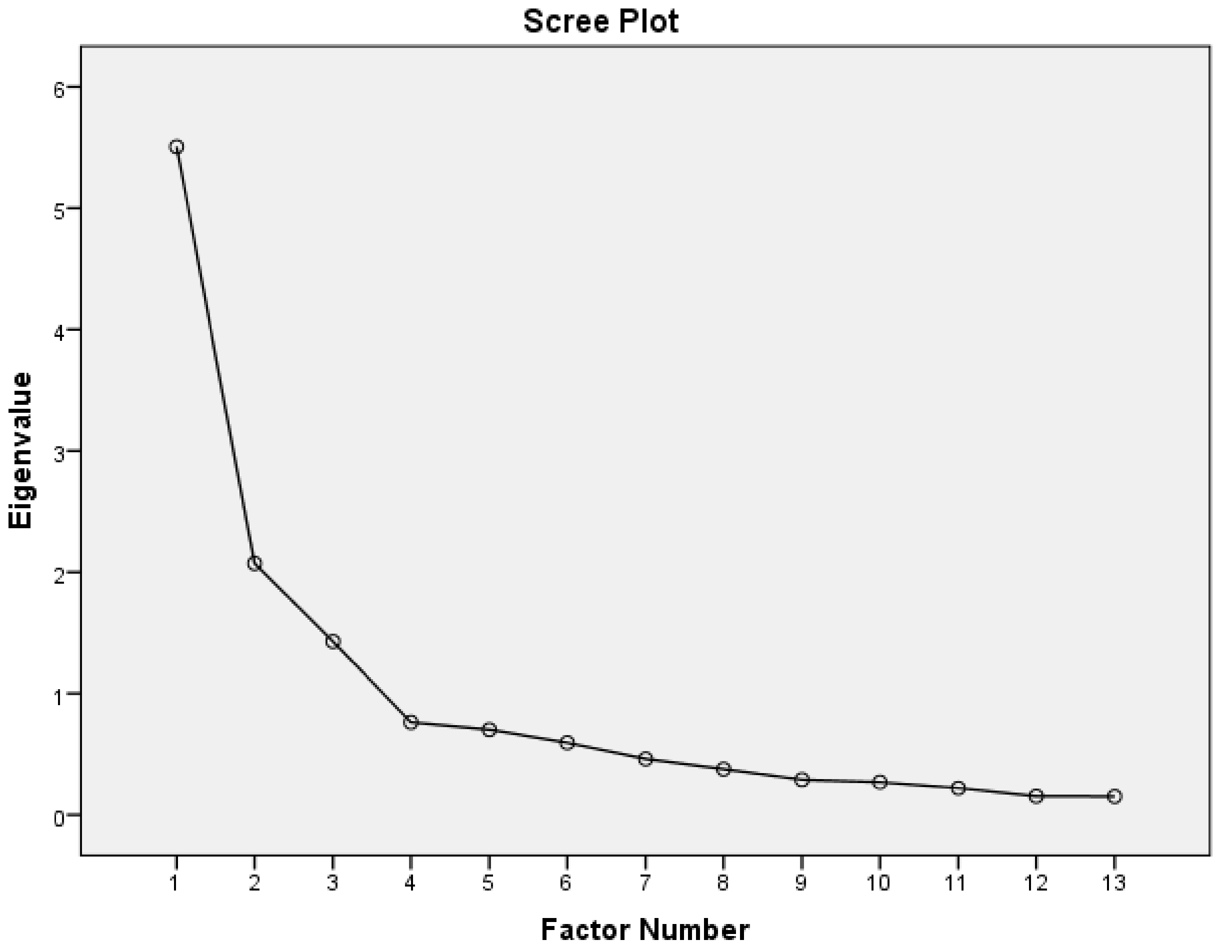


Figure 7: Scree plot of the translated cognitive appraisal of health scale

Table 23: Pattern matrix of the translated cognitive appraisal of health scale

Pattern Matrix[a]

	Factor		
	1	2	3
CAHS-2	.931		
CAHS-3	.892		
CAHS-17	.871		
CAHS-16	.802		
CAHS-20	.483		
CAHS-1		.895	
CAHS-19		.871	
CAHS-18		.670	
CAHS-6		.507	
CAHS-13		.493	
CAHS-10			.944
CAHS-11			.855
CAHS-23			.524

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Factor analysis for the translated Ways of Coping Questionnaire (Revised) (WC-R)

The principal axis factoring was used for extraction of factors and Promax with Kaiser Normalization was run for rotation. The KMO test score was .882 that indicates the sample is adequate. It was then found that 13 factors with Eigen value of more than 1 was extracted that explained 63.23% of the total variance in coping strategies. The result indicated that 7 item load less than 0.3, 4 factor had only 2 items, 1 factor had only 1 item. Hence the analysis was run with 7 factors. The result indicated that 4 items load less than 0.3, 1 factor had only 2 items, and 1 factor had only 1 item. These items were deleted and the analysis was rerun. The pattern matrix indicated that 3 items load in two factors. Then after, the analysis was run with 2 factors fixed. The result indicated that 3 items load less than 0.3. These items were deleted and when the analysis was rerun, clear pattern matrix with 2 factors resulted (factor 1: problem-focused coping strategies and factor 2: emotion-focused coping strategies). The two factors accounted for 40.46% of the variances in patients' coping strategies.

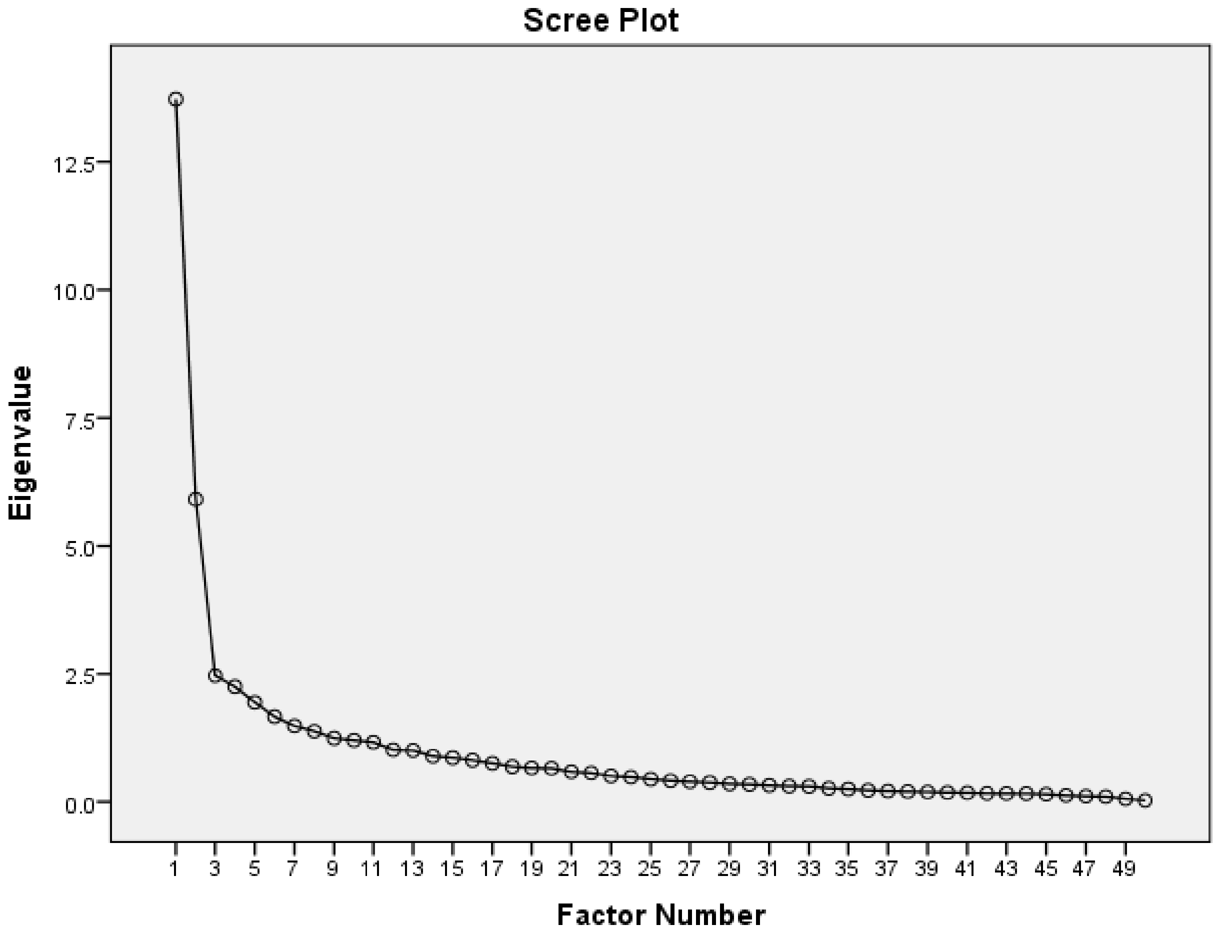


Figure 8: Scree plot of the translated ways of coping questionnaire (revised)

Table 24: Pattern matrix of the translated ways of coping questionnaire (revised)

Pattern Matrix[a]

	Factor	
	1	2
WC-R8	.802	
WC-R2	.804	
WC-R1	.794	
WC-R31	.758	
WC-R7	.751	
WC-R42	.748	
WC-R45	.738	
WC-R18	.722	
WC-R49	.711	
WC-R46	.698	
WC-R6	.642	
WC-R52	.629	
WC-R26	.609	
WC-R48	.416	
WC-R14		.849
WC-R9		.812
WC-R13		.807
WC-R15		.781
WC-R12		.743
WC-R23		.734
WC-R36		.700
WC-R16		.695
WC-R38		.687
WC-R30		.678
WC-R20		.658
WC-R56		.641
WC-R43		.522
WC-R25		.488
WC-R44		.414
WC-R50		.399
WC-R51		.366

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 3 iterations.

Appendix XIV: Estimates of Reliability for the Translated Tools

The reliability estimates for meaning in life, perceived social support, uncertainty, self-efficacy, cognitive appraisal, coping strategies and psychosocial adjustment were computed using the Cronbach's alpha technique. As the estimates in Table 26 indicate, meaning in life (presence) had an alpha score of .86, Meaning in life (search) had an alpha score of .93, Multidimensional Scale of Perceived Social Support (MSPSS) had an alpha score of .84, Mishel Uncertainty in Illness Scale (MUIS) had an alpha score of .73, General Self-Efficacy Scale (GSES) had an alpha score of .85. Harm/Loss. Challenge and Threat Appraisal of (CAHS) had an alpha score of .79, 81, and 80 respectively. Problem Focused Coping (PFC), Emotion Focused Coping (PFC) had alpha scores of .91 and .87. These scales demonstrated adequate internal consistency estimates. The results of the analysis are provided in Table 26.

Table 26: Scale reliability estimates of the translated tools

Instrument	**Cronbach's Alpha**	**Mean**	**SD**	**Range**
Meaning in Life Questionnaire (MLQ)				
Meaning in life (presence)	.86	16.32	6.044	25(5-30)
Meaning in life (search)	.93	23.45	4.548	25(5-30)
Multidimensional Scale of Perceived Social Support (MSPSS)	.84	53.58	14.252	72(12-84)
Family support	.89	21.15	4.121	24(4-28)
Friend support	.88	15.80	5.332	24(4-28)
Significant other support	.87	16.42	5.585	24(4-28)
Mishel Uncertainty in Illness Scale (MUIS)	.73	79.36	6.36	36(60-96)
General Self-Efficacy Scale (GSES)	.85	17.85	6.045	26(10-36)
Cognitive Appraisal of Health Scale (CAHS)				
Harm/Loss appraisal	.79	20.80	2.459	14(28-40)
Challenge appraisal	.81	10.75	2.046	12(3-15)
Threat appraisal	.80	21.95	2.239	11(14-25)

Ways of Coping Questionnaire (Revised) (WC-R)				
Problem Focused Coping (PFC)	.91	14.01	8.460	18(8-26)
Emotion Focused Coping (EFC)	.86	24.09	7.210	17(28-45)

Appendix XV: Assumption Test Results of Regression Analysis

Model 1 (Harm/Loss appraisal)

Assumptions of normality distribution was checked by P-P plot of regression standardized residual and histogram of regression standardized residual. The result suggests there is no violation of normality assumption. Assumptions of multicollinearity was assessed by tolerance and VIF score. The result yielded VIF score ranging from 1.112-2.889 and tolerance of 0.364-0.899 indicating no multicollinearity. The visual inspections of the scatter plot didn't suggest problems with linearity. The visual examination of a plot of the standardized residuals by the regressions standardized predicted value suggest there is no serious violation of homoscedasticity. The independence of the residuals measured by Durbin-Watson statistics was 2.06, indicating that there is no correlation among the residuals.

Model 2 (Challenge appraisal)

Assumptions of normality distribution was checked by P-P plot of regression standardized residual and histogram of regression standardized residual. The result suggests there is no violation of normality assumption. Assumptions of multicollinearity was assessed by tolerance and VIF score. The result yielded VIF score ranging from 1.674-2.864 and tolerance of 0.349-0.757 indicating no multicollinearity. The visual inspections of the scatter plot didn’t suggest problems with linearity. The visual examination of a plot of the standardized residuals (the errors) by the regressions standardized predicted value suggest there is no serious violation of homoscedasticity. The independence of the residuals measured by Durbin-Watson statistics was 1.89, indicating that there is no correlation among the residuals.

Model 3 (Threat appraisal)

Assumptions of normality distribution was checked by P-P plot of regression standardized residual and histogram of regression standardized residual. The result suggests there is no violation of normality assumption. Assumptions of multicollinearity was assessed by tolerance and VIF score. The result yielded VIF score ranging from 1.115-2.904 and tolerance of 0.344-0.897 indicating no multicollinearity. The visual inspections of the scatter plot didn't suggest problems with linearity. The visual examination of a plot of the standardized residuals (the errors) by the regressions standardized predicted value suggest there is no serious violation of homoscedasticity. The independence of the residuals measured by Durbin-Watson statistics was 1.84, indicating that there is no correlation among the residuals.

Model 4 (Emotion-focused coping strategies)

Assumptions of normality distribution was checked by P-P plot of regression standardized residual and histogram of regression standardized residual. The result suggests there is no violation of normality assumption. Assumptions of multicollinearity was assessed by tolerance and VIF score. The result yielded VIF score ranging from 1.210-3.994 and tolerance of 0.250-0.826 indicating no multicollinearity. The visual inspections of the scatter plot didn't suggest problems with linearity. The visual examination of a plot of the standardized residuals (the errors) by the regressions standardized predicted value suggest there is no serious violation of homoscedasticity. The independence of the residuals measured by Durbin-Watson statistics was 1.92, indicating that there is no correlation among the residuals.

Model 5 (Problem-focused coping strategies)

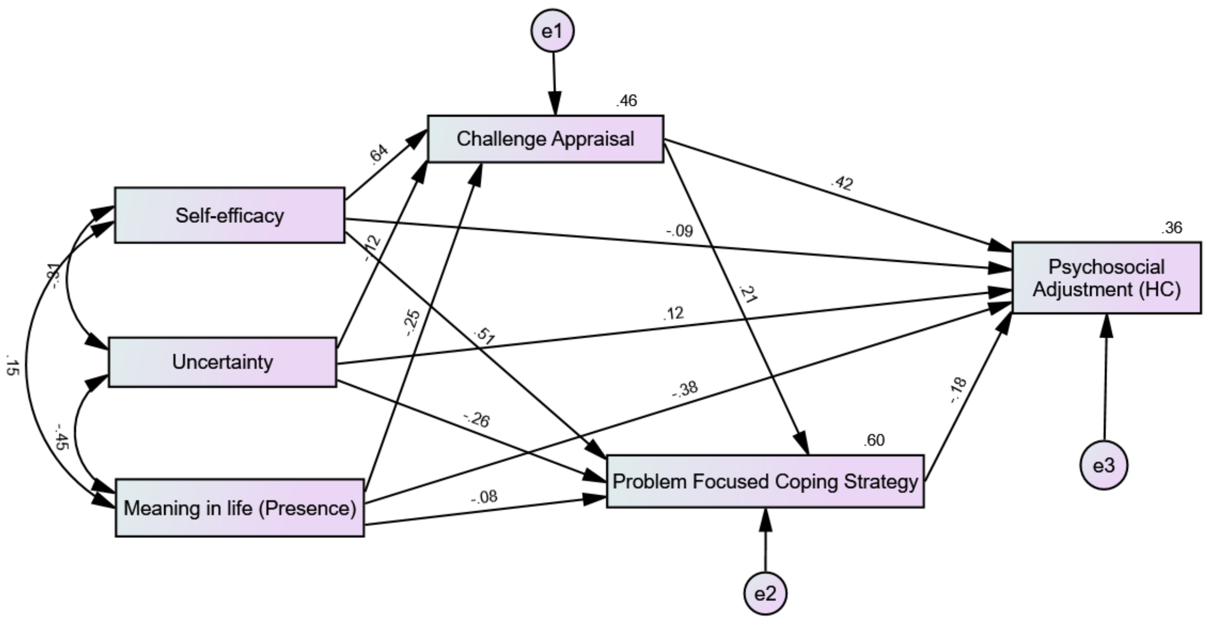
Assumptions of normality distribution was checked by P-P plot of regression standardized residual and histogram of regression standardized residual. The result suggests there is no violation of normality assumption. Assumptions of multicollinearity was assessed by tolerance and VIF score. The result yielded VIF score ranging from 1.251-3.016 and tolerance of 0.237-0.799 indicating no multicollinearity. The visual inspections of the scatter plot didn't suggest problems with linearity. The visual examination of a plot of the standardized residuals (the errors) by the regressions standardized predicted value suggest there is no serious violation of homoscedasticity. The independence of the residuals measured by Durbin-Watson statistics was 2.00, indicating that there is no correlation among the residuals.

Model 6 (Psychosocial adjustment)

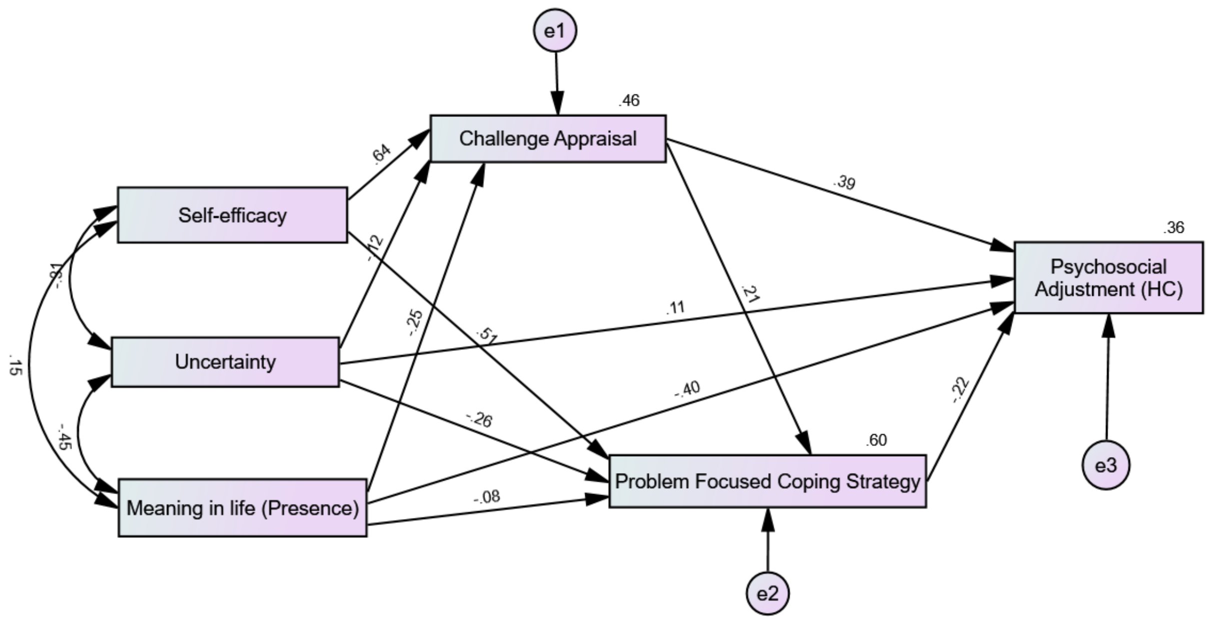
Assumptions of normality distribution was checked by P-P plot of regression standardized residual and histogram of regression standardized residual. The result suggests there is no violation of normality assumption. Assumptions of multicollinearity was assessed by tolerance and VIF score. The result yielded VIF score ranging from 1.113-3.773 and tolerance of 0.265-0.898 indicating no multicollinearity. The visual inspections of the scatter plot didn't suggest problems with linearity. The visual examination of a plot of the standardized residuals (the errors) by the regressions standardized predicted value suggest there is no serious violation of homoscedasticity. The independence of the residuals measured by Durbin-Watson statistics was 1.82, indicating that there is no correlation among the residuals.

Appendix XVI: Initial and Trimmed Mediation Model

Initial model



Trimmed model



Appendix XVII: Declaration

I, the under signed, declare that this dissertation is my original work. It has not been presented in any other University and that all sources of materials used for this work have been duly acknowledged.

Name: Anteneh Dirar Aliyu

Signature: ______________

Date: __________________

This dissertation has been submitted for examination with my approval as a supervisor.

Name: Dr. Wubegzier Mekonnen (Principal Advisor)

Signature: _________________

Date: _____________________

Name: Dr. Zena Berhanu (Co-Advisor)

Signature: ____________

Date: ________________