UNIVERSITY of RWANDA

QUALITY OF LIFE AND ASSOCIATED FACTORS AMONG CERVICAL CANCER PATIENTS ATTENDING A GIVEN HOSPITAL IN RWANDA

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DECLARATION

I do here declare that this research entitled QUALITY OF LIFE AND ASSOCIATED FACTORS OMONG CERVICAL CANCER PATIENTS ATTENDING A GIVEN HOSPITAL IN RWANDA as a part of the requirements in the Degree of Masters in Nursing Sciences at the University of Rwanda, College of Medicine and Health Sciences; it is my original work and has not been submitted before elsewhere. I declare that a complete list of references is provided to indicate all the sources of information.

NIRAGIRE Leonie

DEDICATION

I dedicate this project to Almighty God, my creator, my strong pillar, my source of inspiration, wisdom, knowledge and understanding. He has been the source of my strength throughout this program.

I also dedicate this work to my husband IRAGUHA Emmanuel who has encouraged and helped me all the way.

To my children I.K.Yann, I.I. Yvon, I.I. Yannick, I.A. Gaella and I.E.Parfaite who have been affected in every way possible by my studies.

To my mother

To Mr Isaac MACHUKI OGONCHO

To my supervisors

To my brothers and sisters

To all my classmates

Thank you.

God bless you

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ABSTRACT

Introduction: Cervical cancer is the most common type of cancers affecting women. Therefore, Quality of life (QOL) and its associated factors assessment among cervical cancer patients is considered to be an important aspect in care given for those patients.

Purpose of the study: This study sought to assess the QOL and its associated factors among cervical cancer patients receiving all kind of care at Butaro District Hospital.

Methodology: A convenient non probability was conducted to all eligible patients taking different cervical cancer care at Butaro DH. The data was collected in three months and half from 11th February2019 to 25th May 2019. QOL was measured using the Missoula Vitas QOL Index. Data was coded and entered into Statistical Package for the Social Sciences version 21. Social demographic, clinical factors and level o quality of life were firstly analysed using descriptive statistic. Inferential statistics was used to quality of life.

Results: In this study, the QOL was poor on 63.5% and QOL was founded to be independent of social demographic factors, but dependant on clinical characteristics in its subcomponent of other related treatments (P = 0.03).

Conclusion: QOL was poor on 63.5 % and the worsening party of his one is other related treatment composed by physical, social, psychological and spiritual care or treatment which means that clinical characteristics affect negatively the QOL.

LIST OF FIGURES AND ABREVIATIONS

%   : Percent

AIDS   : Acquired immunodeficiency syndrome

BCCOE   : Butaro cancer center of excellence

CC   : Cervical Cancer

CXR   : Chest X-Ray

DH   : District Hospital

Dr.   : Doctor

HIV   : human immunodeficiency virus

HPV   : Human Papilloma Virus

HRQOL   : Health related quality of life

LEEP   : loop electrosurgical excision procedure

MVQOLI : Missoula vitas quality of life index

No   : Number

P   : P-Value

QOL   : Quality of life

RDC   : Republic democratic of Congo

 Reg   : Registration

SPSS   : Statistical Package for the Social Sciences

WHO   **:** World health Organisation

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CHAPITER ONE

I.1. Introduction

Quality of life (QOL) is an important outcome measure and necessary as a result of care given when caring for cervical cancer patients. QOL has been defined as the subjective evaluation of life as a whole or the patients' appraisal and satisfaction with their current level of functioning compared with what they perceive to be possible or ideal (Ahmad A. et al. 2016.) QOL is multidimensional focussing on the physical, social, Psychosocial and spiritual wellbeing of the patient especially those suffer from cancer(Lee et al. 2016.p1109). In this study, the factors which can worsen the QOL as social demographic factors and clinical characteristics will also be assessed.

I.2. Background

1.2.1 Quality of life

According to (WHO,1995), quality of life defined as an individuals' perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns(Crocker *et al.*, 2019). It is a broad ranging concept affected in a complex way by the persons' physical, psychological, Independence, social relationships, environment & Spirituality to salient features of their environment(Jern, 1988),(Singer and Bowman, 2002). WHO reported that the worldwide QOL was 20% in general. According to the countries:in America, QOL was between 80.8 − 12.7%, in Asia Pacific 91.6 − 14.1%, In Europe 93.9 − 24.5%, in Middle East Africa 48.5 − 12,5% (Economist Intelligence Unit, 2015). According to the income, as the country income is high, as the quality of life is goodand the rage of QOL for them was 93.9 − 30.8% where in UK, the QOL was 93.9%, Australia, 91.6%. In countries with middle income countries the range of QOL equal 57.5 _ 12,5% and the examples of those countries are Costa Rica 57.5%, South Africa 48.5%. For low income countries, except Mongolia had 57.7 % and Uganda of 47.8%, the range of QOL was 34.3% to 14.1% and those results were for 80 countries participated in "the 2015 Quality of Death Index Ranking palliative care across the world.(Economist Intelligence Unit, 2015)

1.2.2 Cervical cancer

Cervical cancer is a type of cancer that occurs in the cells of the cervix which is the lower part of the uterus that connects to the vagina. Various strains of the human papillomavirus (HPV), a sexually transmitted infection, play a role in causing most cervical cancer(Owuor J. et al, 2016.p23).

The cervical cancer has no visible signs and symptoms, but as the stage becomes advanced as the patient experienced some signs and symptoms like: thin, watery, blood tinged vaginal discharge frequently goes unrecognised by the patient; abnormal vagina bleeding in intermenstrual, postcoital associated with pain, perimenopausal, postmenopausal and blood stain foul vaginal discharge(Makuza et al., 2015).At Late stage, the patient presents Pain, leg edema, Urinary and rectal symptoms, Dysuria, Hematuria, Rectal bleeding, Constipation, Haemorrhoids, Uraemia and Lymphedem(WHO 2014).

Worldwide, cervical cancer was the fourth most common cancer among women in 2012. There were an estimated 528000 new cases of cancer, approximate 266000 women died of cancer, accounting for 7,5 % of all female cancer deaths. About 87% of cervical cancer deaths occurred in developing country (International Agency for research on cancer,2017). Globally, in gynaecology-obstetric discipline cervical cancer is the first cause of death. Currently it is mainly found in lower income country, including Rwanda, where around 500000 new cases (83% of worldwide cases) are diagnosed every year(Makuza et al., 2015). It make a big number of children to be orphans without forget the poverty associated with this diseases(Amu EO, 2017). In Sub-Saharan Africa, cervical cancer accounts for 22.5% of all cancer cases in women, and the majority of women who develop cervical cancer live in rural areas. Eastern Africa is one of the most heavily affected areas with an incidence of more than 30 cases per 100,000 women per year(Makuza et al., 2015). Rwanda has a population of 11 million with 2.72 million women aged 15 years and older who are at risk of developing cervical cancer Current estimates indicate that every year nearly one thousand women are diagnosed with cervical cancer and almost 700 die from the disease(Owuor et al., 2016). Cervical cancer ranks as the most frequent cancer among women in Rwanda, and the most frequent cancer among women between 15 and 44 years of age. The estimated incidence of cervical cancer in Rwanda is 49 cases per 100,000 women per year, much higher than the estimated rates in Eastern Africa and worldwide, 34.5 and 16 new cases per 100,000 women, respectively(Owuor et al, 2016). At Butaro district hospital, cervical cancer patients were 598from 2012 to 2016. It founded that several key risk factors for cervical cancer are common in sub-Saharan countries, including prolonged HPV infections and HIV/AIDS ,sexual activity before age of 20 years old, multiple sexual partners, tobacco smoking, oral contraceptive pill use for more than 5 years, history of cervical cancer in the family, high parity (more than 3 children born), and immune-depression due to malnutrition or other systemic diseases(Amu EO, 2017) , (Makuza et al, 2015).

The management of CC depends on its stage because in stage IA, the consideration is the reference to existing national guidelines of CC screening if not it comes cone biopsy or loop electrosurgical excision procedure (LEEP). If patient has stage IA2-IB/early IIA cancer, the treatment is radical hysterectomy. If the patient wants to maintain her fertility, and has early stage I disease, observation of the lesion is possible, if cone biopsy margins are negative. Simple hysterectomy may be acceptable in early stage I disease if fertility is not an issue, and if the delay to obtaining either radical surgery or radiation might result in progression of disease(Dimitrova et al., 2017).

Radical hysterectomy is preferably with pelvic lymphadenectomy. In case of gross evidence lymph node disease during surgery, or lymphnode pathology is positive for cancer, the recommended treatment is chemoradiotherapy. Radical hysterectomy & pelvic lymphadenectomy or primary chemoradiation are the gold standard for treatment of Stage IB-IIA cervical cancer. However, if there is no evidence of metastatic disease (ie. Normal CXR, abdominal and pelvic ultrasounds) and no evidence of vaginal or parametrial spread on pelvic exam and there is no available surgeon to perform a radical hysterectomy & pelvic lymphadenectomy and the patient is unable to obtain primary chemoradiation, then a simple hysterectomy may be considered. For stage IIB, primary treatment with curative intent is chemoradiotherapy.(Endarti et al.,2015).About Stage III and IV the preferred treatment with curative intent is chemoradiotherapy if financially possible. Although the five year survival is lower than Stage IIB, cure is still possible with chemoradiotherapy in Stage III and IV. Here, palliative chemotherapy is possible, usually with carboplatin and paclitaxel. Palliative care is recommended for advanced stages of disease when chemoradiotherapy is not possible. Palliative care includes medications for pain, constipation, anemia, and transfusions as needed.(Azmawati M. N.et al. 2014b)

There is also follow up: for Stage I or II disease after curative therapy: every 6-12 months for 5 years; no routine blood work or x-rays unless clinically indicated; for metastatic disease, every 1-6 months the follow up must done indefinitely or as medically indicated : blood work and x-rays as clinically indicated.

For instance a study done in Rwanda about cervical screening in tertiary care canter, few patients who have undergone biopsy 26% were found to have cervical cancer(Ruzigana, G. et al. 2017). As many factors are associated with the burden of this disease as the QOL about patients suffer with this one looks as low specifically in low income country where situated Rwanda. Lack of QOL or low QOL accelerates the impact of cervical cancer in killing many women, is the reason why QOL is needed in order to help and save many lives.

Same researches report to have afraid about sex like the feeling of having a too narrow or short vagina after radiotherapy session. Self-perceived health status was the most influential factor in case of QOL. Special attention should be given to the sexual dysfunctions of these women after radiotherapy. (Fernandes & Kimura 2010.p362) and women with advanced cervical cancer may experience pain during sexual intercourse because of tumors throughout tissues and reproductive organs, they experience also the vagina discharge and foul smelling at which make the patient isolate(Weyers, De Sutter, Hoebeke and Monstrey, 2010). There is also low back, pelvic or appendix and leg pain due to disease process without forget the abnormal vaginal bleeding, loss of appetite and unexplained weight loss(Byock I.R. and Merriam M.P, 1998); and all those factors make them to be isolated and stigmatised. That is why the QOL with consideration of their factors related is needed for them.

I.3. Problem statement

QOL is a multidimensional concept focussing on the physical, social, psychosocial and spiritual wellbeing and the associated factors are: clinical characteristics and social demographic need more assessment, especially to the patient suffers from cervical cancer.

Care of cervical cancer patients often focuses on physical well being and not on the psychological, social and spiritual well being. And there is no study in Rwanda describing quality of life and associated factors. In a study conducted in Uganda and South Africa among cancer and HIV/AIDS patients undergoing palliative care, poor QOL scores were reported because of focusing on the physical aspects of care with less regard to holistic outcomes such as QOL (by Selman et al.2011). Again, Paul et al. (2016) in their study on QOL for the patients suffering with cervical cancer, poor QOL scores were reported because of focussing on physical aspects of care rather than other components of QOL.

Regarding associated factors, it was seen that social demographic factors and patients' type of cancer, type of cancer treatment, duration of illness and palliative care services were the clinical characteristics identified that affected QOL among gynaecological cancer patients according to the study conducted in Kenya (Machuki Ogoncho *et al.*, 2015); the
reason why we aim to conduct a research study about QOL and associated factors of cervical cancer patients consulting Butaro District Hospital for assessing is there is same barriers to holistic care such as the predominance of focusing on physical aspect of care and the assessment of pain and other symptoms(Osann et al., 2014), and to see at which level the psychological, social and spiritual care given as component of QOL for reaching holistic care. We will analyse

the level at which the associated factors, like clinical characteristics and socio-demographic, can or not worsening the Quality of life.

I.4. Purpose of the study

The purpose of this study is to assess the quality of life and its associated factors among cervical cancer patients of Butaro district hospital.

I.5. Objectives of the study

- To determine the quality of life among cervical cancer patients at selected hospital in Rwanda by February to May 2019
- To identify the associated factors of QOL among cervical cancer patients in this selected hospital in Rwanda by February to May 2019

I.5. Research questions

- What is the quality of life among cervical cancer patient attending Butaro DH?
- What are the factors associated with QOL among cervical cancer patients in Butaro hospital?

I.6. Rationale / Significance of the study.

Nursing practice

This study will help in identifying the specific needs of cervical cancer patients and by addressing them, it will improve their quality of life true care given based to the identified needs.

Nursing education

The study findings will provide readers with knowledge about QOL, QOL and associated factors in case of cervical cancer and other domain of life in general

Nursing administration

The study findings will provide clinicians, leaders, stakeholders and other health planners the guidelines and protocols orientation regarding Quality of life and the management of its associated factors.

Nursing research

It will serve the references to other researches and interest other researchers on research bout QOL especially QOL and associated factors among cervical cancer patients. It will be a baseline for further research.

I.7. Operational definition:

Cervical cancer

Cervical cancer is a type of cancer that occurs in the cells of the cervix — the lower part of the uterus that connects to the vagina(Gbenga O.2017.p3). This study will help to assess cervical cancer patient for being aware about their quality of life according to received care comparatively to patient care expectation.

Quality of life: An individual's sense of well being and ability to perform daily tasks or contentment with everyday life; the degree of enjoyment and satisfaction experienced in everyday life. In this study, it will be composed by Physical, spiritual, psychological and social well-being of patient(Brush 1999.p13).

Associated factors: contributing elements joined together or working in relationship. In this study, it will composed by clinical characteristics and Socio-demographic factors(Fernandes and Kimura, 2010)**.**

Conclusion

This chapter was to demonstrate the quality of life, situation of cervical cancer patients and how they are affected by this one true background and is show the problem statement as motivation of choosing this topic; it shows also the objectives, research questions and the expected rationale.

CHAPITER TWO: LITERATURE REVIEW

II.1. Introduction to Literature review

Literature review is summary of current empirical and theoretical knowledge about particular practice problem that provides a basis for the study conducted(Tongco, 2007).

The current literature bases on components of QOL as result of care given to cervical cancer patients and it will had two dimensions which are the health related QOL (HRQOL) which is concerned with the domains of life that are directly affected by changes in health and those are physical, psychological, Social and spiritual effects of the disease.

As non health related QOL which are the associated factors like socio-demographic effects among cervical cancer patients on their quality of life will be discussed in addition, the clinical characteristics of the patients that include the duration of illness, the stage of the disease and the types of treatment used to manage the cervical cancer will be discussed in relation to their effects on the QOL of the patient(Machuki O., 2015.p19)

II.2. Theoretical literature

WHO define QOL as an individual's perception of their position in the context of the culture and value systems in which they live in relation to their goals, expectations, standard and concerns(Selman, L. E. et al., 2011).

The concept of QOL especially in relation to its dimensions namely physical, social, psychological and spiritual is important for patients with cervical cancer. QOL has become essential in cancer care with its goal of helping the patients to achieve the highest quality of care(Oudsten and Vries, 2011).

II.2.1. Cervical cancer

As said by International Journal of women's health (2017), cervical cancer is the most common genital malignancy in women worldwide, with an incidence of 500,000 cases/year and a very high mortality of at least 300,000 deaths/year. Cervical cancer is the fourth most common cancer in women worldwide and the second most common female cancer in women aged 15-44 years old worldwide .In 2012 there were an estimated 528,000 new cases of cervical cancer and 266,000 deaths from cervical cancer, with 70% of those deaths occurring in developing countries(Riedel, 2015) . In Sub-Saharan Africa, cervical cancer accounts for 22.5% of all cancer cases in women, and the majority of women who develop cervical cancer live in rural areas(Owuor et al. 2016.p12). Eastern Africa is one of the most heavily affected areas with an

incidence of more than 30 cases per 100,000 women per year. Rwanda has a population of 11 million with 2.72 million women aged 15 years and older who are at risk of developing cervical cancer Current estimates indicate that every year nearly one thousand women are diagnosed with cervical cancer and almost 700 die from the disease(Owuor *et al.*, 2016). Cervical cancer ranks as the most frequent cancer among women in Rwanda, and the most frequent cancer among women between 15 and 44 years of age. The estimated incidence of cervical cancer in Rwanda is 49 cases per 100,000 women per year, much higher than the estimated rates in Eastern Africa and worldwide, 34.5 and 16 new cases per 100,000 women, respectively(Owuor *et al.*, 2016). Cervical cancer does not initially cause pain, and only occasional spotting is reported. Because of this lack of symptoms, it is rarely detected in the early stage(Khalil *et al.*, 2015). From the moment the cancer is diagnosed, treatment for cervical cancer includes multiple modalities such as surgery, chemotherapy, and radiation and leads to changes in the affected woman. And that is why they become harmful after lessening the news of being affected by this one.

II.2.2. Pathology of cervical cancer

The Human Papilloma Virus (HPV) is a necessary (but not a sufficient) cause of CC . Most HPV infections are sexually transmitted, and the virus is usually spontaneously cleared by the body . However, about 2% of infection by 'high risk' (or oncogenic) strain of HPV persists in the cervix to cause premalignant and malignant lesions(Branch *et al.*, 2013).

II.2.3. Risk Factors for Cervical Cancer

It was seen that population group and socio-economic status because racial disparities in the incidence and mortality of CC has been reported in many countries than others(Facts, 2017). About the age, peak age of incidence of CC is 52-60 years in South Africa, Nigeria, Korea and England. However, the peak age of CC among people living with HIV/AIDS was between 35 and 40 years before the advent of ART(Olorunfemi G. 2017.p6). Others factors of CC include Genetic predilection, Depressed Immunity (Human Immunodeficiency Virus infection) and Tobacco and alcohol use as demonstrated by the International Agency for Research on Cancer (IARC) designates tobacco smoking as a carcinogen for CC(Makuza *et al.*, 2015), (Olorunfemi G. 2017).

Sexual behaviour and reproductive behaviour of women are also factors of CC because of sexually transmitted infections such as chlamydia, gonorrhoea and herpes have been associated with HPV infection which is main cause of CC . (Korfage *et al.*, 2009) again, many researchers shown that the risk of CC among women who had their first pregnancy before their 17th birthday was almost double that of women who had their first pregnancy at or after 25 years. Also, CC

risk has been shown to increase with increasing parity. (Cooper *et al.*, 2007) and the effect of Contraception regarding CC must not be inconsiderable. Also, smoking is believed to potentiate the risk of hormonal contraceptives on CC evolution(Cooper *et al.*, 2007).

II.3. Empirical literature

The concept of QOL especially in relation to its dimensions namely physical, social, psychological and spiritual is important for patients with cervical cancer. QOL has become essential in cancer care with its goal of helping the patients to achieve the highest quality of care(Oudsten and Vries, 2011). In this literature review, we focus also on associated factors of QOL among cervical cancer patient attending Butaro Hospital and those factors which are socio-demographic status, clinical characteristics of the patients , duration of illness, stage of disease and type of treatment for getting their effect on QOL among those patients.

II.3.1. Quality of life

QOL as a multidimensional concept has both been subjective and varied in nature. Quality of life assessment has been conceptualized into both subjective and multidimensional perspectives. Subjectivity relates to the understanding of QOL from the patient's perspective while multidimensionality relates to assessing the different dimensions of the patient's life like physical, emotional, functional and social well-being(Machuki, 2015).

QOL has been defined as the subjective evaluation of life as a whole or the patients 'appraisal and satisfaction with their current level of functioning compared with what they perceive to be possible or ideal(Shandiz *et al.*, 2017). The Missoula Vitas Quality Of Life Index will be used for assessment of the patients 'subjectivity.

II.3.2. Physical well being

The physical wellbeing refers to the extent to which cancer and its treatment affect physical changes and cause disturbances in the performance of daily activities. It has been indicated that the physical functioning of cervical cancer patient was affected by the physical problems including exhaustion that occur following cancer treatment (Zeng, Ching and Loke, 2010). However, this assertion excludes the wide range of sequel like pain and fatigue that result from the diseases itself which also impairs physical functioning. Fatigue has been identified as the most significant factor affecting daily activities among cervical cancer(Oudsten and Vries, 2011). Some of cervical cancer patients experience the surgical procedure which is source of pain associated with physical discomfort and made functional deficits like inability to work. Cervical cancer related to pain is associated with reduced performance status and poor QOL (Ljuca and

Marosevic, 2009). A study conducted among long term cervical cancer survivors reported a high prevalence of chronic pain in the lower back and hips following radiotherapy which affects their physical functioning.(Korfage *et al.*, 2009)

II.3.3. Psychosocial well being

The mental health status and social interactions can also be disrupted by cervical cancer and its treatment. Cervical cancer induced bone pain has been associated with anxiety and depression that affect the psychological wellbeing of the patient. Cancer patient undergoing chemotherapy and radiotherapy experience same psychological effects in their lives which cannot be overlooked like anxiety, stress and depression as reported in long term follow-up study of patient with advanced cancer(Korfage *et al.*, 2009),(Klügel *et al.*, 2017). Being a terminal disease, patients are inclined to remain worried about their future life and the prognosis of the disease. The fear bout recurrence of the disease is a worrying feature among cancer patient even after undergoing radiotherapy(Pfaendler *et al.*, 2015). This state of anxiety can be allayed by health workers through a well schedule follow up programme where adequate and appropriate information is shared with the patient concerning their illness. Anxiety about sexual performance following radiotherapy is also a major worry among cervical cancer patients(Ahmad A. et al. 2016.p82). Sexual relations become difficult or uncomfortable following cancer diagnosis and treatment. Impaired sexual functioning is a sensitive concern where partner involvement is important for mutual understanding to prevail especially during counselling sessions. However, a contrasting finding was made in a different study that showed no association between QOL and radiotherapy treatment. Long term cervical cancer survivors have been reported to have clinically significant worse body image and social functioning following cancer treatment(Ljuca and Marosevic, 2009). This demands adequate support from the family and involvement of the patient in social activities.

Generally depression and anxiety have been shown to increase in the life of a cancer patient mostly associated with the fear of recurrence or spreading of the disease which negatively affects QOL of the patient(Pfaendler *et al.*, 2015). The interpersonal and well being subscales in the MVQOLI corresponding to social and psychological well being exhibited poor QOL scores among cancer patient receiving palliative care in a study conducted in Uganda and South Africa (L. Selman *et al.*, 2011) though the scores were higher for the interpersonal subscare in the studies conducted USA(Ahmad A. et al. 2016.p81) . This could be a function of differences in the perception of these dimensions between the Americana and Africans and/or the treatment and support administered in these two settings to meet the patient needs.

II.3.4. Spiritual well being

Spiritual care among cancer patients accounts for variance in their QOL. Patients with advanced cancer take spirituality seriously in their lives and many seek help for their spiritual needs(Costello, 2018) . With cervical cancer diagnosis, same patients lose meaning in life and depend on their continued existence in this world. Most patient with advanced cancer experience one or more spiritual concerns. Therefore understanding the spiritual themes including beliefs, community, coping, transformation and practices of this one may take a good place in advanced cancer by the medical team for high QOL(Albers et al. 2010.p293). In Costello's study, patients who received spiritual support from the medical team had higher scores on QOL when they neared death.

Cancer patient take spirituality to be an important aspect in their cancer experience and as such, health care providers must strive to meet the spiritual needs and desires of their patient.

II.3.4. Factors associated with quality of life

1.   Socio-demographic factors

QOL among cervical cancer patients can be influenced by socio-demographic factors. A study conducted in Sudan established that being married, attaining at least a high school education and being employed were associated with higher QOL scores among breast and gynaecological cancer patients(Ahmad A. et al. 2016.p81). This is supported by findings in yet another study carried out in Iran among breast cancer patients that also identified better QOL among employed women(Huang *et al.*, 2017). These studies assert that formal employment and being married yield QOL scores mainly due to the adequate social support associated with the two factors. Similarly tertiary level of education and high family monthly income resulted in high QOL scores among Kenya patients in palliative care(Machuki O., 2015). This depicts the influence of family income on the QOL of cancer patients. The influence of age and level of education on QOL is exhibited in a study conducted among gynaecological cancer patients which showed that patients with less than high school education and were less than 50 years in age had lower overall QOL scores(Klügel *et al.*, 2017), Chan et al, 2012). This contrasts findings from a study among Turkish gynaecological cancer patients that reported higher overall QOL score among women less than 60 years. Again the age of cancer patients has been known to vary their perception of body image and physical attractiveness hence their QOL.

2. Clinical characteristics effects on quality of life

It has been reported that cervical cancer have a high prevalence of chronic pain in the lower back and hips attributed to late effects of radiotherapy that impairs their physical functioning(Osann *et al.*, 2014). Radiotherapy and multi-modal therapy has also been associated with lower total QOL scores among gynaecological cancer patients (Miller et al,2002). According to (Abayomi et al. 2005), 80% of all patients treated for pelvic cancer such as cervical, prostate, endometrial and bladder will experience a permanent change in bowel habit after radiotherapy. These effects of radiotherapy impair the QOL of the cancer patients including those of cervical cancer. The effect of radiotherapy to patients highlights the dilemma health care providers find themselves in before initiating the treatment. Whereas on one end the treatment is meant to improve the QOL of the patient, the effects on the other hand lower as opposed to those treated with radiotherapy that were more likely to complain about urinary, sexual and gynaecological symptoms (Khalil *et al.*, 2015).

Considering the association of this literature review, my observation is that there is no similarly research done about this topic in our country and particularly at Butaro DH; there are few studies documented about QOL among cancer patients in Africa, Shown that social environment can change the perception about quality of life. The strong researches are founded in developed countries where all those instrument of assessment are done as seen below.

II.4. Research gap identification

The literature review shows what different researches seen about social demographic data, clinical characteristics and QOL; but the studies about QOL and associated factors were done in developed countries and out of Africa. See how is cervical cancer in our continent, East Africa is and especially in Rwanda, it indicates the need of conducting further researches in this area. QOL issues among cervical cancer patients are considered important and have led to an emerging research body. If few studies documented QOL among cervical cancer patients in Africa and absence of these studies in Rwanda, this can lead to understand that social environment can change the perception about quality of life, if more research will be done. There will be changes in health care providers and in general community when the ideas based on research will be heard regarding QOL and its associated factor. The fact of not having any research done about it, explain the existing gap on QOL and associated factors among cervical cancer patients in Butaro DH. Hence they need to conduct research in this area to fill the knowledge gap.

II.5. Conceptual Framework

Conceptual framework is a visual or written product, one that explains, either graphically or narrative form, the main things to be studies as key factors, concepts or variables and the presumed relationships among them (Miles &Huberman, 1994.p.18)

Definitions of key variables

Quality of life: An individual's sense of wellbeing true Physical, psychological, social and spiritual components in every day's life (WHO, 2014).

Physical well-being: refers to the extent to which cancer and its treatment affect physical changes and cause disturbances in the performance of daily activities.

Psychological well-being: refers to the extent to which cancer and its treatment cause symptoms like depression, loss of fertility and anxiety in the patient.

Social well being: refers to the extent to which cancer and its treatment affect the engagement in activities and involvement with others in the society(WHO, 2014)

Spiritual well being: refers to the extent to which cancer and its treatment affect the spiritual experience of the patient.

Clinicalcharacteristics: refers to the clinical aspects of cancer that the patient is suffering from which affect quality of life e.g. the type of cancer, time of diagnosis, the stage of the cancer and the types of treatment used to manage the cancer(Skevington, Lotfy and Connell, 2004).

Socio-demographic: refers to the inherent personal characteristics that influence the health of the patient(Skevington, Lotfy and Connell, 2004); e.g. age, gender, level of education, marital status, occupation, religion and income.

The Missoula Vitas Quality of Life Index (MVQOLI) was used in assessing the QOL for cervical cancer patients. This model will identify the four dimensions of QOL as physical well-being, psychological, social and spiritual well-being: the physical will composed by pain, fatigue and constipation; the components of psychological well-being be anxiety and depression; for social well-being, it will be engagement in activity and involvements with others and spiritual well-being which composed by spiritual experience. The independent factors are Socio-demographic factors composed by are, age, gender, marital status, religion, monthly income, occupation, level of education and Clinical characteristics composed for time since diagnosis, treatment for cancer, Duration on treatment. The outcome became level of QOL.

II.6. Diagrammatic conceptual framework

Diagrammatic conceptual framework is the researcher's map in pursuing the investigations(Health, 2006)
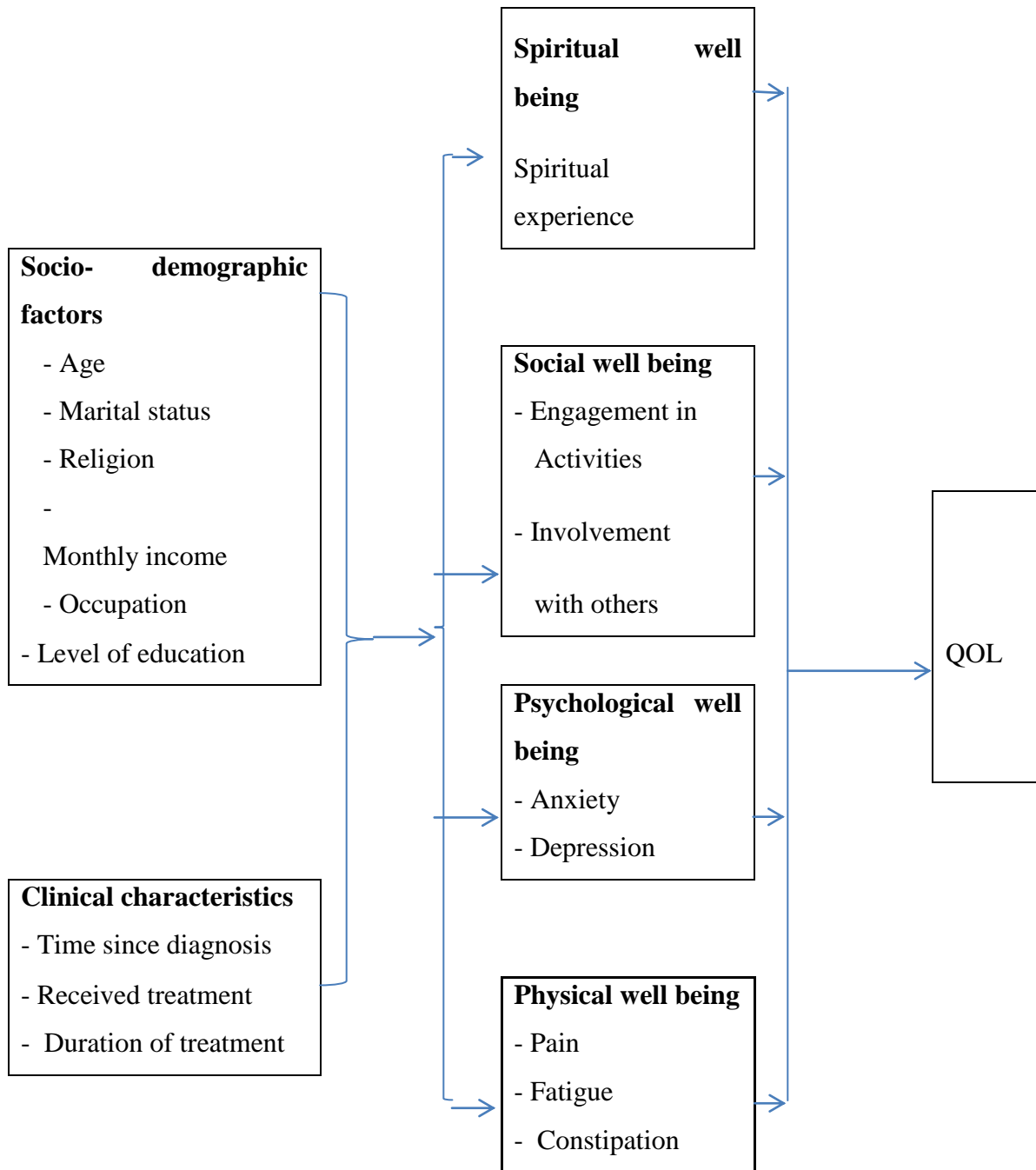
Figure 2.1: Conceptual framework for quality of life adapted from (Machuki Ogoncho *et al.*, 2015)

Conclusion

This literature review emphasises on QOL and associated factors globally, in Africa and Rwanda where Butaro Hospital located as setting of study. This chapter defines cervical cancer and how is a burden reason why the studies about it must done for more evidence based practice which will help to give high quality of care for cure, palliate, increase survival rate of CC patients and accompanying the cancer patient for dying peacefully.

CHAPITER THREE: METHODOLOGY

III.1. Introduction

The methodology is the way of obtaining, organizing and analysing data (Pilot and Hungler, 2004.p233). This study will evaluate QOL and its associated factors among cervical cancer patients at Butaro DH in time of study and measurement of Missoula-Vitas Quality of Life Index (MVQOLI) will be used. This chapter discuss: the research design, study setting, population, including criteria, sample and sampling procedure, the MVQOLI instrument and scoring, procedure for data collection and protection of human rights.

III. 2. Research approach

Research approach is plans and procedures that span the steps from broad assumptions to detailed methods of data collection analysis and interpretation (Cresswell, 2014). Quantitative approach occurs as of the belief that individual phenomena with variable in human being behaviour are able to be calculated independently (Parahoo, 2006. p.5). A quantitative approach was used in this study.

III.3. Research Design

The research design of a study is the vital advance that the researchers utilize to respond their research question and for the management of some challenges faced during the research process (pilot &Beck 2010,p.49).A cross sectional study is a study done once in given period of time to establish the state of affairs at the particular time (pilot &Beck 2010,p.49). Descriptive research is a research study has the main objective of getting the correct explanation of the features people, situation or group (pilot &Hungler 2004,p.716). A cross sectional descriptive design was used in this study and data collection was done in three months and half.

III.2.2. Setting

The research setting refers to the place where the data are collected (Mbambo, 2009). This study was conducted at Butaro cancer center of excellence(BCCOE), at Butaro DH located in Butaro Sector of Burera District in North Province, Rwanda. The contruction of this 150bed hospital began in December 2008 and Butaro Hospital was inaugurated in January 24th 2011. This hospital serves a population of more than 400.000 people. BCCOE was founded on 18 July 2012 by the Ministry of health, with support from pattern's in health and Dana Faber cancer Institute. BCCOE serves as the first national cancer referral facility in Rwanda. Patients with all types of cancer are refered to BCCOE from all over Rwanda, as well as neighbouring countries, such as Burundi, RDC, and Uganda(Jern, 1988)

III.2.3. Population

Population is the full amount of unity from which information can be collected (Parahoo.2006.p.258) .Target population: is the entire set of cases about which the researcher would like to make a generalization(Gennifer V.2017), (Parahoo.2006). Accessible population: or sampling unitis a sample that is feasible for the research to access. A population that meets the population criteria and is available (Asiamah N. et al.2017), (Parahoo.2006). In this study the population was the available 63 cervical cancer patients receiving treatment at Butaro district hospital.

III.2.4. Inclusion and exclusion criteria

Inclusion criteria are a set of predefined characteristics used to identify subjects who will be included in a research study(Mehmood, 2013)

Exclusion criteria are defined as features of the potential participants who meet the inclusion criteria but present with additional characteristics that could interfere with the success of the study or increase their risk for an unfavourable outcome (Mehmood, 2013). This study included all meted patient suffer from cervical cancer for all stages of illness at Butaro DH and the exclusion criteria was the unselected patients because they was disoriented, not able of talk and /or write.

III.2.5. Sample size

The size of population included all cervical cancer patients chosen conveniently in period of three months and half of data collection. Sample size was 63 cervical cancer patients.

III.2.6. Sampling strategy

The sampling strategy is the plan sated forth to be sure that the sample used in research study represents the population from which the sample drown(Tongco, 2007). Convenience sampling (also known as Haphazard Sampling or Accidental Sampling) is a type of non probability or non-random sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study(Sharma, 2017). It is also referred to the researching subjects of the population that are easily accessible to the researcher(Etikan, Musa and Alkassim, 2016) .

A convenient non probability sampling was used to select participants for the study. Every eligible cervical cancer patient receiving care at Butaro cancer center of excellence andconsented

to participate in the study was interviewed true questionnaire. This process was repeated for three months and half.

III.2. 7. Instruments

Refers to the device used to collect data, such as a paper questionnaire or computer assisted interviewing system(Etikan, Musa and Alkassim, 2016).In this study, the questionnaire was used the global QOL score true the Missoula Vitas Quality Of Life Index(MVQOLI) true SPSS (Machuki Ogoncho et al., 2015) and the component of this one are:

III.2.8. Dependent variables

1. Physical well being

2. Psychological well being

3. Social well being

4. Spiritual well being

III.2.9. Independent variables

1. Socio-demographic characteristics: age, gender, level of education, religion, marital

status, average monthly income and occupation.

2. Clinical characteristics: duration of illness, type of cervical cancer treatment and duration treatment.

III.2.10. Outcomes

The outcome is the level of QOL.

Data were collected using a structured questionnaire (see Appendix 4) that adopted the

Missoula Vitas Quality of Life Index (MVQOLI); The MVQOLI is a 26 item quality of life

questionnaire with one global QOL item and five subscales. The subscales include symptoms, function, interpersonal, well being and transcendent. Those subscales used by MVQOLI were converted in four by WHO which are physical, social, psychological and spiritual domains respectively. Weighted subscale scores range from -30 to 30 while the total QOL score is calculated from the weighted subscale scores ranging from 0 to 30. The global QOL and WHO score is the patients' rating of their overall QOL ranging from 1 to 5. According to WHO (2012), they are satisfied or have good QOL who are scored 5. For those scored 1, 2 and 3, they have poor QOL and those scored 4 have moderate QOL (Manual, 2012) and (Health, 2019). This means that the patients who are scored 1 to 3 have 20% to 60%, those scored 4 have 61% to 80% and score 5 have 81% to 100%

The tool was designed to assess the patients' personal experience in each of those domains.

III.4. Data collection procedure

Data collection lasted 3months and half starting from 11th February2019 to 25th May 2019. I chose the assistants and explain how to use the questionnaire.

With the research assistant we met the Director of Hospital and head of research committee to seek the approval on data collection. The researcher explains about the purpose and procedure of research to patients for obtains their consent. I explained the purpose of research and rights to participants, the assistant was helped me in selecting patient for participation and help in signing the consent forms one by one for all eligible participants. Then the assistant helped to administer the questionnaires, to fill the questionnaire for the patients who were not able to write and turn back the filled questionnaires and signed consent forms to me. Researcher and research assistants selected participants conveniently with making sure that all participants fulfil the inclusion criteria to prevent selection bias.

III.5.Validity and reliability

Validity of instrument:

validity is seen as the core of any form of assessment that is trustworthy and accurate(Moss, 1985) and is composed by:

Face validity is a subjective judgement on the operationalization of a construct. Face validity is the degree which a measure appears to be related to a specific construct in the judgment of non-experts such as test takers and representative of the legal system and is refers to research's subjective assessments of presentation and relevance of the measuring instrument as to whether the items in the instrument appear to be relevant, reasonable, unambiguous and clear (Oluwatayo,2012)

Content validity is the degree to which items in an instrument reflect the content universe to which the instrument will be generalized(Taherdoost, 2018),

Again, content validity is an issue of representation. The essential questions posed by this validity is : does the instrumentation (e.g: questionnaire items) pull in representative manner from all of the ways that could be used to measure the content of given construct(Straub and Gefen, 2004). The data collection tool used, is an existing developed and approved questionnaire to assess quality of life and was adapted to fit in our study on quality of life and associated factors among cervical cancer patient. The questionnaire was given to cervical cancer patients, to test its consistency and accuracy. The questionnaire was fairly easy to read. The internal

validity was controlled by avoiding the use of complicated and confusing words in data collection tools. The questionnaire was translated from English into the local language in English-Kinyarwanda with understandable words and the researcher pretested the translated questionnaire before conducting the main study. The external validity was controlled by selecting a representative sample size from the sampling frame with a random sampling of participants. The research assistants were trained on the use of the questionnaire prior to the study.

Table 3.1.Content validity table

Objectives	Components in the conceptual frame work	Research questions respond the objectives
To determine the quality of life among cervical cancer patients of selected hospital	Physical well being Social well being Psychological well being Spiritual well being	Section 3
To identify the associated factors of QOL among cervical cancer patients in this selected hospital	Social demographic factors clinical characteristics factors	Section 1 Section 2 Section 3

Reliability

Reliability is seen as the degree to which a test is free from measurement errors,

since the more measurement errors occur the less reliable the test (Fraenkel& Wallen,2013), (Zohrabi, 2013). According to Jim Kuthy, reliability is the degree to which a Practice, Procedure, or Test produces stable and consistent results. Reliability of a test refers to its freedom from unsystematic errors of measurement (Mohajan, 2017) and is composed by: pre-test instrument and reliability coefficient.

Pre-test instrument: Is a way to evaluate questionnaires and control of the measurements errors, in the practice of survey design, its results including recommendations for improving the questionnaire. The pre-testing of questionnaire helps to modify some questions and alternative answers. The final (modified) questionnaire after pre-testing used for collecting the data (Faux& Jeffrey,2010).

In the questionnaire pre-test the four main issues of design were considered; question content, question form, the instrument and procedures and process(Faux& Jeffrey,2010).

Reliability Coefficient which is the estimate of the reliability of a test is indicated by a reliability coefficient : Ranges between 0 and +1.00; 0 indicates no reliability ; 1.00 indicates perfect reliability denoted by a lower-case "r"(Zohrabi, 2013)

A reliability coefficient of 0.90 means that 90% of the variance in test scores is due to systematic variance in the characteristic/trait being measured, and only 10% is due to error variance. A test's reliability serves as the upper bound of a test's validity ; Theoretically, a test cannot predict a criterion any better than it can predict itself (Jim K.2015)

Table 3.2.Reliability Coefficient

US Department of Labour's guidelines for interpreting reliability of coefficients	
Coefficient reliability value	**Interpretation**
90 and higher	Excellent
80-89	Good
70-79	Adequate
Below 70	May have limited applicability

MVQOLI was validated in the USA where it had an adequate internal consistency ($\alpha = 0.77$) and broad construct validity ($r = 0.43$) with the total scores(Byock, Palliative and Service, 1998) . The tool has been tested in a similar population of cancer patients in Uganda and South Africa (Selman et al. 2011)Eligible participants were ascribed to a quiet and confided area within the facility from where the questionnaire was then administered. After the interviews, all the questionnaires were reviewed daily for completeness and accuracy. In this study, the reliability was controlled by administering the questionnaire to 9 respondents fulfilling the inclusion criter

ia for piloting to refine the methodology and make sure for the usefulness of the questionnaire, a pilot study which has been successful. Therefore, the researcher calculated the internal consistency reliability coefficient. The questionnaire had 25 items and the Cronbach's alpha test was .852, the value which shows that items were completely connected or related to each other at 85%.

III.6. Data analysis

Data analysis is the process used to examine the information, especially using a computer, in order to find study results out and/or use those results in making the appropriate decisions.

In this study, data was analysed by using SPSS 21, Descriptive statistics was used to describe the four domain of QOL which are physical, psychological, social and spiritual well-being and inferential statistic was used to analyse the association between socio-demographic and clinical characteristics with QOL; where the statistic analysis was done in comparison of QOL with each element of social demographic factors and QOL with clinical characteristics factors to be aware about at which element the QOL is affected or not.

III.7. Ethical consideration

Ethical considerations in research are the norms or standards for conduct that distinguish between right and wrong. They help to determine the difference between acceptable and unacceptable behaviours(Tongco, 2007).

After receiving the ethical clearance(Appendix 1) from Institutional Review Board, approval of our institution as UR/ school of nursing and midwifery research committee, and according to the permission which was obtained from Butaro DH(Apendix2), education and sensitisation was given to the participant, then after, the information was given to the participants , purpose of the study, non-invasiveness of the data collection procedure, confidentiality of the information and respondent were reassured that they will be anonymous.

They was given the chance of asking everything about the study and opportunity of thinking on their decisions about participation or not is given and for being free for refusing, stopping or participating in research to any moment they want according to their choice; the patients had have the consent to sign when accepted to participate in research.

III.8. Limitation of the study address

The limitations of the study are characteristics of design or methodology that impacted or influenced the interpretation of the findings from research. Limitations are potential weaknesses in study and are out of control(Simon, 2011).

The limitation of this study is that there is no other research done in our country regarding QOL and its associated factors. Then it seems to be difficult in comparison, and discussion of results from this study to other studies. The tool was adapted and some items in questionnaire were modified or added according to really situation for study. Because the study was conducted in one Hospital and the sample was small, the results cannot be generalised to the others Hospital;

CHAPITER FOUR: RESULTS

IV.1 Introduction

This chapter presents the findings of the study. The findings include a description of social demographics factors, clinical characteristics, and quality of life among cervical cancer patients consulting Butaro District Hospital. An analysis and interpretation of quality of life in relationship with social demographic factors and its relationship with clinical characteristics are done among patients suffering with cervical cancer.

The purpose of this study was to assess the quality of life among cervical cancer patients of Butaro district hospital and to identify the associated factors of QOL among those cervical cancer patients in this selected hospital. The study aimed to answer the following questions: What is the quality of life among cervical cancer patient attending Butaro District Hospital? and What are the factors associated with QOL among cervical cancer patients in Butaro hospital?

The study was conducted in the only one cancer center of the country located in North province of Rwanda. A sample was selected using convenient non probability sampling method. Data was collected through questionnaire using to respond the scheduled questions. The SPSS/pc and Excel computer software were used to compute all statistical analyses. Results on social-demographic and clinical characteristics data itself and in relationship with quality of life for the patients suffer from cervical cancer are presented.

IV.2 Results presentation

IV.2.1 Social demographic characteristics

Table 4.1 displays results on age, education level, occupation, marital status, religion and monthly income of the participants.

Table 4.1Social Demographics Sample (N = 63)

Social demographic data		Frequency	Percent
Patient_age	35-44	11	17.5
	45-54	22	34.9
	55-64	18	28.6
	65+	12	19.0
Education level	None	23	36.5
	primary incomplete	15	23.8
	Primary complete	18	28.6
	Secondary incomplete	6	9.5
	Secondary complete	1	1.6
Occupation	Housewife	8	12.7
	Fermer	48	76.2
	Casual worker	1	1.6
	Self employed	6	9.5
Marital status	Single	1	1.6
	Married	31	49.2
	Widow	13	20.6
	Separated	6	9.5
	Divorced	8	12.7
	sex worker	4	6.3
Religion	None	2	3.2
	Christian	52	82.5
	Muslim	9	14.3
Monthly income	Less than 5000	45	71.4
	5000-9999	15	23.8
	More than 10000	3	4.8

According to the results on Table 4.1, the predominant age range is 45 – 54 which was 22(34.9%) from 63 respondents;

Concerning level of education, Table 4.1 shows that 23(36.5%) had no any education and 12(23.8%) did not complete primary education. About the occupation, this table shows that 48(76.2%) were farmers. Regarding marital status, 31(49.2%) were married and 4(6.3%) were sex workers.

Concerning religion, the majority of participants 52(82.5%) were Christian. About the income, the majority of participants 45(71.4%) responded that they cannot get 5000FRW per month.

IV.2.2 Clinical characteristics

Table 4.2 displays results regarding on when diagnosed, Received treatment, last treatment, other related treatment, starting time of related treatment and other disease suffering for.

Table 4.2.Clinical characteristics (N = 63)

Clinical characteristics data		Frequency	Percent
When diagnosed	One to three months ago	15	23.8
	Four to six months ago	10	15.9
	Seven to nine months ago	11	17.5
	One year ago	7	11.1
	More than one year	20	31.7
Received treatment	Chemotherapy	21	33.3
	Surgery	1	1.6
	Radiotherapy	10	15.9
	Surgery and chemotherapy	3	4.8
	Chemotherapy and radiotherapy	18	28.6
	None	10	15.9
Last treatment	Less than one month	7	11.1
	One to tree months	17	27.0
	Four to six months	8	12.7
	Seven to nine months	2	3.2
	One year ago	14	22.2
	Not done	10	15.9
	More than one year	5	7.9
Other related treatment	Pain relief	50	79.4
	Pain relief and psychological management	8	12.7
	pain relief+psycho+social and spiritual management	5	7.9
Starting time of related treatment	Less than a month	3	4.8
	One to tree months ago	19	30.2
	Four to six months ago	6	9.5
	Seven to nine months ago	9	14.3
	One year ago	15	23.8
	More than one year	11	17.5
Other disease suffering for	HIV	13	20.6
	None	33	52.4
	HTN	5	7.9
	Respiratory disease	4	6.3
	UTI	1	1.6
	Severe back pain	2	3.2
	Rectal bleeding	3	4.8
	DM, HTN and Severe back pain	1	1.6
	DM	1	1.6

HIV= Human Immune Virus, HTN= Hypertension, UTI = Urinary tract infection

DM= Diabetes mellitus

Table 4.2 shows that the time of diagnosis where predominant on one third 20(31.7%) as the diagnosed to have cervical cancer in time of more than one year and displays that One third of them 20(31.7%) received chemotherapy.

About last treatment on those received treatments is 14(22.2%) who received the treatment in one year ago.

This table shows again others related treatment, where a big number of participants 50(79.4%) received pain relief. The when those related treatment started to be given are shown in this table: 19(30.2%) started the related treatment in one month ago. The last point appearing in this table is others diseases at which the cervical cancer patients suffering from as comorbidities, where 33(52.4%) had no others diseases suffering for.

IV.2.3 Physical component

Table 4.3shows the physical quality of life(QOL). The QOL is a multidimensional composed by four components, and those components are physical, social, Psychosocial and spiritual; QOL is scored by strongly disagree, disagree, neutral, agree and strongly agree according to the satisfaction level of cervical cancer patient for each asked question.

Table 4.3. Physical component (N = 63)

Physical components of QOL	Score	Frequency	Percent
My symptoms are adequately controlled	Strongly disagree	1	1.6
	Disagree	5	7.9
	Neutral	5	7.9
	Agree	37	58.7
	Strongly agree	15	23.8
I feel sick all the time	Strongly agree	2	3.2
	Agree	23	36.5
	Neutral	16	25.4
	Disagree	22	34.9
I accept my symptoms as a fact of life	Strongly disagree	2	3.2
	Disagree	16	25.4
	Neutral	13	20.6
	Agree	28	44.4
	Strongly agree	4	6.3
I satisfied with the current control of symptoms	Strongly disagree	1	1.6
	Disagree	11	17.5
	Neutral	4	6.3
	Agree	35	55.6
	Strongly agree	12	19.0
Physical discomfort overshadows any	Strongly agree	5	7.9

opportunity for enjoyment	Agree	16	25.4
	Neutral	22	34.9
	Disagree	18	28.6
	Strongly disagree	2	3.2
I am no longer able to do many of the things I like to do.	Disagree	11	17.5
	Neutral	25	39.7
	Agree	25	39.7
	Strongly agree	2	3.2
I am satisfied with my ability to take care of my basic needs.	Disagree	30	47.6
	Neutral	24	38.1
	Agree	9	14.3

From table 4.3, physical quality of life was analysed and this component also composed by its sub-components which are: My symptoms are adequately controlled, I feel sick all the time, I accept my symptoms as a fact of life, I satisfied with the current control of symptoms, Physical discomfort overshadows any opportunity for enjoyment, I am no longer able to do many of the things I like to do and I am satisfied with my ability to take care of my basic needs.

True the analysis of table 4.3 regarding physical component of QOL on its first sub-component my symptoms are adequately controlled, 37(58.7%) agreed that their symptoms were controlled. To the second subcomponent I feel sick all the time, disagree was predominant on 22(34.9%), on I accept my symptoms as fact of life, 28(44.4%) responded that they agreed. On I am satisfied with the current control of symptoms, 35(55.6%) agreed, to physical discomfort overshadows any opportunity of enjoyment, 22(34.9%) were neutral, other subcomponent is I am no longer able to do many of the things I like to do: for this one, 25(39.7%) were neutral and 25(39.7%) agreed. To the last subcomponent of physical QOL which is I satisfied with my ability to take care of my basic needs, 30(47.6%) responded to be disagree.

IV.2.4 Social component

Table 4.4 is for social component of QOL. The sub-component composed social component are: I am dependent on others for personal care, I accept the fact that I cannot do many of the things that I used to do, I have recently been able to say an important things, I feel closer to others in my life now than I did before my illness, In general, these days I am satisfied with relationships with family and friends, At present, i spend as much time as i want to with family and friends and It is important to me to have close personal relationships;

Table 4.3Social component (N = 63)

Social components of QOL	Score	Frequency	Percent
	Strongly agree	12	19.0
	Agree	16	25.4
I am dependent on others for personal care	Neutral	20	31.7
	Disagree	14	22.2
	Strongly disagree	1	1.6
	Strongly agree	18	28.6
	Agree	20	31.7
I accept the fact that I can not do many of the things that I used to do	Neutral	14	22.2
	Disagree	7	11.1
	Strongly disagree	4	6.3
	Strongly disagree	2	3.2
	Disagree	22	34.9
I have recently been able to say an important things on the people close to me	Neutral	21	33.3
	Agree	17	27.0
	Strongly agree	1	1.6
	Strongly disagree	2	3.2
	Disagree	30	47.6
I feel closer to others in my life now than I did before my illness	Neutral	15	23.8
	Agree	14	22.2
	Strongly agree	2	3.2
	Strongly disagree	4	6.3
	Disagree	18	28.6
In general, these days I am satisfied with relationships with family and friends	Neutral	13	20.6
	Agree	27	42.9
	Strongly agree	1	1.6
	Strongly disagree	1	1.6
	Disagree	20	31.7
At present, i spend as much time as i want to with family and friends	Neutral	23	36.5
	Agree	15	23.8
	Strongly agree	4	6.3
	Strongly disagree	1	1.6
	Disagree	14	22.2
It is important to me to have close personal relationships	Neutral	21	33.3
	Agree	25	39.7
	Strongly agree	2	3.2

For I am dependent on others for personal care, 20(31.7%) responded neutral, to I accept the fact that I cannot do many of the things that I used to do 20(31.7%) agreed. The next is I have recently been able to say important things where 22(34.9%) responded disagree. Other is I feel closer to others in my life now than I did before my illness: 30(47.6%) disagreed. Regarding In general, these days I am satisfied with relationships with family and friends 27(42.9%) agreed on that. Another subcomponent is :At present, I spend as much time as I want to with family and friends, 23(36.5%) were neutral, and the last of this social QOL is it is important to me to have close personal relationships where25(39.7%) responded that they agreed.

IV.2.5 Psychological component

Table 4.5 is psychological component of QOL. This component is composed by My affairs are not in order, I am worried that many things are unresolved, If i were die suddenly today, i would feel prepared to leave this life, I am more satisfied with myself as a person now than I was before my illness, The longer I am ill, the more I worry about things getting out of control, It is important to me to be at peace with myself as subcomponents.

Table 4.4.Psychological component (N = 63)

Psychological components of QOL	Score	Frequency	Percent
My affairs are not in order, I am worried that many things are unresolved	Strongly agree	9	14.3
	Agree	24	38.1
	Neutral	10	15.9
	Disagree	19	30.2
	Strongly disagree	1	1.6
If i were die suddenly today, i would feel prepared to leave this life	Strongly disagree	10	15.9
	Disagree	25	39.7
	Neutral	13	20.6
	Agree	12	19.0
	Strongly agree	3	4.8
I am more satisfied with myself as a person now than I was before my illness	Strongly disagree	6	9.5
	Disagree	34	54.0
	Neutral	5	7.9
	Agree	14	22.2
	Strongly agree	4	6.3

	Strongly agree	10	15.9
The longer I am ill, the more I worry about things getting out of control	Agree	27	42.9
	Neutral	15	23.8
	Disagree	9	14.3
	Strongly disagree	2	3.2
	Strongly disagree	1	1.6
It is important to me to be at peace with myself	Disagree	21	33.3
	Neutral	13	20.6
	Agree	26	41.3
	Strongly agree	2	3.2

To its first subcomponent which is my affairs are not in order 24(38.1%) agreed on that. The second subcomponent which is If i were die suddenly today, i would feel prepared to leave this life, 25(39.7%) responded disagree, the next is , I am more satisfied with myself as a person now than I was before my illness where 34(54%) responded disagree. To the longer I am ill, the more I worry about things getting out of control 27(42.9%) agreed on that, and to it is important to me to be at peace with myself where 26(41.3%) responded agree.

IV.2.6 Spiritual component

Table 4.6 is the analysis of spiritual component of QOL. The subcomponents of this one are: My contentment of life depends upon being active and being independent in my personal care, I feel disconnected from all things now than I did before my illness, I have a better sense of meaning in my life now than i have had in the past, I am comfortable with the thought of my death, Life has lost all value for me, every day is a burden and It is important to me to feel that my life has meaning.

Table 4.6. Spiritual component(N = 63)

Spiritual components of QOL	Score	Frequency	Percent
My contentment of life depends upon being active and being independent in my personal care	Strongly disagree	35	55.6
	Disagree	16	25.4
	Neutral	5	7.9
	Agree	4	6.3
	Strongly agree	3	4.8
I feel disconnected from all things now than I did before my illness	Strongly agree	6	9.5
	Agree	17	27.0
	Neutral	20	31.7
	Disagree	18	28.6
	Strongly disagree	2	3.2
I have a better sense of meaning in my life now than i have had in the past	Strongly disagree	4	6.3
	Disagree	42	66.7
	Neutral	4	6.3
	Agree	13	20.6
I am comfortable with the thought of my death	Strongly disagree	7	11.1
	Disagree	30	47.6
	Neutral	14	22.2
	Agree	11	17.5
	Strongly agree	1	1.6
Life has lost all value for me, every day is a burden	Strongly agree	8	12.7
	Agree	25	39.7
	Neutral	17	27.0
	Disagree	10	15.9
	Strongly disagree	3	4.8
It is important to me to feel that my life has meaning	Strongly disagree	2	3.2
	Disagree	19	30.2
	Neutral	12	19.0
	Agree	29	46.0
	Strongly agree	1	1.6

To the first subcomponent which is my contentment of life depends upon being active and being independent in my personal care 35(55.6%) responded strongly disagree. To the subcomponent of I feel disconnected from all things now than I did before my illness, around one third of participants 20(31.7.2%) responded neutral. For the subcomponent of I have a better sense of meaning in my life now than i have had in the past, 42 (66.7%) disagreed, on the subcomponent of I am comfortable with the thought of my death, 30(47.6%) disagreed, to Life has lost all value for me, every day is a burden where 25(39.7%) agreed on this statement, and to It is important to me to feel that my life has meaning 29(46%) agreed on that.

IV.2.7 Overall quality of life

Table 4.7 analyses the overall quality of life and shows the results in three classes according to the scores which are poor QOL when overall score is less than 75/125(less than 60%), moderate quality of life when overall score is 75 -99(60 – 80%), the third is good QOL where the score is $100 - 125(81 - 100\%)$ as established by WHO. According to WHO (2012), they are satisfied or have good QOL who are scored 5. For those scored 1, 2 and 3, they have poor QOL and those scored 4 have moderate QOL (Manual, 2012) and (Health, 2019). This means that the patients who are scored 1 to 3 have 20% to 60%, those scored 4 have 61% to 80% and score 5 have 81% to 100%

Table 4.7 Overall QOL score (N = 63)

Main scores(Participants)	QOL score out of 125	Frequency(%)	Percentages of QOL	Level of QOL
	43.00	1(1.6%)	34.4	
	45.00	1(1.6%)	36.0	
	51.00	1(1.6%)	40.8	
	53.00	1(1.6%)	42.4	
	58.00	2(3.2%)	46.4	
	60.00	1(1.6%)	48.0	
	61.00	2(3.2%)	48.8	
	62.00	3(4.8%)	49.6	Poor QOL (less than 60%)
	63.00	5(7.9%)	50.4	
Less than 75 out of 125 (40)	64.00	1(1.6%)	51.2	
	65.00	4(6.3%)	52.0	
	66.00	1(1.6%)	52.8	
	67.00	1(1.6%)	53.6	
	68.00	5(7.9%)	54.4	
	69.00	1(1.6%)	55.2	
	70.00	2(3.2%)	56.0	
	71.00	1(1.6%)	56.8	
	72.00	3(4.8%)	57.6	
	73.00	3(4.8%)	58.4	
	74.00	1(1.6%)	59.2	
75 - 99 (22)	75.00	3(4.8%)	60.0	
	76.00	3(4.8%)	60.8	
	77.00	1(1.6%)	61.6	
	78.00	1(1.6%)	62.4	
	79.00	1(1.6%)	63.2	Moderate QOL(60 - 79)
	81.00	2(3.2%)	64.8	
	82.00	1(1.6%)	65.6	
	83.00	1(1.6%)	66.4	
	84.00	1(1.6%)	67.2	
	86.00	2(3.2%)	68.8	
	87.00	1(1.6%)	69.6	
	88.00	1(1.6%)	70.4	
	90.00	1(1.6%)	72.0	
	93.00	2(3.2%)	74.4	
	95.00	1(1.6%)	76.0	
100 - 125 (1)	104.00	1(1.6%)	83.2	Good QOL (80 and above)

From this table, only 1(1.6%) participant had good QOL (83.2%), it shows again that 22(34.9%) had moderate QOL and 40(63.5%) participant had poor QOL mean that they had less than 75/125(less than 60%).

IV.2.8 Factors associated with quality of life

Table 4.8 analyse the factors associated with QOL and those factors are in two categories which are social – demographic factors and clinical characteristics factors.

Table 4.8 is about social demographics factors composed by patient age, education level, occupation, marital status, religion and monthly income.

Table 4.5.Social demographic factors associated with quality of life (N =63)

Social demographic data	Chi-square	P value
Patient age	114.423[a]	.249
Education level	156.111[a]	.167
Occupation	128.013[a]	.063
Marital status	190.274[a]	.203
Religion	56.915[a]	.870
Monthly income	72.707[a]	.389

This table shows that there was no social demographic factor that affects QOL in study: the chi-square was used and P-value to all subcomponents is more than 0.05 which mean that all of them did not affect QOL statistically.

Table 4.9 analyses the clinical characteristics associated with QOL and those clinical characteristics are: the time at which they did diagnosed, received treatment, last treatment, related treatment, starting time of related treatment and others diseases suffering for.

Table 4.6. Clinical characteristics factors associated with quality of life (N = 63)

Clinical characteristics factors	Chi-square	P value
When did you diagnosed	134.916[a]	.605
Received treatment	191.620[a]	.185
Last treatment	223.811[a]	.244
Other related treatments	93.345[a]	.033
Starting time of related treatments	178.677[a]	.409
Other disease suffering for	306.082[a]	.136

The only one element of associated factors which was affected QOL and was significant statistically is other related treatment, where P-value = 0.03.

CHAPITER FIVE: DISCUSSIONS OF THE RESULTS

IV.1. Introduction

This chapter presents a summary of the results and discusses their findings, it focus on the study questions which are: what is the quality of life among cervical cancer patients attending Butaro DH? And what are the factors associated with QOL among cervical cancer patients in Butaro hospital? It also gives recommendations for improving identified gaps.

IV.2. Demographic characteristics

This study done on 63 patients suffer from cervical cancer and attending Bataro district hospital for management. Regarding patient age, the predominant range of age for participants in this study is 45 – 54 they were 22(34.9%) and this one is the range proved that women can be affected more than others ranges of age(Olorunfemi G. 2017.p6); in his study called trends and determinants of the incidences and mortality of cervical cancer in south Africa, founded that are women of 52 – 56 years old are them who more likely to have cervical cancer but, the study done by Ljuca and Marosevic in 2009, the rage of age where cervical cancer affects many women is 45 – 54 years old; and this is the same as the results of this study.

About the education level, a significant results is those who had no any education 23(36.5%), 15(23.8%) were did incomplete primary; even if this one did not affected the QOL in this research, but others researches like Huang et al. 2017 identified how low education level affect QOL; For(Osann *et al.*, 2014) in their study "Factors associated with poor quality of life among cervical cancer survivors", there was no any association between QOL and education level. It was independently associated with low QOL in multivariate analysis (r2=0.74). About the occupation, 48(76,2%) were famer and 8(12.7%) were housewife; in this study, we did not see any statistic association of QOL and occupation, but others researchers demonstrated the difference; in study done in Kenya "Determinants of Quality of Life Among Gynaecological Cancer Patients on Follow Up at a Referral Hospital in Kenya", the occupation affected negatively the QOL (P<0.05)(Machuki Ogoncho *et al.*, 2015); this is the same in study done by (Stegeman, 2014) where the occupation worsened QOL on 43.2%. On marital status, a big number of participants 31(49.2%) were married; different studies showed that Marital status affect QOL. The study done by (Ahmad Ainuddin *et al.*, 2016) was significantly affected QOL (P = 0.016). About religion, 52(85.5%) were Christians; Muslims were 9(14.3%) and 2 patients had no religion; as component of QOL, spirituality is seen as a fundamental issue in care given to

patients and many patients complaint to have poor spiritual QOL (Selman *et al.*, 2017); from the results of Selman, 43 – 53% of patients in this study had poor QOL. For the last point of social demographic factors which is monthly income, 45(71.4%) were had less than 5000 Rfr as income per month ; again the study done by Makuchi O. 2015, significant association between monthly income and QOL (P<0.05) was founded again, was founded that work and income satisfaction increase survival in patient suffer for cervical cancer(Khalil *et al.*, 2015)

IV.3. Quality of life

From the results of this study, it is only 1(1.6%) patient who had good QOL.

Out of the collected 63 patients, 40 (63.5%) had poor QOL and this result is not differ from those of Abou reported that the QoL was fairly favourable in majority (60.3%) of 205 patients because of poor QOL in one or more components of QOL(Abou et al, 2016); another research on factors associated with poor quality of life among cervical cancer survivors also define QOL as multidimensional composed by physical, social, psychological and spiritual components and said that the poor QOL may depend on weakness of one or more component of this one; this study showed poor QOL in cervical cancer patient caused by poor QOL of some components like psychological was 60 to 63% of poor QOL, 10 to 25% had poor QOL physically (Hossain *et al.*, 2015). Again, another study done in Ethiopia by Oslo and Akershus.2016 showed poor QOL on 52.5%. In this study, is the components of function and social make the participants to have low QOL.

IV.4 Social demographic data with quality of life

As demonstrated in table 8.1, there is no any point from social demographic data affecting statistically the quality of life. But, others researchers reported the association between them and QOL: In study done by Güngör *et al.*, 2017, it was founded that patients' quality of life was affected by age, education level and mostly by economic condition. From this study, according to some variables in relation to demographic features and cancer treatment the quality of life of the women aged <50 was more negatively affected in the functional well-being subscale (p=0.037)

Another research about QOL and associated factors showed that there was no relationship between education and quality of life (P > 0.05) but housewives had lower Physical QOL and Social QOL than other groups that were studied (P < 0.05)(Stegeman, 2014).

IV .5 Clinical characteristics results with quality of life

As presented in table 8.2, the only one element of associated factors which affected the QOL and was significant statistically is other related treatment. The literatures show that those others related treatments are pain relief, psychological, social and spiritual management (Machuki Ogoncho *et al.*, 2015), (Üstündag, 2015) and (L. E. Selman *et al.*, 2011).

In analysing the association between those others clinical characteristics, is demonstrated that they affect QOL because the P-value = 0.03 which is less than 0.05 meaning that the relationship of other related treatments and QOL is statistically significant; and this result is the one expected as it was predicted in the problem statement. This is differs to others components of clinical characteristics because there is no other variable showed the significant relationship with the QOL. This result is the same as those presented by Selman *et al.*, 2011 in their study on Quality of life among patients receiving palliative care in South Africa and Uganda, because of basing care on physical component quality of life without focussing on others component and Machuki O. from Kenya in his study called Determinants of Quality of Life Among Gynaecological Cancer Patients on Follow Up at a Referral Hospital in Kenya, reported that clinical characteristics were significantly associated with quality of life(P – value < 0.05); On component of the time of diagnosis P-value was 0.6; the received treatment, P-value was 0.1; for last treatment, P-value was 0.2; starting time of related treatments, P-value was 0.4 and P-value was 0.1 to other diseases suffering for and all those P – value did not make any relationship because they more than 0,05.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

VI.1 Conclusion

In this study, the QOL is poor on 63.5% and patients with cervical cancer are not satisfied with their global quality of life. QOL was founded to be independent of social demographic factors, but dependant on clinical characteristics in its subcomponent of other related treatments which mean that QOL may be improved by holistic QOL composed by physical, social, psychological and spiritual care or treatment

VI.2 Recommendations

The quality of life is poor among cancer patients, especially in those suffering from cervical cancer(Owuor*et al.*, 2016). As the results of this study show that 40 (63.5%) patients out of 63 had poor QOL which is the same results with those of Osann reported to have poor QOL on 63% for study done in USA, (Osann k., Hsieh S. and Nelson E., 2014) and that clinical characteristics (other related treatments) seen to be the associated factor which influence poor QOL in this study; those are the recommendations:

Nursing practice

The nurses should make comprehensive and holistic assessment in identifying the specific needs of cervical cancer patients and by addressing them, this will improve the QOL and the patient will be cared basing on the identified needs which can be one or more components of QOL.

Nursing education

The oncology nurses caring for cervical cancer patients should be role model to all co-workers and students in creating an environment which facilitate patients to open up for holistic assessment; so that more patient will be assessed, the more will be cared.

Nursing administration

The study findings should be used by clinicians, leaders, stakeholders and other health planners as a way orienting Quality of life as result of holistic care and help to assess and manage of its associated factors.

Nursing research

Further research about quality of life and associated factors are needed in all Rwandan hospital caring for cancer patients to carry out the need of cancer patients for more caring them.

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APENDIX

APPENDIX 1. UR ETHICAL CLEARANCE

UNIVERSITY OF RWANDA   COLLEGE OF MEDICINE AND HEALTH SCIENCES

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 14/01/2019
Ref: CMHS/IRB/038/2019

NIRAGIRE Leonie
School of Nursing and Midwifery, CMHS, UR

Dear NIRAGIRE Leonie

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled *"Quality Of Life and Associated Factors among Cervical Cancer Patient Attending a Selected Hospital in Rwanda."*

Having reviewed your protocol and found it satisfying the ethical requirements, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.

Professor Jean Bosco GAHUTU
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:
- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR

APPENDIX 2. ACCEPTANCE LETTER FROM BUTARO DISTRICT HOSPITAL

REPUBLIC OF RWANDA

NORTHERN PROVINCE

BURERA DISTRICT

BUTARO HOSPITAL

E-mail: butaro.hospital@moh.gov.rw

Butaro, February 11, 2019

Our Ref......./HB/MT/QI /2019

NIRAGIRE Leonie

School of Nursing and Midwifery, CMHS, UR

Re: **Acceptance Letter**

Dear Madam,

Butaro Hospital Leadership is pleased to inform you that your request for collecting data of your study entitled" *Quality Of Life and Associated Factors among Cervical Cancer Patients Attending a given Hospital in Rwanda"* at Butaro Hospital has been accepted.

We take this opportunity to inform you that during data collection period you will be required to comply with ethical principles applied at Butaro Hospital.

We wish you all the best.

Sincerely,

Dr MPUNGA Tharcisse

Director General/ Butaro Hospital

APPENDIX3. AUTORIZATION FOR RESEARCH TOOL

tool for research

Niragire Leonie <leonieniragire@gmail.com>   9 oct. 2018
                                                                  19:50

À isaacmachuki, isaacmachuki

To Isaac M. Ogoncho   NIRAGIRE Leonie
Dear Sir,   Huye District
Subject: Request for tool of data collection   South Province
                                              Rwanda Country
                                              Tel: 250788735631
                              E-mail: leonieniragire@gmail.com

Dear Sir, I would like to request you a permission for using your used tool as Missoula Vitas Quality of Life Index (MVQOLI) used in your dissertation.

In fact, I'm student in master's program, College of Medicine and Health Sciences, University of Rwanda in Rwanda country;I'm nurse in Oncology track; the program started in October 2017 and it will take the end in June 2019.
My subject of study is Quality of life and associated factors among cervical cancer patients; this is why I would like to ask you the permission of using the Missoula Vitas Quality Of Life Index as tool which can measure the quality of life.
At the end of my dissertation, you will receive my thanks true my dissertation.
Thank you for your help.

Sincerely,.

Isaac Machuki <isaacmachuki@gmail.com>   10 oct. 2018
                                                              11:44

À moi

                              anglais français

Traduire le message
                                              Désactiver pour : anglais

Hello,
Well I do not have any copyrights for the tool since I did not develop it, I just adopted it for my study.

I used the attached one. Thank you
APPENDIX 4.CONSENT FORM: ENGLISH

c

A PARTICIPATION CONSENT FORM/ENGLISH

For completing my Masters' studies in Oncology nursing, I, Leonie NIRAGIRE here mentioned as investigator would like to conduct a study entitled" **Quality of life and associated factors omong cervical cancer patients attending Butaro Distristrict Hospital in Burera District of Rwanda North province"**

The study will be done on cervical cancer patients attending Butaro Hospital. I would like request for your participation by answering to questions.

Your rights during this study:

You have rights to accept or refuse participation or withdraw from the study at any time necessary without being required to provide explanations.

Your answers will kept confidentially since you are not required to writte names on the answer questionnaire and even the research assistant who will help you filling the questionnaire shall not have access to your identification.

You will be given feedback from the study through the hospital of attachment.

I thank you in advance for your contribution in this activity!

Signature:

Principal Investigator: Leonie NIRAGIRE

Telephone number 0788735631

Patient

I. ……………………….. …………………….having been explained about the purpose of this study , my contribution and being reassured that my rights shall be protected, I hereby accept to sign on this sheet as evidence that I accept to participate in this study by answering to questions asked

I have well read and understand this document and accept to make signature freely without any oppression from whoever.

Date:

Signature

APPENDIX 5: QUESTIONNAIRE (English questionnaire)

Research topic: QUALITY OF LIFE AND ASSOCIATED FACTORS AMONG CERVICAL CANCER PATIENTS ATTENDING BUTARO HOSPITAL

Date: ………………………………………

Section 1.0 Socio- Demographic Data

Q 1.1 How old are you?

1. 18-24 years [ ]   2. 25-34 years [ ]   3. 35-44 years [ ]

4. 45-54 years [ ]   5. 55-64 years [ ]   6. 65 years and above [ ]

Q 1.2 What is your level of education?

1. None [ ]   2. Primary-incomplete [ ]   3. Primary-complete [ ]

4. Secondary-incomplete [ ]   5. Secondary-complete [ ]   6. Tertiary [ ]

Q 1.3 What is your occupation?

1. Housewife [ ]   2. Peasant farmer [ ]   3. Casual worker [ ]

4. Self employed [ ]   5.Formal employment[ ]   6.Other[ ] (Specify)…………

Q 1.4 What is your marital status?

1. Single [ ]   2. Married [ ]   3. Widowed [ ]

4. Separated [ ]   5. Divorced [ ]   6. Other [ ] (Specify)……………

Q 1.5 What is your religion?

1. None [ ]   2. Protestant [ ]   3. Catholic [ ]

4. Muslim [ ]   5. Other [ ] (Specify)……………………

Q 1.6 What is your average monthly income (FRW)?

1. Less than 5,000 [ ]   2. 5,000-9,999 [ ]   3. More than 10,000 [ ]

Section 2.0 Clinical Characteristics

Q 2.1 Do you know the disease you are suffering from? yes………………no…………………….

If no, when did you become ill?

If yes,

Q 2.2 When were you diagnosed with this cancer?

  1. One to three months ago [ ]　　　　　2. Four to six months ago [ ]

  3. Seven to nine months ago [ ]　　　4. One year ago [ ]　　　5. More than one year ago [ ]

Q 2.3 Have you received any treatment?　　　　1.Yes [ ]　　　　　　　2. No [ ]

Q 2.4 If yes, what type of treatment did you receive?

  1. Chemotherapy [ ]　　　　　　　　2. Surgery [ ]　　　3. Radiotherapy [ ]

  4. Surgery and Chemotherapy [ ]　　　5. Chemotherapy and Radiotherapy [ ]

6. Surgery, radiotherapy and Chemotherapy [ ]

Q 2.5 When did you last receive this treatment?

  1. Less than a month ago [ ]　　　　　2. One to three months ago [ ]

  3. Four to six months ago [ ]　　　4. Seven to nine months ago [ ]　　5. One year ago [ ]

Q 2.6 What services have you received as part of your care?

  (Specify)… 1. Pain relief [ ]　　　　　2. Psychosocial counselling [ ]

  3. Spiritual care [ ]　　　　4. Other symptom management [ ]

Q 2.7 When did you start receiving these services?

  1. Less than a month ago [ ]　　　　2. One to three months ago [ ]

  3. Four to six months ago [ ]　　　4. Seven to nine months ago [ ]

  5. One year ago [ ]　　　　　　6. Other [ ] (Specify)………………….

Q 2.8 Are you currently suffering from any other chronic illness?

  1. Yes [ ]　　　　2. No [ ]

Q 2.9 If yes, which illness?…………………………….

Section 3.0 The Missoula Vitas Quality of Life Index (MVQOLI).

PHYSICAL COMPONENT

Q 3.1 My symptoms are adequately controlled	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.2 I feel sick all the time	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.3 I accept my symptoms as a fact of life	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.4 I am satisfied with the current control of symptoms	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.5 Physical discomfort overshadows any opportunity for enjoyment	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.6 I am no longer able to do many of the things I like to do.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.7 I am satisfied with my ability to take care of my basic needs.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

SOCIAL COMPONENT

Q 3.8 I am dependent on others for personal care	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.9 I accept the fact that I can not do many of the things that I used to do	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.10 I have recently been able to say important things to the people close to me	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.11 I feel closer to others in my life now than I did before my illness	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.12 In general, these days I am satisfied with relationships with family and friends	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.13 At present, I spend as much time as I want to with family and friends.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.14 It is important to me to have close personal relationships.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

PSYCHOLOGY COMPONENT

Q 3.15 My affairs are not in order, I am worried that many things are unresolved.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.16 If I were to die suddenly today, I would feel prepared to leave this life.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.17 I am more satisfied with myself as a person now than I was before my illness.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.18 The longer I am ill, the more I worry about things getting out of control.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.19 It is important to me to be at peace with myself.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

SPIRITUAL COMPONENT

Q 3.20 My contentment of life depends upon being active and being independent in my personal care	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.21 I feel more disconnected from all things now than I did before my illness.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.22 I have a better sense of meaning in my life now than I have had in the past.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.23 I am comfortable with the thought of my own death.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.24 Life has lost all value for me, every day is a burden.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q 3.25 It is important to me to feel that my life has meaning.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree

GLOBAL

How would you rate your overall quality of life?	Best possible	Good	Fair	Poor	Worst possible

APPENDIX 6.URUHUSHYA RWO KUJYA MU BUSHAKASHATSI

INYANDIKO YO KWEMERA KUGIRA URUHARE MU BUSHAKASHATSI

Kugira ngo nsoze amasomo y'icyiciro cya gatatu cya kaminuza mu buforomo , Leonie NIRAGIRE ndashaka gukora ubushakashatsi ku "**Mivurirwe y'abarwayi bafite kanseri y'inkondo y'umura n'ibindi bigendanye nayo bishobora gutuma ubuzima bwabo bumera neza cyangwa nabi mu gihe cyo kuvurwa**"

Ubwo bushakashatsi bukazakorerwa ku muntu ifite ikibazo cya kanseri y'inkondo y'umura, ariko akagera mu bitaro bivura kanseri bya Butaro.

Ni muri urwo rwego mbasaba Kugira uruhare muri ubu bushakashatsi mudufasha gusubiza ibibazo byanditse.

Uburenganzira bwanyu:

Mufite uburenganzira bwo kwemera cyangwa kwanga kugira uruhare muri ubu bushakashatsi no kubwivanamo igihe cyose bibaye ngombwa mutabajijwe ibisobanuro.

Ibisubizo byanyu bizagirwa ibanga kuko mudasabwa kwandika amazina yanyu ku mpapuro zasubirijweho, ndetse ni ubafasha kuzuza urupapuro rw'ibibazo ntagomba gushyiraho amazina yanyu.

Muzamenyeshwa kandi ibyavuye muri ubu bushakashatsi binyujijwe muri ibi bitaro bya Butaro.

Mbaye mbashimiye ufufatanye bwanyu muri iki gikorwa!

Umukono:

Amazina y'mushakashatsi: Leonie NIRAGIRE

Telephone 0788735631

Uwemeye kujya mu bushakashatsi

Jyewe ………………….. …………………maze gusobanurirwa intego y'ubu bushakashatsi, uruhare rwange ndetse nkanabwirwa uburyo uburenganzira bwange buzubahirizwa ,nemeye gushyira umukono kuri iyi nyandiko, nk'icyemezo cy'uko nemeye gusubiza ibibazo bibazwa muri ubu bushakashatsi.

Nasomye neza iyi nyandiko kandi nayisobanukiwe neza niyo mpamvu nshyizeho umukono nta gahato.

Itariki :

Umukono :

APPENDIX 7: IBIBAZO BIJYANYE N'UBUSHAKASHATSI(Kinyarwanda

questionnaire)

IBIBAZO BIJYANYE N'UKO UMUNTU YIYUMVA AKURIKIJE UBUVUZI AHABWA: MU BARWAYI BA KANSERI Y'INKONDO Y'UMURA

Itariki: …………………………………

Igice cya mbere: 1.0 Imibereho rusange

1.1 Ufite imyaka ingahe?

   1. 18-24 [ ]   2. 25-34 [ ]   3. 35-44 [ ]

   4. 45-54 [ ]   5. 55-64 [ ]   6. 65 gusubiza hejuru [ ]

1.2 Amashuri wize angahe?

    1. Nta na rimwe [ ]   2. Abanza-atarangiye [ ]   3. Warangije abanza [ ]

    4. Ayisumbuye atarangiye [ ] 5. Warangije ayisumbuye [ ]   6.Kaminuza [ ]

    7. Ayandi[ ] (Yavuge)……………………

1.3 Ukora iki?

    1. Kwibera mu rugo [ ]   2. Umuhinzi [ ]   3. Ukora icyo abonye cyose [ ]

    4. Kwikorera [ ]   5.Akazi ka leta [ ]   6.Ibindi[ ] (Bivuge)…………

1.4 ibirebana no gushaka:

    1. Uwashatse [ ]   2. Ingaragu [ ]   3.uwicuruza [ ]

    4. Watandukanye [ ]   5. Wapfakaye [ ]   6.Ibindi[]

(Bivuge)……………

1.5 Ni irihe dini ryawe?

    1. Ntaryo [ ]   2. Umuporoso [ ]   3.umugaturika [ ]

    4. umusilamu [ ]   5. Umudiventiste [ ]   5.ibindi [ ] (bivuge)…………

1.6 Ni amafaranga angana iki ushobora kubona ku kwezi (FRW)?

    1. Munsi ya 5,000 [ ]   2. 5,000-9,999 [ ]   3. 10000 no hejuru yayo

Igice cya kabiri 2.0 Ibirebana n'ubuvuzi

2.1 Waba uzi uburwayi urwaye?………………………………….

Niba utabuzi, ni ryari watangiye kurwara(wafashwe)?

Niba ubuzi,

2.2 Ni ryari wamenye ko urwaye iyi Kanseri?

   1. Ukwezi kumwe kugeza kuri atatu ashize [ ]   2. Ane kugeza kuri atandatu [ ]

   3. Arindwi kugeza ku icyenda [ ]   4. Mu mwaka umwe ushize [ ]

5. Mu gihe kirenze umwaka [ ]

2.3 Hari imiti wahawe?

   1.   Yego [ ]   2. Oya [ ]

2.4 Niba ari yego, Ni iyihe miti wavujwe?

   1. Chemotherapy? [ ]   2. Warabazwe? [ ]   3. Radiotherapy [ ]

   4. Kubagwa na Chemotherapy [ ]   5. Chemotherapy na Radiotherapy [ ]

   6. Kubagwa, radiotherapy na Chemotherapy [ ]

2.5 Ni ryari uheruka gufata umuti?

   1. Igihe kiri munsi y'ukwezi [ ]   2. Ukwezi kumwe kugeza kuri atatu [ ]

   3. Ane kugeza kuri atandatu [ ]   4. Arindwi kugeza ku icyenda [ ]

   5. mu mwaka umwe ushize [ ]

2.6 Ni ubuhe buvuzi wahawe muri ubu bukurikira?

   1. Kugabanyirizwa uburibwe [ ]   2. Ibitekerezo n'isanamutima [ ]

   3. Ibijyanye n'iyobokamana [ ]   4. Ibindi bimenyetso by'uburwayi [ ]

   5. Ibindi [ ] (Bivuge)………………….

2.7 Ni ryari watangiye kuvurwa muri ubu buryo tubonye hejuru?

   1. Igihe kiri munsi y'ukwezi [ ]   2. Ukwezi kumwe kugeza kuri atatu [ ]

   3. Ane kugeza kuri atandatu [ ]   4. Arindwi kugeza ku icyenda [ ]

   5. mu mwaka umwe ushize [ ]   6. Ikindi gihe [ ] (Kivuge)………………….

2.8 Hari indi ndwara idakira urwaye?

   1. Yego [ ]   2. Oya [ ]

2.9 Niba ari yego, ni iyihe? …………………………….

Igice cya 3.0 Ibirebana n'uko umurwayi yiyumva hakurikijwe ubuvuzi ahabwa.

<u>**Ubuvuzi bufatika(haba ku burwayi nyirizina, uburibwe, kuruka gucika integer n'ibindi nkabyo)**</u>

3.1 Uburwayi bwanjye bubona imiti uko bikwiriye.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.2 Buri gihe, mba numva ndwanye.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.3 Nakiriye uburwayi bwanjye nk'umugabane w'ubuzima bwanjye	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.4 Numva nyuzwe nuko uburwayi bwanjye ndetse n' ibimenyetso bigendana nabwo bivurwa.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.5 Mba numva ntameze neza, ku buryo numva nta kintu kikinshimisha.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.6 Singifite ubushobozi bwo gukora ibintu nakundaga gukora .	cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.7 Nyuzwe n'ubushobozi mfite bwo kwikemurira iby'ibanze .	cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa

<u>**Ubuvuzi bushingiye ku mibereho rusange**</u>

3.8 Kugirango niyiteho, bisaba ko ngira umfasha.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.9 Nari nsanzwe ngira ibintu by'ingenzi mbwira abanzengurutse.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.10 Numva nkeneye kuba kumwe(kubana) n'abandi kuruta uko byari biri mbere yo kurwara	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.11 Muri rusange, muri iyi minsi numva nyuzwe nuko mbanye n'ab'umuryango wanjye n'inshuti	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.12 Ubu, igihe cyanjye nkimarana n'ab'umuryango wanjye n'inshuti nk'uko mbyifuza	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa

n

	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.13 Ni ingenzi kuri jye kugira abo tugirana umubano uhamye	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa

Ubuvuzi bushingiye ku byiyumviro n'ibitekerezo

	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.14 Ibyanjye mbona bitarimo kugenda neza, mfite impungenge zuko ntazakira.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.15 Niba nshobora gutungurwa n'urupfu aka kanya, nakagombye kuba nariteguye kuva muri ubu buzima.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.16 Numva nyuzwe no kubaho nk'ikiremwa muntu (ari iby'giciro) kuruta uko byari biri mbere yuko ndwara.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.17 Uko ndushaho kurwara, niko ndushaho guterwa ubwoba n'ukuntu ndushaho kuremba.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.18 Icy'ingenzi ni ukwiha amahoro	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.19 Mpabwa ubufasha mu buryo bwo kugira ibyiyumviro n'imiterereze biboneye	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa

Ubuvuzi bushingiye ku myizerere

	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3. 20 Njya nganirizwa ku birebana n'imyizerere cyangwa ibijyanye no gusenga	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.21 Numva ndi jyenyine, ibintu byose ntacyo bivuze ngereranyije nuko nari meze ntararwara.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.22 Numva ubuzima bwanjye ari ubw'agaciro kuruta uko nabitekerezaga mbere	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa

	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.23 Nakumva nta kibazo ndamutse naganirijwe ibijyanye no gupfa(kwanjye).	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.24 Ubuzima nta gaciro bugifite kuri jye, buri munsi burushaho kundemerera	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa
3.25 Kumva ko ubuzima bwanjye ari ubw'agaciro, n'ingenzi kuri jye.	Cyane bikabije	Cyane	Hagati na hagati	Oya	Habe na busa

Muri rusange

	Bubi cyane	Bubi	Hagati na hagati	Bwiza	Bwiza cyane
Ni mu buhe buryo muri rusange ubonamo ubuzima bwawe?	Bubi cyane	Bubi	Hagati na hagati	Bwiza	Bwiza cyane

Murakoze cyane kwemera kuba muri ubu bushakashatsi.