

**Psychosocial Problems of Cervical Cancer Patients in a
Tertiary Level Hospital of Bangladesh**



SUBMITTED BY

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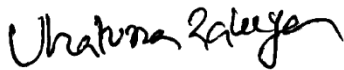
SUBMITTED TO

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Declaration

I hereby declare that the work which is being presented in the Thesis, entitled **“Psychosocial Problems of Cervical Cancer Patients in a Tertiary Level Hospital of Bangladesh”**, in partial fulfillment of the degree Master of Public Health (MPH) program and submitted to the Faculty of Allied Health Sciences, Daffodil International University, Bangladesh is an original piece of dissertation under the guidance of Professor Dr. A B M Alauddin Chowdhury, Department of Public Health, Daffodil International University.


.....

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Certification

This is to certify that **Uhatuna Zakeya**, Student ID N0. 172-41-598 has carried out the research work as a partial requirement of the degree under my supervision and submitted the dissertation entitled “**Psychosocial Problems of Cervical Cancer Patients in a Tertiary Level Hospital of Bangladesh**”.

I have confidence regarding the originality of her data and I also express that the dissertation is up to my satisfaction



.....

Professor Dr. ABM Alauddin Chowdhury

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List of Abbreviations

ASR	- Age-standardized incidence rate
CC	- Cervical cancer
DIU	- Daffodil International University
GOU	- Gynae Oncology Unit
HADS	- Hospital Anxiety & Depression level
HPV	- Human Papilloma Virus
IARC	- International Agency for Research on Cancer
LMICs	- Low and Middle-income Countries
MPH	- Masters of Public Health
NICRH	- National Institute of Cancer Research and Hospital
WHO	- World Health Organizations
SC	- Supportive care
SD	- Standard Deviation
SPSS	- Statistical Package for the Social Sciences

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Uhatuna Zakeya

ABSTRACT

Background: Globally cervical cancer is the fourth most common cancer in women and the incidence and mortality rate of cervical cancer are highest in low- and middle-income countries. **Objective:** The study aimed to determine the psychological and social aspects among cervical cancer patients in (GOU) unit of a tertiary-level hospital in Bangladesh. **Methods:** Among 304 participants, a descriptive cross-sectional study was carried out with a semi-structured questionnaire was used to collect data. Data was analyzed using SPSS version 25. **Results:** In this study, the mean age of the respondents was 45.49 years. The study findings reported that 77.3% of respondents have anxiety at an abnormal level, and 80.9% have abnormal depression levels. Moreover, 16.1% and 14.5% have borderline abnormal anxiety and depression accordingly. Respondents anxiety and depression level are significantly associated with their education, profession, marital status, family income, treatment bearing source etc. Moreover, most of them (94.7%) have economic problem for treatment and are not satisfied (97.4%) with their present condition **Conclusion:** Generally psychosocial issues are being covered in terms of long-term treatment process but it is crucial to find out the interventions for better management of psychosocial problems of cervical cancer to make the treatment process smoother.

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CHAPTER 1: INTRODUCTION

1.1 Background:

Cervical cancer among women is the eighth most common cancer worldwide and the fourth most common cancer among women. More than 662,301 new cases of cervical cancer were diagnosed in 2022, which was about 528,000 cases in 2012 worldwide (1). The incidence of CC in Asian countries is on the rise for example in China 13.8/lack, India 17.7/lack, Brazil 12.7/lack (2). Most of the time cervical cancer is detected in the later stages of cancer and it can be easily neglected because it does not initially cause symptoms like lower abdominal pain, and vaginal spotting. Some studies reported that the incidence of CC is declining gradually because of early diagnostic tool applications, the cervical Pap- -smear (3).

Human papillomavirus (HPV), low socio-economic status, marrying before the age of 18 years, smoking, and multiple childbirths are causing factors of cervical cancer, which increase the risk of developing cervical cancer (4). Accordingly, the treatment modalities of cervical cancer may consist of a combination of surgery, chemotherapy, and radiotherapy (2). However, cervical cancer is a common cause of death in women worldwide (5).

In comparison with other gynecological cancer patients, CC patients face various problems such as physical, psychological, and social distress, spiritual suffering, fatigue, irritability, memory loss, decreased energy level, recurring pain, worse emotional distress, and at last poor quality of life (6). Studies showed that CC patients commonly experience anxiety and feel that they are going to die in a worse condition (McCallum M, et al,2014). According to

a study in Ethiopia, 79.7% of CC patients experienced anxiety and 47% of CC patients felt depression (7).

At the same time, mental illness is a major cause of morbidity and mortality in today's world. (8). The burden of mental illness is especially high among females. Where the prevalence of any mental disorder is estimated to be 12 thousand per 100 thousand females, and the prevalence of anxiety and depressive disorders is estimated to be 3.5 thousand and 3.4 thousand per 100 thousand females, separately (9). During the past decade, patients with mental disorders have been recognized as experiencing substantial health inequality, in terms of cervical cancer prevention, females with mental illness are less likely to be vaccinated against HPV and to participate in cervical cancer screening (8).

A study suggested that individuals diagnosed with mental illness may have less support from tertiary cervical cancer prevention due to delayed diagnosis and treatment of cancer (10,11,12).

1.2 Justification:

The study aims to investigate and address the multifaceted challenges faced by individuals diagnosed with cervical cancer in Bangladesh. This research is crucial due to the significant psychosocial impact of cervical cancer, which extends beyond physical health implications. By exploring these issues, the study seeks to contribute valuable insights into understanding the emotional, social, and psychological burdens experienced by patients.

In Bangladesh, where healthcare resources and awareness about cervical cancer are often limited, patients encounter unique psychosocial stressors such as stigma, fear of death, financial pressure, and disruptions in family dynamics. These factors affect their treatment

adherence and overall welfare. By identifying these challenges, the study aims to inform healthcare strategies and interventions tailored to meet the specific psychosocial needs of cervical cancer patients in Bangladesh. The current study highlights the often-neglected emotional and social repercussions of the disease, which can significantly impact treatment adherence, recovery, and overall quality of life. By conducting this study, researchers seek to generate evidence that informs policy-makers, healthcare providers, and support organizations about the specific needs of cervical cancer patients in Bangladesh. The findings could potentially lead to the development of culturally sensitive interventions and support programs that address psychosocial distress, enhance patient empowerment, and improve overall healthcare delivery for this vulnerable population.

Ultimately, this research endeavors to advocate for holistic care approaches that integrate psychosocial support into clinical settings, thereby improving patient outcomes and enhancing their overall coping mechanisms. By shedding light on these psychosocial issues, the study aims to contribute to the broader discourse on cancer care and support systems in low-resource settings like Bangladesh.

1.3 Research question:

What are the psychosocial problems of cervical cancer patients in a tertiary-level hospital of Bangladesh?

1.4 Objectives:

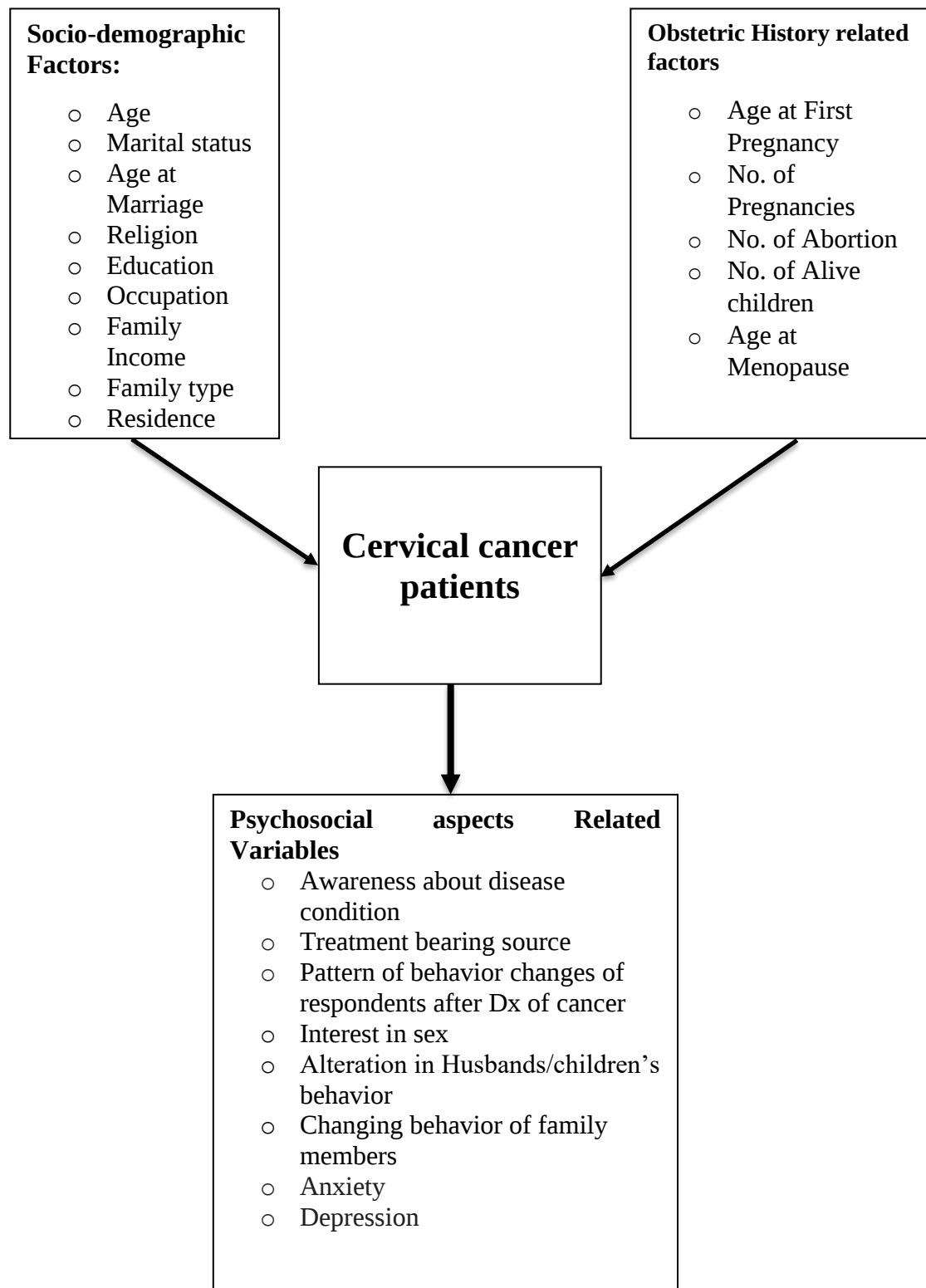
General objective:

To know the psychological (anxiety & depression level) and social aspects among patients having cervical cancer in the GOU unit of a tertiary level hospital in Bangladesh.

Specific objectives:

- To describe the socio-demographic characteristics of the respondents.
- To assess the Obstetric history of the respondents.
- To determine the changing pattern of behavior after diagnosis of cancer.
- To find out the changing response of family members of respondents after diagnosis of cancer.
- To examine the level of anxiety and depression of the respondents.
- To determine the relationship between socio-demographic characteristics, and the level of anxiety and depression of the respondents.

1.4 CONCEPTUAL FRAMEWORK



CHAPTER 2: LITERATURE REVIEW

Cervical cancer is still now a significant public health concern globally, specifically in low and middle-income countries (LMICs) like Bangladesh. Beyond its physical impact, cervical cancer imposes substantial psychosocial burdens on patients, affecting their quality of life, mental health, and social well-being. This literature review explores the psychosocial problems encountered by cervical cancer patients, emphasizing the psychological and socioeconomic aspects after diagnosis of the disease.

Cervical Cancer

In Bangladesh, cervical cancer remains a significant public health concern with notable incidence and prevalence rates that emphasize the immediate need for preventive measures, early detection, and treatment strategies. The International Agency for Research on Cancer (IARC) reported that there were about 604,000 new cases of cervical cancer globally in 2020 (13).

Cervical cancer is indicated as the second most occurring cancer among women in Bangladesh, following breast cancer. According to the International Agency for Research on Cancer (IARC) and the World Health Organization (WHO), Bangladesh, Cervical cancer has a relatively high incidence rate. Recent data indicates that the Age-Standardized Incidence rate (ASR) of cervical cancer was approximately 13.1 per 100,000 women in a year in Bangladesh (13). This statistic underscores the substantial burden of cervical cancer on women's health in the country.

Prevalence refers to the proportion of individuals in a population affected by a disease at a specific point in time. Due to advances in screening and treatment, the prevalence of

cervical cancer has been gradually decreasing in high-income countries where effective screening programs are in place. However, in low and middle-income countries, prevalence remains high due to limited access to healthcare services, lack of screening programs, and other socio-economic factors. While specific global prevalence rates are less frequently reported compared to incidence rates, the burden of cervical cancer persists in many regions. The World Health Organization (WHO) estimates that approximately 342,000 women die from cervical cancer each year globally, with over 90% of these deaths occurred in low and middle-income countries (14).

In Bangladesh, the prevalence of cervical cancer is influenced by various factors including limited access to healthcare services, inadequate screening programs, and cultural barriers that hinder early detection and treatment. The prevalence is influenced by the late-stage diagnosis due to lack of awareness, limited resources for screening and treatment, and socio-economic factors that impact access to healthcare. The fear of death and concerns about treatment outcomes are common emotional responses (15). In Bangladesh, where cancer awareness and access to healthcare services are limited, these challenges are exacerbated by cultural beliefs and social stigma associated with cancer (16).

Patients often experience shame, isolation, and discrimination, which lead to delayed diagnosis and treatment initiation (17).

Factors related to cervical cancer:

Cervical cancer is influenced by various factors, spanning biological, behavioral, and environmental dimensions. Understanding these factors is pivotal for prevention, early detection, and effective management of the disease. Among the biological factors Human

Papilloma Virus (HPV) Infection, is the primary risk factor for cervical cancer. Persistent infection with these viruses can lead to cellular changes that progress to cervical cancer over time (18). Genetic factors may influence an individual's susceptibility to Human Papillomavirus and the progression of cervical dysplasia to invasive cancer. Genetic variations affecting immune response and viral clearance mechanisms play a role in disease development (19).

Along with the early onset of sexual activity, multiple sexual partners, and unprotected sex increase the risk of HPV infection and developing cervical cancer. These behaviors contribute to increased exposure to HPV (20). Tobacco smoking is a significant risk factor for cervical cancer. It not only weakens the immune system's ability to clear HPV infections but also promotes the progression of cervical lesions to invasive cancer. Smoking cessation reduces the risk of cervical cancer development (20). Environmental Factors like lower socioeconomic status are associated with high incidence and death rates of cervical cancer. Factors like limited access to healthcare services, including screening and vaccination, and higher prevalence of risk behaviors contribute to disparities in disease outcomes (21). Accordingly, adequate access to cervical cancer screening, HPV vaccination, and timely medical care significantly impacts disease prevention and management. Barriers to healthcare access, including geographic, financial, and cultural factors, contribute to late-stage diagnosis and poorer outcomes (21). Cervical cancer incidence can also increase with age, peaking in women aged 35-44 years. Factors such as early age at first childbirth, multiple pregnancies, and long-term use of oral contraceptives may influence disease risk (20).

Psychological aspects of cervical cancer patients:

Cervical cancer diagnosis and treatment can trigger profound anxiety and depression among patients globally. The uncertainty of prognosis, fear of treatment side effects, and existential concerns about mortality contribute to heightened emotional distress. The physical symptoms of cervical cancer and its treatment, such as pain, fatigue, and changes in body image, further exacerbate psychological symptoms (22). Several factors contribute to anxiety and depression in cervical cancer including the psychological impact of a cancer diagnosis, coping with treatment-related stressors, financial burden, and disruptions to social and family roles (23). Lack of access to supportive care services and cultural stigmas surrounding cancer can also exacerbate psychological distress (24).

In Bangladesh, cervical cancer patients often experience heightened anxiety and depression due to late-stage diagnosis, limited treatment options, and cultural beliefs surrounding cancer. The stigma associated with cancer and misconceptions about its causes can lead to feelings of shame and isolation among patients (25). Financial constraints and lack of access to specialized mental health services further exacerbate psychological distress (26).

Socioeconomic Aspects of Cervical Cancer Patients

Cervical cancer patients worldwide encounter various social challenges, including stigma, economic disparities, and limited healthcare access. The stigma surrounding cancer can lead to social isolation and discrimination, affecting patients' mental health and willingness to seek timely medical care (27). Economic factors also play a crucial role, as treatment costs and lost income can impose substantial financial burdens on patients and their families, especially in underdeveloped and developing countries (28). Moreover,

disparities in healthcare access contribute to differences in treatment outcomes, with limited availability of screening programs and oncology services in underserved regions exacerbating the problem (29). Efforts to address these challenges globally include stigma reduction campaigns, advocacy for universal health coverage, and initiatives to improve healthcare infrastructure. Integrated healthcare approaches aim to enhance access to cancer screening, diagnosis, and treatment, thereby improving patient outcomes and overall quality of life (30).

In Bangladesh, cervical cancer patients face distinct social problems shaped by cultural norms, gender inequality, and healthcare system limitations. Cultural beliefs and misconceptions about cancer often lead to delays in seeking medical care, with some patients initially consulting traditional healers before accessing formal healthcare services (25). Gender norms that prioritize male healthcare needs and restrict women's autonomy further complicate the situation, impacting early detection efforts and treatment outcomes (31). Healthcare infrastructure challenges, including shortages of oncology specialists and diagnostic facilities, hinder effective cervical cancer management in Bangladesh (32). Limited access to comprehensive cancer care in rural areas exacerbates disparities in treatment outcomes, highlighting the need for targeted interventions to improve healthcare access and quality across the country.

The socioeconomic status of cervical cancer patients in Bangladesh significantly influences their psychosocial well-being. Poverty, lack of education, and limited healthcare infrastructure contribute to delays in seeking medical help and accessing necessary

treatments. Financial constraints further exacerbate stress and anxiety among patients and their families, impacting treatment adherence and overall prognosis (33).

Cultural beliefs surrounding cancer in Bangladesh contribute to the psychosocial challenges faced by patients. Cancer is often viewed fatalistically, leading to fatalism and hopelessness among patients and their families (25). Moreover, cancer stigma prevents open discussion and support-seeking behaviors, isolating patients from social networks and community support systems (34). Studies indicate that addressing psychosocial needs alongside medical treatment improves overall patient outcomes and enhances coping mechanisms (35).

Healthcare System Challenges:

The healthcare system in Bangladesh faces numerous challenges in providing comprehensive care for cervical cancer patients. The limited availability of oncology specialists, diagnostic facilities, and treatment options restricts timely intervention and holistic care (26). Additionally, a lack of integrated psychosocial support services further hinders the management of emotional and social issues among patients (32).

Interventions and support strategies:

Efforts to address the psychosocial problems of cervical cancer patients in Bangladesh are gradually emerging. Community-based interventions, peer support programs, and psychological counseling services have shown promise in mitigating distress and improving coping skills among patients (36). Integrating psychosocial care into existing healthcare frameworks and enhancing public awareness about cervical cancer are crucial steps towards reducing stigma and improving patient outcomes (37).

In conclusion, cervical cancer patients in Bangladesh face significant psychosocial challenges that impact their quality of life and treatment outcomes. Addressing these issues requires a comprehensive approach that addresses cultural beliefs, socioeconomic factors, and healthcare system limitations. By integrating psychosocial support into cancer care strategies and promoting community-based initiatives, Bangladesh can improve the well-being of cervical cancer patients and enhance their overall survival rates.

CHAPTER 3. METHODOLOGY

3.1 Introduction

This chapter discusses the methodology used in this study. It describes the study setting, study design, study population, sample of the study, the study instrument, the procedure, and data analysis. The chapter ends with the ethical considerations followed in this study.

3.2 Study Design

A descriptive cross-sectional study has been used to understand the sociodemographic characteristics of cervical cancer patients and to examine the anxiety and depression levels among the patients by using a quantitative approach.

3.3 Place of study

The study place was the tertiary level hospital named National Institute of Cancer Research and Hospital, Mohakhali, Dhaka. However, for this study, we selected the GOU unit in NICRH which is situated at Block- B in the hospital.

3.4 Study Period

The study was carried out from March to September 2020.

3.5 Study population

For this study, patients attending the GOU unit were randomly selected and their ages were between 18 years to 60 years.

3.5.1 Selection criteria:

Inclusion criteria:

1. Age limit: 18 years to 60 years.

Exclusion criteria:

1. Temporary migrants (Guests),
2. Who are seriously sick.

3.6 Sample size

The following formula was used to determine the sample size

$$n = z^2(pq)/d^2$$

Hare,

n = Desired sample size

d = Confidence interval;

p = Estimated Prevalence rate.

q = (1-p)

z =1.96 (95% Confidence level),

According to this study Prevalence (P) of cervical cancer screening was reported as 29.8% among women in India (Muthuramalingam MR and Muraleedharan VR,2023)

p = 29.8%

q = 1 - .298

d = 0.05 hence the calculated sample size was 321.

Due to a shortage of time, interviews were done with 304 respondents.

3.7 Sampling Techniques

A purposive sampling technique has been used to conduct the research

3.8 Data collection procedure:

The principal investigator has conducted the quantitative information collection work. Before starting the data collection, interviewers informed the subjects and discussed them in short to prepare them mentally for the specific question. Before the interview, informed consent was obtained from the respondents. A semi-structured questionnaire was used and after getting consent from the respondents, the data was collected by face-to-face interview.

3.9. Research instruments:

Data has been collected from (GOU) unit of NICRH. A pre-tested, questionnaire has been to get feedback on the suitability, and appropriateness of the questions. The questionnaire has 5 parts for example,

Part 1: Socio-demographic characteristics

It includes questions about the Age of the participants, Marital status, Age at marriage, Religion, Education, Occupation, Family Income, Family type, Residence, and Age at First Pregnancy of respondents.

Part 2: Obstetric history of the respondents

This part includes questions about total number of pregnancies, total number of abortions, number of alive children, age at menopause etc. of respondents.

Part 3: Psychosocial problems of respondents

This includes respondent's awareness about her own disease, first reaction of respondents after information of her diagnosis, awareness about Cervical cancer, economic problems for treatment, treatment bearded by whom.

Part 4: Pattern of behavior changes of respondents after diagnosis of cancer

This section contains questions about participants' feelings of hesitation while meeting with people, meeting less with society people, feeling of self-guilt, think of people don't like them, lost interest in sex after diagnosis of cancer, satisfaction with her present condition. Answers have been given by yes and no format.

Part 5: Changing behaviors of family members after diagnosis of cancer

This part contains questions about alteration in Husbands/children's behavior and changing behavior of other family members of respondents.

Part 6: Hospital Anxiety & Depression level (HADS)

Hospital anxiety and depression has been used to determine the anxiety and depression level of respondents. HADS was devised 30 years ago by Zigmond and Snaith to measure anxiety and depression in a general medical population of patients. It has become a popular tool, for clinical practice and research.

3.10 Data processing and analysis:

After collecting data, all interviewed questionnaires were checked for completeness, correctness, and internal consistency to exclude missing or inconsistent data and those were discarded. All the collected data was rechecked, coded, and entered into a database using

SPSS version 25 by the researcher. Analysis has been done targeting the study objectives by considering the indicators. A descriptive analysis of all relevant variables has been done using measures of Central Tendency, Dispersion, confidence interval, etc. Association and differentials within/between variables have been tested using a t-test and Chi-square test.

3.11 Ethical considerations

Ethical clearance was obtained from the Faculty of Allied Health Sciences Research Ethics Committee of Daffodil International University through the Department of Public Health. Before data collection informed consent was taken from study participants. Participants would also be assured that their information and records would be kept confidential and they had the right to withdraw their participation from the study at any time.

CHAPTER 4. RESULTS

Table 1: Distribution of the respondents according to age (n = 304)

Age of the respondents	Frequency (n)	Percentage (%)
25 - 35	59	19.4
36 - 45	78	25.7
46 - 55	128	42.1
56 - 65	34	11.2
66 - 75	5	1.6
Total	304	100
Mean± SD	45.49 ± 9.74	

Table 1 incorporates the age of the respondents. The largest group of respondents consists of those aged 46 – 55 (42.1%), followed by those aged 36 – 45 (25.7%), 25 – 35 (19.4%), 56 - 65 (11.2%), etc. The mean age of the respondents was 45.49 years.

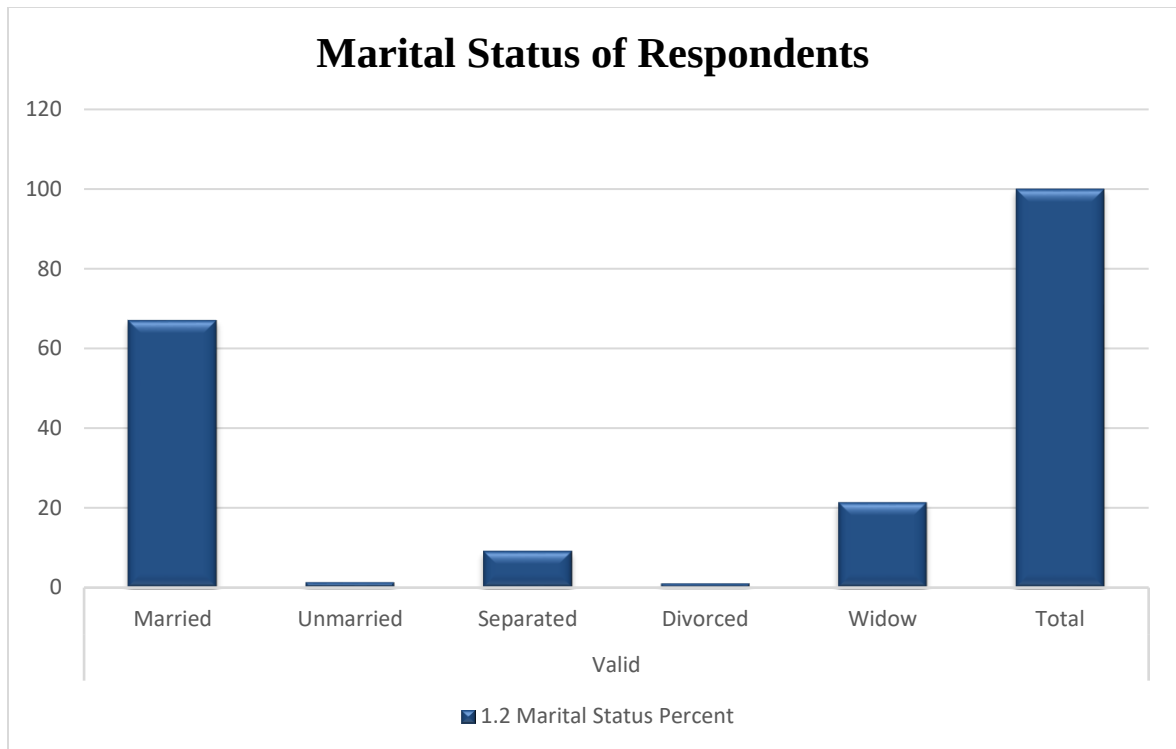


Figure 1: Distribution of Respondents by Marital Status (n=304)

Since the study was conducted on women so figure 1 shows that the overwhelming majority of women (67.1%) were married. 21.4 percent of respondents were widows and 9.2 percent reported as separated from their husbands.

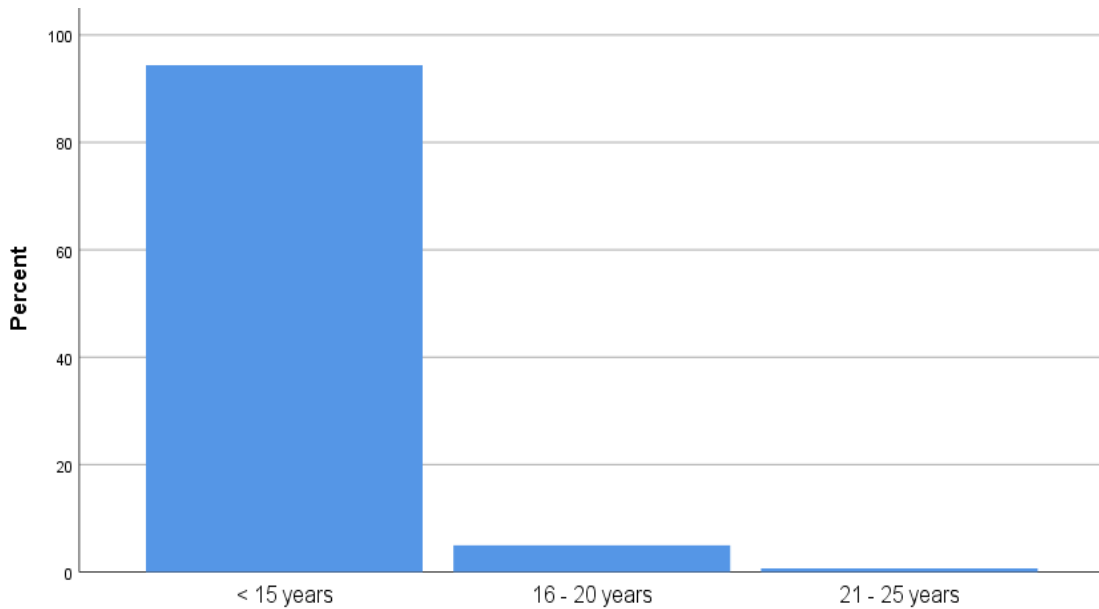


Figure 2: Distribution of Age at Marriage of Respondents (n = 304)

About 94 percent of respondents got married before the age of 15 years which can be called early marriage and it is the risk factor for uterine cancer, breast cancer, abortion, etc. Among the respondents, only about 5 percent got married at the age between 16 – 20 years. Others got married after age 20 years and 2 of the respondents were not married.

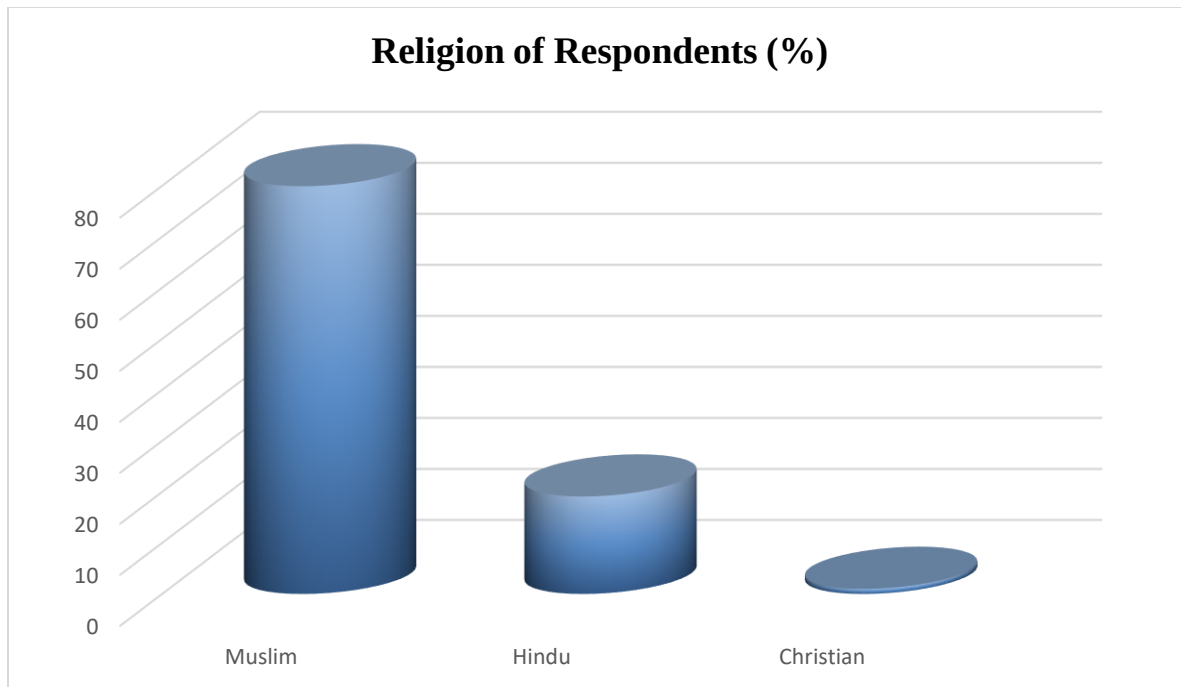


Figure 3: Distribution of respondents by Religion (n=304)

Figure 3 illustrates the religion of the respondents where about 80 percent of respondents belonged to Muslim, 19 percent were Hindu and the remaining participants were Christian.

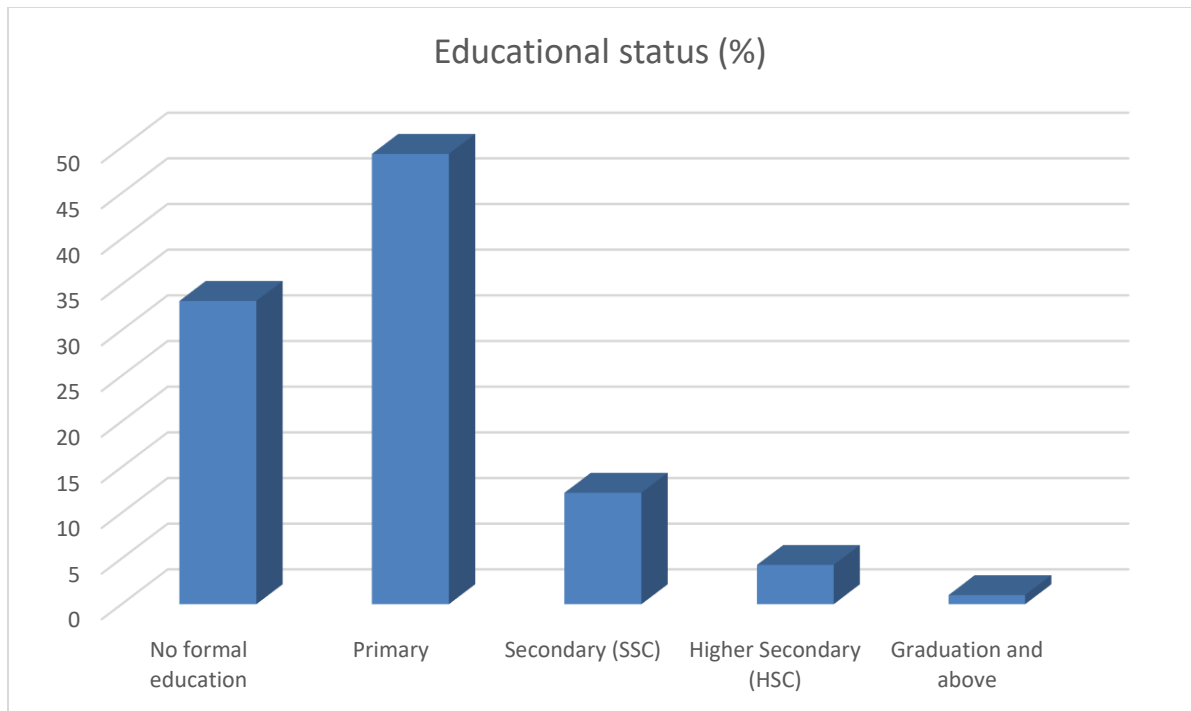


Figure 4: Distribution of educational background of respondents (n=304).

Figure 4 illustrates the educational background of the respondents where approximately half of the respondents had primary education and 33.2 percent did not have formal education. Additionally, 12.2 percent had secondary education, and others had higher secondary (4.3%) and graduated about 1 %.

Table 2: Distribution of Occupation of Respondents (n = 304)

S/N	Occupation	Frequency	Percent
1.	Housewife	259	85.2
2.	Day Labor	22	7.2
3.	Service	13	4.3
4.	Others	10	3.3
	Total	304	100.0

The occupation of the respondents is shown in Table 2, which shows the majority of the respondents (85%) were housewives. 7.2 percent of the respondents are day laborer and 7.6 percent of were working as service holders and other jobs.

Table 3: Distribution of Monthly Family Income of Respondents (n=304).

Income	Frequency	Percent
<10000 BDT	61	20.1
11000 - 20000 BDT	146	48.0
21000 - 30000 BDT	61	20.1
31000 - 40000 BDT	12	3.9
> 50000 BDT	24	7.9
Total	304	100.0
Mean $\pm$ SD	20557.57 $\pm$ 11852.329	

Table 3 shows about 48 percent Respondents monthly family income ranges from 11000 – 20000 BDT among 304. Approximately 20 percent had below 10000 BDT and about 8 percent had above 50000 BDT. Average monthly income of the respondents is about 20557.57 BDT.

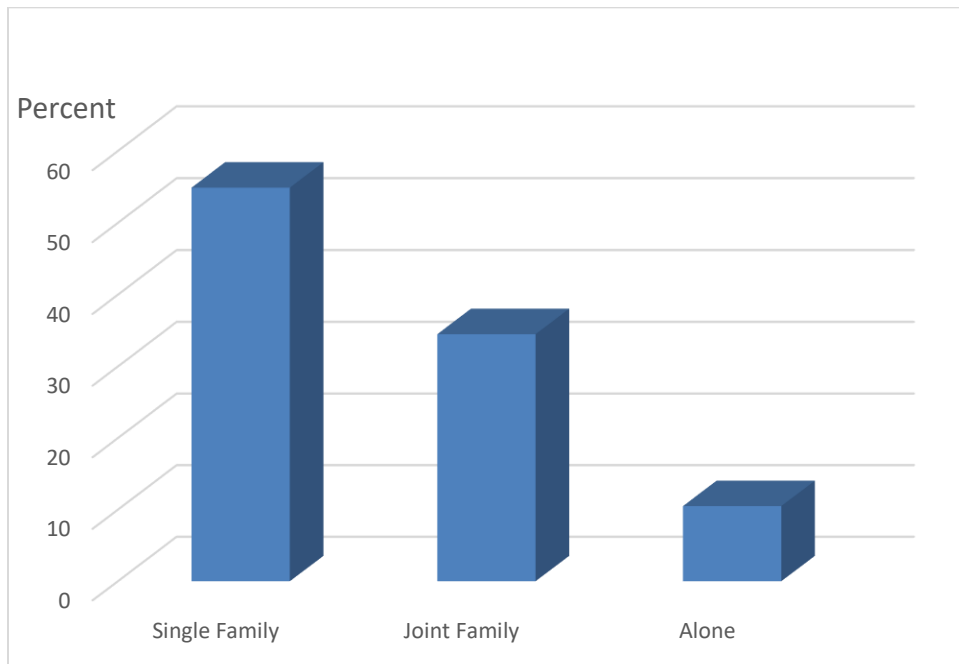


Figure 5: Distribution of Family Type of Respondents (n = 304)

Figure 5 shows more than half of the respondents (54.9%) belonged to single family type others lived in Joint families (34.5%) and 10.5 percent lived alone.

RESPONDENTS' OBSTETRIC HISTORY

Table 4: Distribution of age of first pregnancy of the respondents (n = 304)

Age of First Pregnancy	Frequency	Percent
< 15 years	214	70.4
16 - 20 years	83	27.3
21 - 25 years	5	1.6
Missing	2	.7
Total	304	100.0

Table 4 proclaims that around 70 percent of respondents became pregnant for the first time at the age of 15 and before that. Additionally, about 27 percent had their first pregnancy at the age of 16 – 20 years and others (1.6 %) between 21 – 25 years.

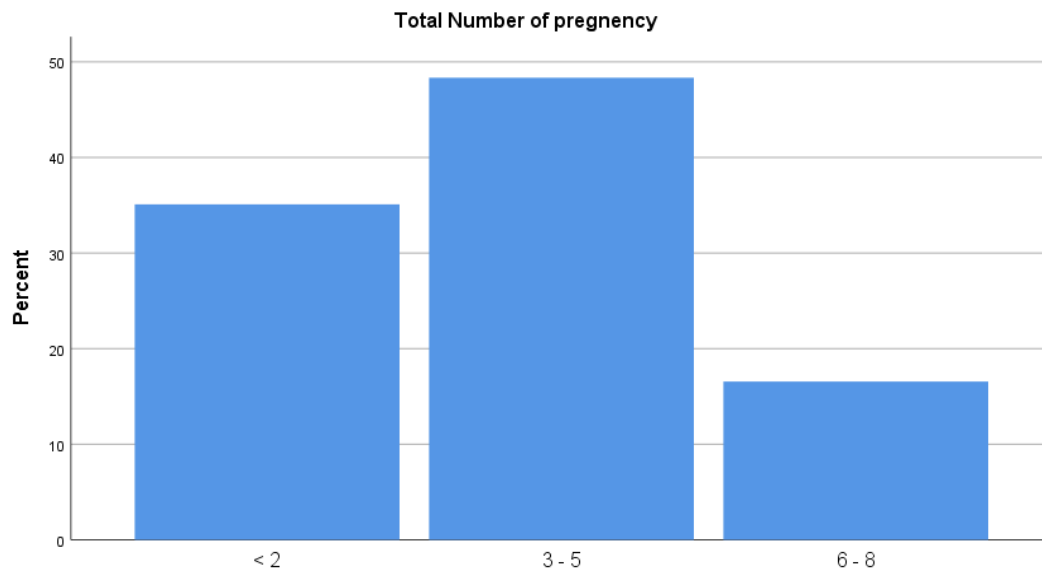


Figure 6: Distribution of Total Number of Pregnancies of the Respondents (n = 304)

Among 304 respondents about 48 percent had the total number of pregnancies between 3 – 5. 16 percent had 6 – 8 pregnancies and 35 percent had 2 or less than 2 pregnancies.

Table 5: Distribution of total number of Abortion of respondents (n = 304)

Total Number of Abortion	Frequency	Percent
0	162	53.3
1	118	38.8
2	18	5.9
3	4	1.3
Missing	2	.7
Total	304	100

Table 5 displays that half of the respondents don't have an abortion. Additionally, about 38.8% of respondents had one abortion, 5.9 % had 2 and 1.3 % had 3 abortion history.

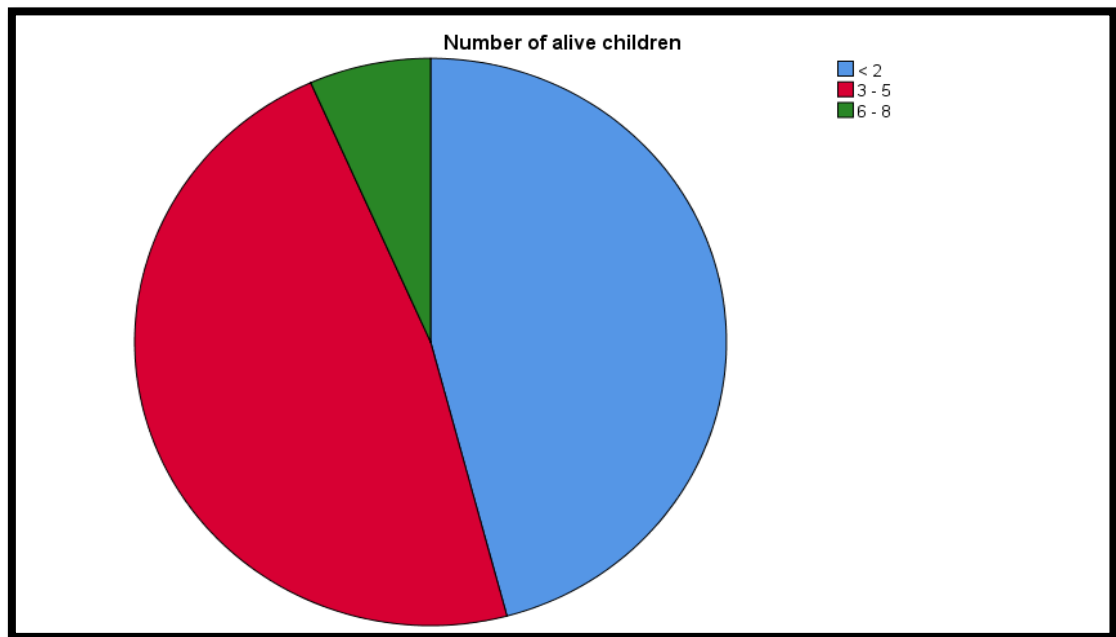


Figure 7: Distribution of Total Number of Alive children (n = 304)

Figure 7 shows about 47 percent of respondents had 3 – 5 live children, 45.4 percent had about 1 or 2 children and 6.6 percent had between 6 – 8 live children.

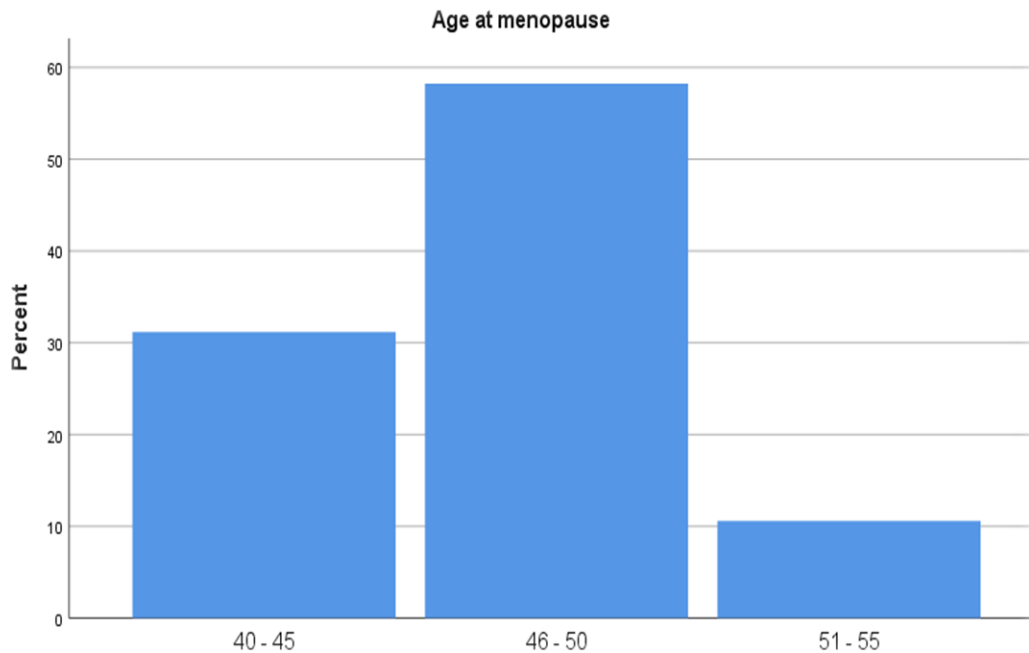


Figure 8: Distribution of Age at Menopause of Respondents (n=304).

Figure 8 shows that 32.6 % of respondents were at the age of 46 – 50, 17.4 percent at the age of 40 – 45, and 5.9 percent at the age between 51 – 55 years.

PSYCHOSOCIAL PROBLEMS OF RESPONDENTS

Table 6: Distribution of respondents Awareness about disease condition (n=304).

Items	Yes No. (%)	No No. (%)
Respondent's awareness about her diseases	266 (87.5)	38 (12.5)
Respondents' Awareness about Cervical cancer	58 (19.1)	246 (80.9)
Economic Problems for Treatment	288 (94.7)	16(5.3)

Table 6 shows that most of the respondents (87.5%) were aware about her disease but most of them (80.9%) did not aware about cervical cancer. Additionally, about 94.7% from 304 respondents were not economically stable for their treatment of cancer.

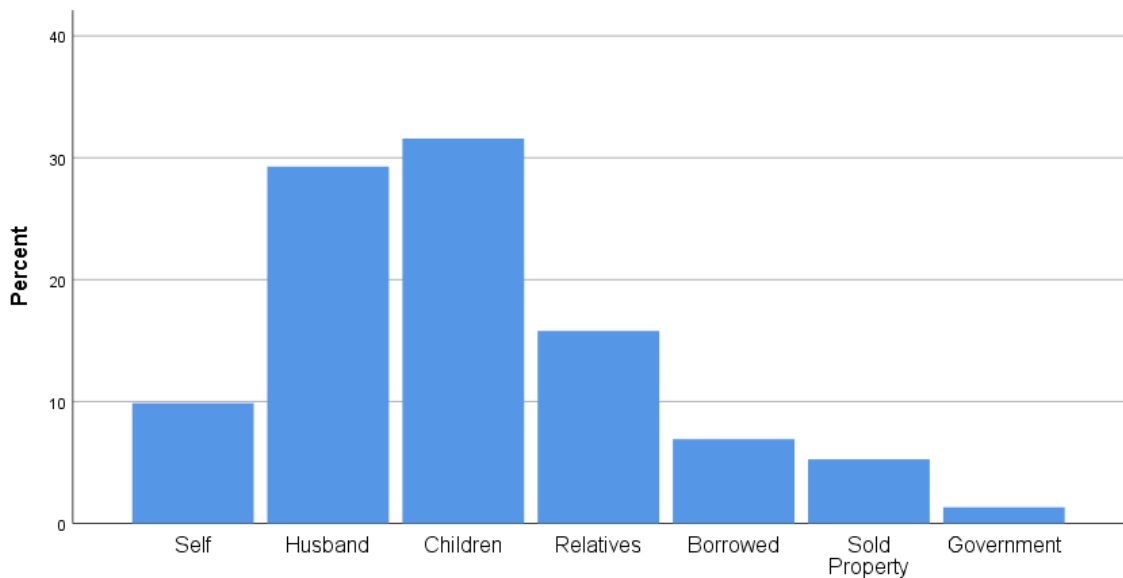


Figure 9: Distribution of respondent's treatment-bearing source (n=304).

Respondents treatment cost had been bearded by their husband (29.3%) or children (31.6%). Some of them are self-dependent (9.9%) had borrowed money (6.9%) or sold their property (5.3%) for treatment. Only 1.3% had government support for treatment.

Table 7: Pattern of behaviors changes after cancer diagnosis of respondents (n=304).

Items	Yes No. (%)	No No. (%)
Feeling of hesitation in meeting with people	178 (58.6)	126 (41.4)
Feeling of self-guilt	218 (71.7)	86 (28.3)
Less meeting with society people	188 (61.8)	116 (38.2)
Feeling that people don't like respondent	13 (1.3)	291 (95.7)
Lost interest in sex	285(93.8)	3 (1)
Satisfied with her present condition	8 (2.6)	296 (97.4)

According to table 7 respondents reported their pattern of behavior change after diagnosis of cervical cancer. More than 50 % felt hesitation in meeting with people, about 71% felt self-guilt, 61% met with society people less than before. At the same time most of them (94%) had lost interest in sex after their diagnosis. Almost all of them were not satisfied with their present condition.

Table 8: Changing behaviors of family members after diagnosis of cancer(n=304).

Alteration in respondents' Husbands/children's behavior	Frequency	Percent
More affection	65	21.4
Less in affection	184	60.5
Does not support now	42	13.8
Does not want to provide treatment	13	4.3
Total	304	100

About 60 % of respondents reported that they find less affection in their husband/children in Table 8. 13 % of the participants reported their husband and children did not support them now and 4.3% did not want to provide treatment. On the contrary 65 respondents reported more affection with their husband/children.

Table 9: Distribution of changing behaviors of family members after diagnosis of cancer(n=304).

Items	Yes No. (%)	No No. (%)
Abused or insulted by your husband/Children	83 (27.3)	221(72.7)
Separation feeling from husband/children after diagnosis of cancer	86 (28.3)	218 (71.7)
Husbands/children are not interested in providing treatment (Ever felt by the participants)	85 (28.0)	215 (70.7)
Husband/children left after diagnosis of cancer	31 (10.2)	269 (88.5)
Negative behavior of friends and relatives after cancer diagnosis	15 (4.9)	289 (95.1)

About 27 % of respondents reported they had been abused or insulted by their husband/children, 28% felt separated from their husband/children and they were also not interested in providing treatment, 10 % of respondents' husbands left after diagnosis of Cancer, and 15 % felt negative behaviour changes in relatives after diagnosis of cancer in table 9.

Table 10: Distribution of Anxiety and Depression of the respondents (n = 304)

Anxiety and Depression of the participants	Normal	Borderline Abnormal	Abnormal	Total
Anxiety of respondents	20 (6.6)	49 (16.1)	235 (77.3)	304
Depression of respondents	14 (4.6)	44 (14.5)	246 (80.9)	304

Table 10 showed that about 235 respondents had abnormal levels of anxiety and 246 had abnormal levels of depression which was about 80 % among 304 respondents. On the other hand, only 6.6 % had a normal level of anxiety and about 4.6% had a normal level of depression among the cervical cancer respondents.

Table 11: Association between age and level of anxiety of the respondents (n=304).

Age of the respondents	Level of Anxiety			Total	Chi-square	P-value
	Normal	Borderline	Abnormal			
25 - 35	4	17	38	59		
36 - 45	7	10	61	78		
46 – 55	9	22	97	128	20.007	0.010
56 - 65	0	0	34	34		
66 - 75	0	0	5	5		
Total	20	49	235	304		

Table 11 showed that the respondent's age was significantly related to the level of anxiety of those who have cervical cancer. Accordingly, about 235 cervical cancer patients had abnormal levels of anxiety, and abnormal anxiety levels were higher between the age group 36 to 55 years.

Table 12: Association between sociodemographic characteristics and level of anxiety (n=304).

Variables	Level of Anxiety	
	Chi-square	P value
Age	20.007	0.010
Marital status	76.060	0.000
Education	19.952	0.011
Profession of Respondents	18.994	0.004
Family Income	84.108	0.000
Treatment bearing source	94.748	0.000

Table 12 showed that age and educational level of the respondents was significantly associated with level of anxiety of cervical cancer patients. Where at the same time marital status, profession, Family income and treatment bearing source of the respondents are highly significantly associated with level of anxiety.

Table 13: Association between sociodemographic characteristics and level of Depression (n=304).

Variables	Level of Depression	
	Chi-square	P value
Age	18.228	0.020
Marital status	43.695	0.000
Education	5.977	0.650
Profession of Respondents	15.974	0.014
Family Income	38.949	0.000
Treatment bearing source	50.418	0.000

Table 13 showed that the age and educational level of the respondents were significantly associated with the level of depression of cervical cancer patients. Where at the same time marital status, profession, Family income, and treatment-bearing source of the respondents are highly significantly associated with the level of depression.

CHAPTER 5.DISCUSSION

In this study only 20 % of respondents are aware of cervical cancer but studies from rural Maharashtra revealed that about 31% of women were aware of cervical cancer (43). Many of them have economic problems for treatment about 94.7%. In LMICs, the financial burden of cervical cancer treatment is substantial, with 40-60% of households reporting catastrophic healthcare related to cancer treatment, including cervical cancer (44). At the same time among 304 respondents, 71% had self-guilt, and 61 % had less meeting with people. Around 30-40% of cervical cancer patients report feelings of guilt (45) and 40-50% of cervical cancer patients experience social withdrawal or reduced social engagement (46). Other studies show that cervical cancer patient face various level of social difficulties for example study conducted in Ethiopia revealed that about 61.8% patient face social discrimination, 63% and 78% face loss of body image and loss of sexuality (38).

In this study about 60.5% respondents felt their husband or children are less affectionate to them than before. Even husbands / children of 13.8 % respondents does not support now. At the same time approximately, 30 percent reported to be abused or insulted by their family members, feeling of separation and felt that they are not interested in providing treatment to the respondents. Along with 10 % reports that their husband left after diagnosis of cancer. In some cases, especially where HPV is perceived negatively, around 10-20% of women report distancing or abandonment by their husbands after diagnosis (46) . Studies from other countries show profound impacts of diagnosis and treatment of incurable cervical cancer on quality of life which results in disruption in social economic sexual and

personality aspects (39). Therefore, the diagnosis of cervical cancer significantly affects marital relationships because of being female.

In this study, approximately 240 respondents have both anxiety and depression and it has been an abnormal level. At the same time, about 16.1% and 14.5% are borderline abnormal in HADS anxiety and depression levels. Accordingly, other studies found that 46.9% of patients exhibit clinically experienced anxiety and 90.4% of participants with advanced-stage cervical cancer exhibit symptoms of depression (40). Another study in Northern Thai Cervical cancer patients showed a prevalence of depression of about 13.5% (41). Bengali et al reported that 38.7% undergoing brachytherapy have anxiety and 25.8% experience moderate to severe stress (42).

This current study found that the age of the respondents and educational status of the respondents were significantly related to the level of anxiety of cervical cancer patients. Where at the same time marital status, profession, Family income, and treatment-bearing source of the respondents had a highly significant relationship with the level of anxiety. In terms of depression level, it has been shown that the age and educational level of the respondents was significantly associated with the level of anxiety of cervical cancer patients. Studies from other countries showed that Socio-demographic factors such as income, education, marital status, and cultural background profoundly affect the psychological and social experiences of cervical cancer patients. Those from lower-income, less educated, or socially conservative backgrounds are at greater risk for depression, anxiety, guilt, and social isolation (46).

CHAPTER 6.CONCLUSION

The study findings reported that 77.3% of respondents have anxiety at an abnormal level, and 80.9% had abnormal depression levels. Moreover, 16.1% and 14.5% have borderline anxiety and depression accordingly. Respondents' anxiety and depression levels are significantly associated with their education, profession, family income, treatment bearing source. Furthermore, about 60.5% of respondents felt their husbands or children were less affectionate to them after their diagnosis of cancer, some reported separation, being abused/insulted, and some husbands/children didn't want to provide support for treatment. Most of them (94.7%) have economic problems with treatment and are not satisfied (97.4%) with their present condition. Since Bangladesh is still now a developing country economic problem is common for long-term treatment. On the contrary, this study focused on one government hospital where people come from different areas to have their treatment at a low cost. If they were economically stable they could go to private hospitals or another country for better treatment.

Recommendation

- There is need for focus on patients' psychosocial problems for better management of their disease. We only focus on their treatment but other factors could disrupt the treatment process which we have to be careful.
- A further study is recommended to find out the interventions or management for reducing their psychosocial problems which we easily skip among cancer patients.

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Appendix

APPENDIX I: INFORMED CONSENT

Dear Research Participant,

Asalamu Alaikum. My name is Uhatuna Zakeya. I am a (Masters of Public Health) student of Daffodil International University. We are conducting a research work entitle “psycho social problems of cervical cancer patient in a tertiary level hospital of Bangladesh”. The purpose of the research is to determine the psychological and social problems of patients having cervical cancer. It will involve an interview of approximately 15 minutes. I would like to assure you that this study has been reviewed and received ethics clearance.

The collected information will be used only for the research purpose. Confidentiality of your information will be maintained strictly. There is no monetary compensation to you for your participation in the study. Though you may not be directly benefitted from this study but this study result may be used for the future appropriate intervention development and to reduce social problems and to reduce anxiety and depression level among cervical cancer patients in future. This is absolutely voluntary participation and you can terminate your participation at any time, also you can withdraw your information at any stage of the research study.

If you have any question can ask me at any time. If you have any additional questions about the research study you may contact with Dr. ABM Alauddin Chowdhury, Assistant Professor, Dept. of Public Health, DIU. Mobile: 01921 200890

If you give your written consent to participate in this study, we can start your interview.

Signature / thumb of participant

Signature of Researcher/ Representative

APPENDIX II: QUESTIONNAIRE

Masters of Public Health

Questionnaire for “Psycho social problems of cervical cancer patient attending in a tertiary level hospital of Bangladesh”

Date of Interview: ____/____/____

Respondent's ID:

1. Socio-demographic characteristics			<u>Code</u>
1.1	Age of respondent in years:	_____	
1.2	Your marital status?	A. Married; B. Unmarried; C. Separated; D. Divorced; E. Widow	
1.3	If married, Age at marriage	_____	
1.4	Religion	1= Muslim 2= Hindu 3= Christian 4=Others	
1.5	Education	1= No education 2= Primary 3= Secondary 4= Higher education	
1.6	Profession:	1= Housewife 2= Day labor 3= Business 4= Service 5= others	
1.7	Monthly family income		
1.8	Living place	1=Rural 2= Urban	
1.9	If urban, then specify	1= Slum 2= Non-slum	

1.10	How much is your family expenditure monthly?		
1.11	Size of the family:		
1.12	Living status:	1. Single Family 2. Joint Family 3. Alone	
1.13	How many children do you have ?	1. _____ sons 2. _____ Daughter Total.....	
1.14	Annual income of the family		
1.15	Sex-wise distribution of family members:	_____ Male _____ Female Total= _____	

2. Obstetric history of the respondents			Code
2.1	Age at marriage of the respondents	_____	
2.2	Age at first pregnancy	_____	
2.3	Total number of pregnancies	_____	
2.4	Total number of abortions	_____	
2.5	Total number of alive children	_____	
2.6	Age of menopause	_____	

3. Psychosocial problems of respondents			Code
3.1	Respondents awareness about her own disease	0 = No 1 = Yes	
3.2	Time duration about the information of her own cancer diagnosis	1 = Day of diagnosis 2 = After few days of diagnosis; 3 = Just before starting treatment; 4 = During treatment	

3.3	Awareness about Cervical cancer	1 = yes 2 = No	
3.4	Economic problems for treatment	1 = yes 2 = No	
3.5	Treatment bear by	1 = Self 2 = Husband 3 = Children; 4 = Relatives; 5 = Borrowed; 6 = Sold property; 7 = Government	

4. Pattern of behavior changes of respondents after diagnosis of cancer			<u>Code</u>
4.1	Feeling of hesitation in meeting with people	1 = yes 2 = No	
4.2	Feeling of self-guilt	1 = yes 2 = No	
4.3	Less meeting with society people	1 = yes 2 = No	
4.4	Feeling that people don't like me	1 = yes 2 = No	
4.5	After diagnosis of cancer have lost interest in sex	1 = yes 2 = No	
4.6	Satisfied with her present condition	1 = yes 2 = No	

5. Changing behaviors of family members after diagnosis of cancer			Code
5.1	Alteration in respondents' husbands/children behavior	1. Less in affection 2. Doesn't support now 3. Doesn't want to provide treatment	
5.2	Ever been abused or insulted by husband / children / relatives	1 = yes 2 = No	
5.3	Feeling of separation from husband / Children after dx of cancer	1 = yes 2 = No	
5.4	Ever felt that husband / children are not interested in providing treatment	1 = yes 2 = No	
5.5	Husband /children left after dx of disease	1 = yes 2 = No	
5.6	Friends and relatives are aware about the diagnosis of respondents' cancer	1 = yes 2 = No	
5.7	Feeling of negative behavior changes in friends and relatives after dx of cancer	1 = yes 2 = No	
5.8	Friends and relatives are aware about the diagnosis of respondents' cancer	1 = yes 2 = No	

6. Hospital Anxiety & Depression level (HADS):

1. Do you feel tense or ‘wound up’?	A	2. Do you feel as if you are slowed down?	D
Most of the time	3	Nearly all of the time	3
A lot of the time	2	Very often	2
Time to time, occasionally	1	Sometimes	1
Not at all	0	Not at all	0
3. Do you still enjoy the things used to enjoy?	D	4. Do you get a sort of frightened feeling like ‘butterflies in the stomach’?	A
Definitely as much	0	Not at all	0
Not quite so much	1	Occasionally	1
Only a little	2	Quite often	2
Not at all	3	Very often	3
5. Do you get a sort of frightened feeling like something awful is about to happen?	A	6. Have you lost interest in my appearance?	D
Very definitely and quite badly	3	Definitely	3
Yes, but not too badly	2	I don’t take as much care as I should	2
A little, but it doesn’t worry me	1	I may not take quite as much care	1
Not at all	0	I take just as much care as ever	0
7. Can you laugh and see the funny side of things?	D	8. Do you feel restless as if you have to be on the move?	A
As much as I always could	0	Very much indeed	3
Not quite so much now	1	Quite a lot	2
Definitely not so much now	2	Not very much	1
Not at all	3	Not at all	0

9. Worrying thoughts go through your mind:	A	10. Do you look forward with enjoyment to things?	D
A great deal of the time	3	A much as I ever did	0
A lot of the time	2	Rather less than I used to	1
From time to time but not too often	1	Definitely less than I used to	3
Only occasionally	0	Hardly at all	2
11. You feel cheerful:	D	12. Do you get sudden feelings of panic?	A
Not at all	3	Very often indeed	3
Not often	2	Quite often	2
Sometimes	1	Not very often	1
Most of the time	0	Not at all	0
13. Can you sit at ease and feel relaxed?	A	14. You can enjoy a good book or radio or TV program:	D
Definitely	0	Often	0
Usually	1	Sometimes	1
Not often	2	Not often	2
Not at all	3	Very seldom	3

Scoring:

Total score: Depression (D) _____ Anxiety (A) _____

0-7 = Normal

8-10 = Borderline abnormal (borderline case)

11-21 = Abnormal (case)

THANK YOU