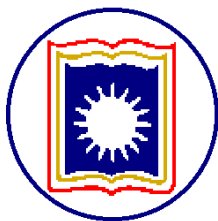


Economic Aspects and Quality of Life of Older Persons



University of Rajshahi

**Research Project and Field Studies
(According to B.Sc. Honors Syllabus 2012-2013)**

*A Project Paper Submitted in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science in Population Science and Human
Resource Development of the University of Rajshahi for the Year- 2017*

**Date of Submission
April, 2017**

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March 2017**

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Controller of Examinations
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Dear Sir,

In forwarding the research project paper titled “**Economic Aspect of Active Aging and Quality of Life of Older Persons**” in partial fulfillment of the requirement for the degree of B.Sc. Honours in population Science and Human Resource Development, University of Rajshahi, I hereby certify that, the student with examination Roll No. 13085929 and registration number: 4751 has completed the research work for the full period and the research project embodies the results of his own investigation conducted during the period he worked as an B.Sc. Honors student under my supervision.

I wish him a bright future and every success in life.

Sincerely Yours

(Dr. Md. Nuruzzaman Haque)
Associate Professor
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DEDICATED

To



MY BELOVED

PARENTS

AND

RESPECTABLE

ACKNOWLEDGEMENT

This project work is one of the parts of our B.Sc. Final examination (Part-IV) of the Department of Population Science and Human Resource Development. It is a part of our knowledge. It is a practical and difficult job and I am quite new in this field. So, I tried my best to bring out the goods result with my all sincerity, honesty, merit and hard labor.

First of all, I consign my limitless thank to the Almighty Allah for giving me strength, endurance and ability to complete this course of study.

The most key person whom I am helpful is my supervisor. I am deeply indebted to him for his willingness to accept me as a research student. The completion of the research has been possible only for providing me his constant support, helpful guidance through encouragement, suggestion and decision during my entire phase of the study.

I am grateful to the Chairman and Project Director and the respectful teachers of the Department of Population Science and Human Resource Development for their nice co-operation and allowing me to using the seminar and enjoying the computer facilities with internet for this purpose. Also, my sincere thanks to the Chairman of the Examination Committee of this department for providing me with sufficient time to complete the research and for his good care about our research work.

I would like to extend my thanks to all my friends and best wishers for their help and encouragement during the period of this research work. Finally, I express my cordial thanks to the respondents from whom I collected necessary data for this research.

In fine, I am alone responsible for the shortcoming and the errors if there be any, I am sorry for that.

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Abstract

Aged dependency ratio in Bangladesh is 7.6 % and total life expectancy (both sexes) at birth for Bangladesh is 69.8 years. This is closer to the average life expectancy at birth of the global population which is about 71 years. Increase of older persons is cause of concern for our country. For this reason in this study, economic aspect and quality of life of older persons are examined. By this study we will investigate demographic characteristics, effect of old age allowance, working status, effect of income and effect of savings on quality of life of elderly population on some selected areas in Rajshahi City Corporation area. The data were collected by direct interview method and we have used 240 sample data from older persons whose age is 60+ for our study purpose. We calculated QOLI according to WHOQOL-BREF. For the investigation we have used statistical analyze like frequency distribution, mean QOL and contingency analysis. Majority of the elderly women of age 60+ years who are widowed, illiterate, economically dependent have a very poor quality of life. Overall QOL in Rajshahi City Corporation area is higher than mean QOL of Bangladesh. 36 percent of the women and 24 percent of the men in this study get any government allowance or other necessary services from the government. Chi-square analysis reveals the determinants of quality of life of the elderly persons. Those analysis reveals that the relationship between quality of life and other factors like, marital status, education qualification, getting old age allowance, work, income, saving etc. In Bangladesh as in other regions of the world, the population ages 60 years and older is growing faster than the total population. The findings of the study should get due attention to provide secured later life of the elder especially female elderly in Bangladesh and developing nation as well.

Keywords: Older persons, Rajshahi city, Quality of life

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CHAPTER ONE

INTRODUCTION

Quality of life of older persons is a concern for Bangladesh. There is a clear increasing trend toward an older population in Bangladesh. Aging is a natural, multidimensional process of human life. Old age is the closing period of the life of an individual. A person's activities, attitudes towards life, relationships to the family and work, biological capacities and physical fitness are all confined by the position in the age structure of the particular society in which she/he lives. Aging is generally defined as a process of deterioration in the functional capacity of an individual that results from structural changes with the advancement of age. The ageing process is characterized by a complex set of social, psychological and biological changes of an individual. The condition of the elderly in a social setting is not merely determined by the inevitable characteristics but also depends upon the cultural practices in the society which happens to be changing at a rapid pace in Bangladesh today. Culturally, Bangladesh is increasingly a youth oriented society. But in fact, demographically it is an ageing society which is reflected in the recent age structure of the population (Sattar, 1996). The number of persons aged 60 and over has been increasing at an unprecedented rate. In 1980, just prior to the convening of the First World Assembly on Ageing, there were 378 million people in the world aged 60 or above. Now 30 years later, that figure has doubled to 759 million, and it is projected to rise to 2 billion by 2050. The world's older population – those aged 60 years and over – reached nearly 900 Million in 2015. More than half of the total (508 million) lived in Asia, including 209 million in China and 116 million in India. Europe is the region with the second largest number of older persons, nearly 176 million, followed by Northern America with 74 million, Latin America and the Caribbean with 70 million, Africa with 64 million and Oceania with 6 million. Although the older population is growing in all parts of the world, most of the increase is taking place in the developing world. On average, 29 million older persons will be added to the world's population each year between 2015 and 2025, and over 80 per cent of those will be added in the less developed regions. Residing in the less developed regions will increase from 65 per cent in 2015 to about 80 percent by the year 2050. In 2015, slightly more than half (52 per cent) of the world's older population lived in Urban areas, divided approximately equally between urban areas in the less developed and in the more developed regions. However, the rural areas of the less developed regions still housed nearly 40 per cent of the world's older population, while the rural areas of more developed

regions were home to only about 10 per cent. Older men are married, while older women are not. Instead, older women are likely to be widowed. Worldwide, around 80 per cent of men aged 60 or over, but under half of women of the same age, currently have a spouse. By region, the proportions of men who are married range from 85 per cent in Africa to 73 per cent in Oceania; for women they range from 52 per cent in Asia to 39 per cent in Africa. In Africa, older men are more than twice as likely as older women to be married. (United Nations, 2015). In 2050 there will be 40.5 million older people in Bangladesh, which is about 17% of the total population. The pattern of aging is likely to vary among South Asian countries. It can also be seen that Korea, Japan, Singapore, China, Sri Lanka, and India are the countries with the largest aging population. By 2000, in countries like Korea, Japan, Sri Lanka, and Singapore the number of older people exceeded those aged 0 to 14 years. By 2050, many Asian countries will have a projected aging index of at least 100 million and, more specifically, for Korea, Japan, and Singapore it will be in excess of 200 million which indicates almost double the number of older people compared to younger (i.e., less than 15 years). However, China contains the largest number of older people. The median age of the population will also increase in Asia. The projected increase in both the absolute as well as relative size of the older population in Bangladesh is of growing concern for demographers and social policy-makers. The growth of the older population has highlighted several issues related to their status and roles, care and living, health, social support, and over all well-being. Active ageing (AA) is the global goal of present ageing world for meeting the challenges of older persons and for improving their quality of life. Active ageing can be explained as a concept (A. Walker, 2002) has defined Active ageing as profound strategy to maximize participation and wellbeing as people grow older (A. Walker. 2002). Area of Bangladesh is 147,630 square km. The country has a population of about 162.9 (in millions, 2016), Income per capita \$1,466 (BBS, 2016) with corresponding population density 1103 persons per square kilometer with Population growth rate 1.05% (2016 est.). In Bangladesh, an estimated 11 million people are currently 60 years or older, and it is projected that these numbers will increase by 173% by 2025. Around 17.6 percent of the Bangladeshi population lives below the national poverty line (UNDP 2014), and 13% of the population earns less than \$2 a day. An estimated 35 percent of the population in rural areas lives below the poverty line. Marital status affects the social situation, living arrangements and well-being of older men and women. However, older women's economic situation is usually more strongly influenced by marital status. Older women, widowhood often receive pension from various organization. In developing countries, women lack legal and enforceable rights to inherit property when the husband dies and they have little or no recourse if the

husband's relatives move to take over the dwelling, landholding or other property. Women, particularly widows, who are without living sons or who live alone, are considered to be particularly at risk of economic destitution, social isolation, and poor health. In the present circumstances the older persons are vulnerable, neglect and exploitation. Thus, there is an urgent need of studies on the living arrangement patterns, health status and their determinants of the elderly women in Bangladesh. Therefore, this study tries to examine what type of socio-economic structure and patterns of living arrangements and health status characterize the elderly persons, as well as the factors are associated with living arrangements, health status (Datta, 2006). In Bangladesh also because of increasing life expectancy elderly population will increase. Bangladesh will face many difficulties in managing the many challenges for large elderly population. There are some previous research on quality of life of older persons. But economic aspect of active aging and quality of life of older person is a new topic.

1.2 Statement of the Problem

Economic condition of older persons is seen as an effective instrument for reducing the vulnerabilities of distressed population across the globe. The present study will give an opportunity to assess the program from the beneficiaries' perspectives. It will also provide an opportunity to assess the program from implementation point of view. From time immemorial, in Bengali society, aged people are traditionally respected and considered as vulnerable counselors for their experience and authority over the worldly affairs. But, due to socioeconomic factors, the respectable position the elderly held in the past, is losing its importance. The magnitude and familial care given to them in the past is diminishing. Again, due to advancement of science and medicine, a life expectancy level has risen more than before and the number of aged people is on increase. According to BBS, 1. Upazila is a sub-district of Bangladesh consisting of 300 sq.km and with 3,20,0000 people on an average 2. After the administration of the central government, Bangladesh has been divided into 8 administrative divisions 3. in Bangladesh, in 2006, 6% (8.3 million) of the population was aged 60 or over and according to United Nations (UN), this figure is predicted to rise to 12.8% by 2025 and, 21% by 2050 (Help Age International, 2011). Every year in Bangladesh, approximately 80,000 new older persons are entering into aged group (60+) who, in general, constitute a socially and economically vulnerable group with basic needs remaining unsatisfied in many cases (Hossain, 2007). As demographically the ratio of aged persons in the population is gradually increasing, and socially and culturally they are losing their traditional vulnerable position in

the family and society, it is very important to look into this problem with special attention and care. (BBS, 2005) found out that the literacy rate among the elderly is lower than national rate. From the above discussion there are arising some questions, such as:

1. Does the quality of life of older persons affected by social support and old age allowance?
2. Does the quality of life of older persons affected by work?
3. Does the quality of life of older persons affected by income?
4. Does the quality of life of older persons affected by savings?

1.3 Research Objectives

The broad objective of the paper is to assess the economic aspect and quality of life of older persons in Rajshahi.

The specific objectives are to:

1. Estimate level of quality of life.
2. Test the relationship between economic condition and quality of life.
3. To find the difference in quality of life according to demographic characteristics.
4. To investigate relation between economic condition and quality of life of older persons.
5. To find the difference in quality of life according to social help status.

1.4 Concept and Terminology

Ageing: The view of ageing adopted in this study was based on Erikson's theory of the life cycle (Erikson et al. 1986, Erikson 1997). Originally, the life cycle comprised eight stages, but Joan M. Erikson has added one more stage to the theory. Old age is represented by stages eight and nine. Stage eight is dominated by the conflict between integrity and despair, integrity standing for a sense of wholeness and meaning in looking back upon life, and despair standing for a sense of meaninglessness, lost opportunities and failures. The resolution is offered by wisdom, 'informed and detached concern with life itself in the face of death itself' (Erikson et al. 1986 p. 37). In the ninth stage, due to bodily weakness, a person's autonomy, independence and control are challenged and as a consequence, self-

esteem and confidence weaken. Despair is constantly present, but it is less concerned with past life than with daily functions and getting through one more day.

Active ageing: Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. It applies to both individuals and population groups.

Quality of life: There are mainly two types of QOL those are subjective QOL and objective QOL. Subjective QOL is about feeling good and being satisfied with things in general. Objective QOL is about fulfilling the societal and cultural demands for material wealth, social status and physical well-being. . In our project we study on subjective QOL.

Quality Of Life (QOL) is the general well- being of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, religious beliefs, finance and the environment.

Quality of life (QOL) is the general well-being of individuals and societies, outlining negative and positive features of life. It observes life satisfaction, including everything from physical health, family, education, employment, wealth, religious beliefs, finance and the environment.

Quality Of Life (QOL):

Subjective QOL: Quality of life is a highly subjective measure of happiness that is an important component of many financial decisions. Factors that play a role in quality of life vary according to personal preferences, but they often include financial security, job satisfaction, family life, health and safety.

QOL may be defined as subjective well-being. Recognizing the subjective of QOL is a key to understanding this construct. QOL reflects the difference, the gap, between the hopes and expectation of a person and their present experience. Human adaptation is such that life expectations are usually adjusted so as to lie within the realm of what the individual perceives to be possible. This enables people who have difficult life circumstances to maintain a reasonable QOL.

Economic condition: Generally Economic conditions refer to the state of the economy in a country or region. They change over time in line with the economic and business cycles, as an economy goes through expansion and contraction.

Social help: A good way to gauge how well a society is doing is by asking about the social welfare and seeing if people are happy. A family or individual in need can apply for assistance from a social welfare program like: food stamps, Medicaid, Medicare, or SNAP.

1.5 Limitation of the study

We had to face several problems during the data collection. These problems, considered here as the limitation of the study, they are as follows:

- The tendency of hiding the correct answer of some aspect like income, property etc was noticed among the respondents.
- Some of the respondents did not co-operate frankly. Most of the time they were disinterest to answer my question.
- Some of the problems arise due to illiterate person. In some cases they are unable to understand the meanings of the question. I had to spend a lot of time to enable them for understanding the questions.
- Some female did not give interview directly for the protection of religious bindings.
- The other problem relates to answer which needed recalling of events from a distant past memory lapse might have worked in this case.
- Some of the respondents did not give the accurate answer to some question because they felt boring to give information about their personal affairs.

When the respondents could not tell actual answer then I received only approximate answer.

1.6 Organization of the study

Here we briefly discuss how we have organized the study. The whole study has been divided into five chapters. In order to accomplish a meaningful representation the present study is organized in the following chapters:

Chapter one is introductory chapter which contains Introduction, statement of the problem, Research Objectives, concept and terminology, limitation of the study and organization of the study.

Chapter two contains a briefly discussion on review of literature.

Chapter three is methodology chapter which contains discussion on data sources and data processing, description of the Variables, Calculation procedure of quality of life index, the analytical methods and statistical software

Chapter four is results and discussion chapter consists of basic characteristics of the study population which includes the percentage of the respective basic characteristics, level of quality of life, association between different socio-economic, demographic and health related variables by applying bivariate analysis.

In chapter five conclusion and recommendation are included.

Bibliographies are given at the end of the paper.

CHAPTER TWO

LITERATURE REVIEW

Research on economic aspect and quality of life of older persons is a relatively new topic for developing countries and it has not been given the special emphasis it requires. This section will therefore review earlier works on Bangladesh. There has been a gradual development in understanding aging issues as more and more Non-governmental Organizations (NGOs) have come forward to do research with support from the government of Bangladesh. Ibrahim (1981) documented the health and socio-economic problems of older persons. It is regarded as the pioneering epidemiological study conducted on this issue. In fact, problems of older people in Bangladesh attracted the attention of the country's medical scientists in the fifties and, as a result of their initiative, the Bangladesh Association for the Aged and Institute of Geriatric Medicine (BAAIGM) were established in 1960. This Dhaka-based organization has been rendering a limited medical service to retired Government servants who live in Dhaka city only, with the cooperation of several organizations. In 1988, the BAAIGM conducted an excellent study on "A Survey on Health and Socio-economic Problems of older people in Bangladesh" which is considered to be one of the most important baseline studies of the health and socio-economic conditions of older people in Bangladesh. Featuring the prevalence of some diseases (pain, rheumatic fever, anemia/weakness, asthma, coughs, and colds) among older people, this survey finds that 75% of them faced problems regarding their treatment. This was highest in rural areas (81%) and lowest in the city (63%). Furthermore, the study revealed that the overwhelming majority of older people are not in good health. About 67% of men and 79% of women reported sickness from one or more diseases, in many cases chronic. On an average, about 25% had been ill for over 10 years, the greater proportion of these being female. In Bangladesh, adult children, particularly sons, are considered to be the main source of security and economic support to their parents, particularly in times of distress, sickness, and in old age (Cain, 1986). Over the past 45 years since independence, Bangladesh has increased its real per capita income by more than 130 percent, reduced poverty rate by sixty percent, and achieved most of the millennium development goals. Some of the underlying specific achievements include, reducing total fertility rate from 7.0 to 2.2; increasing life expectancy from 46.2 years to 71.6; increasing the rate of economic growth from an average rate of 4% in the 1970s to 7.05 percent in 2016; increasing the

savings and investment rates from below 10 percent each in the 1970s to 24 percent (investment rate) and 30 percent (savings rate) in FY10 (SFYP 2011-2015)

The rapid growth in population and its impact on socio-economic life has attracted attention from different quarters all over the world. Simultaneously, the increasing social, political and economic problems all over the world and social scientists have also recognized the same. Very few literatures are available in these directions but research on population aging is getting gradual momentum.

Literature on the aged people in Bangladesh has not yet emerged well. However, there has been a good beginning in the meantime here through the works of some social scientists and the Bangladesh association for the aged and the institution of Geriatric medicine respectively.

In Bangladesh, like many developing countries population ages 60 and over has been arbitrarily considered to be the aged in all most studies made earlier, although there is universally accepted specification of age span of years embraced by old age (Kabir, 1994). They are further categorized as Young –olds-those who are of age 60-69 years. Old-olds-who are of age 70-79 years and extremely-old-aged 80 years and above. These divisions are arbitrary and *ceteris paribus*, demographic (Kabir. 1994).

Bangladesh's social customs encourage the elderly to stay with their children. Typically, the elderly became dependent on their children's income. In most cases, older people do not have control over financial resources, which results in a gradual decrease of control over family matters and eventually complete negligence. The constitution of Bangladesh guarantees equality of men and women, but the economic, social and religious, and even legal status of women is determined by the male head of household's decisions and perceptions, as well as the generally patriarchal social structures. Also life expectancy has increased from 46.5 years in 1950 to 71.6 years in 2015-2016, and is expected to rise to 76 years by the year 2045-2050. (UNDP-2015).

In addition data regarding elder abuse are difficult to find and interpret because elder abuse is relatively recently recognized entity, has a wide variety of definitions from state to state, and is subject to cultural interpretation (Hansberry et al. 2005). In the present circumstances the older persons are vulnerable to abuse, neglect and exploitation (Datta, 2006). Thus, there is an urgent need of studies on the living arrangement patterns, health status and abuse and their determinants of the elderly in Bangladesh. Therefore, this study tries to examine what type of socio-economic structure and patterns of living arrangements, health status and abuse characterize the elderly persons, as well as the factors are associated with living arrangements, health status and abuse of the elder. (Tey 1995) indicates that the

income and education has been found to be highly correlated to the poor health in many countries in Asia. Older persons, especially older women, is disproportionately represented amongst the poor, which has important implications of their nutritional status, access to adequate medical care and their wives to depend on when they fall ill., older women are quite likely to have to rely on children and other relatives.

The living arrangements of the elderly population are often considered as the basic indicator of the care and support provided by the family. A plethora of evidence from the developing world suggests that the family is the key institution for elderly persons and their living arrangements are a fundamental determinant of their well-being (Mba 2005, 2004). (Kabir, 1991) indicates that the support system for older people in Bangladesh is not good and, due to deteriorating economic conditions, this support is further weakening. He points out that rural-urban migration of adult members of the family is a very common phenomenon, and this migration causes older people to be left behind in rural areas, often lonely and uncared for. (Kabir, 1992) depicts Bangladesh as a country with an expected rapid increase in the older population by 2025 and without any formal program for their welfare. He also mentions that "retirement age from the formal sector ranges from 57 to 65 years, while in the informal sector, older people work as long as their health permits. The dependency ratio will show an increase from 8.7 in 1990 to 16.2 in 2025; consequently, the burden will increase for young wage earners and the government. Social security programs for older people apply only to retired military, government and industrial workers." (Kabir, 1994) focused on economic participation and dormant potentials of older people. This was probably the first study in the country conducted from the perspective of the economic potential of older people. Guidelines were developed for conducting this case study in Bangladesh and in a few other Asian and Pacific countries. The general framework detailed coverage of the study, strategic information on local areas, profiles of older people, assessment of the economic potential of older people, and program and policy development. This case study included a purposive sample of 342 rural men and 158 rural women with 76.2% aged over 60-69 years and 23.8% over 70. Findings showed great variability in the different characteristics of older people featuring their living arrangements and status within their families, education level, involvement in economic activities, ties with family, possessions of wealth and assets, etc. (Kabir, 1998) conducted a study in urban and rural Bangladesh in 1995/96. During the survey, information was collected on socio-economic and demographic characteristics of older people, family support, functional ability, illness experience of older people, and their utilization of healthcare facilities. Data on age distribution in this study indicate that even among

older people, women die at an earlier age than men. Other data for Bangladesh also show a lower portion of women than men in the oldest age groups (Ibrahim, 1988). The literacy rate among older people as a whole in this study is lower for women than for men. Women reported a lower income than men, with a high proportion of women having no income at all. (Islam et al.1997) have used 1994-95 BBS data for burden of morbidity analysis in Bangladesh. Morbidity appears to be higher for females. They suffer from fevers, dysentery, dyspepsia, gastritis, ulcer, ear infection, rheumatic fever, blood pressure, heart disease, malnutrition, and anemia at substantially higher rates than males. On the other hand, higher prevalence of immunizable diseases such as diarrhea, cold, jaundice, and kalaazar, typhoid have been reported in case of males. The above studies provide invaluable initial information regarding aging issues in Bangladesh. However, until quite recently not much was known about population aging and its consequences. It would be worthwhile to undergo a macro level investigation on aging to identify the real demographic issues. Therefore, the main objective of the study is to evaluate the overall aging situation in Bangladesh and to examine its consequences.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. In any research work data is an essential element that plays an important role in entire research work. Data source, quality and methodology are the important part for obtaining accurate findings and lastly comment on those findings for any research. Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In methodology, we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. Methodology is must for every kind of research problems and execution of research work. Systematically, it is very essential to collect accurate and sufficient data to prepare project report. This chapter provides a brief description of selection of project title, study area, population and sample, sampling design, questionnaire preparation, data collection and processing, computer application in research, conceptual framework, methodology and limitation of present study.

3.2 Selection of the Project Title

Now-a-days economic aspect active aging and quality of life of older persons is not an outbreak of an area nor a regional panic but a problem throughout the world. Bangladesh is a large populated country. About seven percent population is older. So I have decided to carry my research study.

The department of **Population Science and Human Resource Development** approves a system in which the total students are divided in some groups and each group is subjected to a teacher for supervision especially for the time of project work. According to this manner after a long discussion with my supervisor I select my study problem as “**Economic Aspect and Quality of Life of Older Persons at Rajshahi City**”

3.3 Data Collection and Sampling Design

Data collection is an essential segment of any study whether it is census or survey. This study has been conducted under a purposive sampling procedure because of time consuming and constrain of cost of sampling. The present chapter is confined to explore selection of a project title, study area, the data collection method, limitation of data collection. A brief discussion on the preparation of questionnaire, choosing sample size is also presented here.

3.4 Area of Study

The study population was the people of Rajshahi City Corporation in Rajshahi district. The area of Rajshahi City Corporation is 95.56 sq. km which consist of 30 wards and from those I purposively have selected word 12 & 23 including 12 mohalla for my field study.

3.5 Data Collection Methods

Data collection methods means by which and by how the data were obtained from the respondents. In this the required steps are following:

3.6 Preparation of the Questionnaire

A questionnaire is a set of questions regarding a specific research study. We know that a good research depends on a good form of questionnaire. So, a questionnaire is a keystone of the survey. Language of the questionnaire should be simple. In my questionnaire, every question was relevant to the objective of the survey. At first, I have submitted a questionnaire to my supervisor and the whole questionnaire was pre-tested and reformed.

The questionnaire was designed in such a way that maximum information could be obtained within a short time by covering our objects of the study. The questionnaire was designed considering the following characteristics:

- (i) Number of questionnaire in the questions should be limited;
- (ii) A respondents should adequately be assumed that his identify will not revealed and information will no be against his interest;
- (iii) Avoid long and confusing question and formulate simple and short questions
- (iv) Start with easy questions then slowly put the difficult one. But maintain ones of its sequences in essential in the questionnaire for the research work.

The respondents were asked questions on the following topics:

- Background characteristics (age, education, marital status etc.).
- Economic aspects of the respondents.
- Physical quality of life of the respondents.
- Psychological quality of life of the respondents.
- Satisfaction on relation with others.
- Environmental quality of life of the respondents.

3.7 Data Collection

The data should be collected keeping in view the objectives of the study. The editing of the completed questionnaires helped in amending and recording errors or eliminating data that are obviously erroneous and inconsistent. All kinds of mistakes have been corrected where it was found in questionnaires and all answers have been observed carefully. As a result there is no irrelevant information. The tendency should not collect too many data, but the important one and some of which are never subsequently examined and analyzed. In this survey the method of direct interview was used. The enumerators were mainly responsible to collect information and recorded them properly. Attention was given to record factual and true statement made by the respondents.

In any survey enumerator's role is the most significant with respect to coverage and reliability of data collection. The success and failure of the enumerators in eliciting relevant responses are largely and exclusively dependent on their efficiency, capability and responsibility. In this survey 6 enumerations are in 3 groups. A wide discussion about the coverage and contents was made with the enumerators. They were given necessary instruction regarding ways of collecting data and in the art of putting questions in such fact flu way that maximum responses and reasonable accurate information could be obtained under all circumstances. All concepts and definitions used were clearly explained and information actually to be collected was vividly shown to the enumerators by users of clear illustration and direct interview. In order to obtain ready solutions to the problem, which had been faced during enumeration, the enumerators were advised to contact with me, so that I could solve the problems with the consolation of my supervisor.

3.8 Time of data collection

The period of data collection was 1 January 2017 to 15 February 2017.

3.9 Data Processing and Analysis

The easiest procedure of analyzing the data is to use computer program. At present nobody thinks to analyze data without a suitable computer program. No other alternative is available to analyze the data quickly, easily and correctly. So I have selected a suitable computer program for data entry and analysis. For the data processing and analysis following stages are followed:

1. Editing: Editing of data is a process of examining the collected raw data, to detect errors and omissions and to correct these when possible. After the collection of data day by day, I carefully checked each schedule of questionnaire. The data were edited rigorously to make correction of any existing inconsistencies in data and to minimize the non-sampling error of the study. I made edition in order to have a complete, consistent, accurate and homogeneous data. During the editing period following considerations were kept in mind:

- The data should be completed.
- The data should be consistent.
- The data should be accurate.
- The data should be homogeneous.

2. Coding: Coding refers to the process of assigning numerals or other symbols to answer so that responses can be put into a limited number of categories or classes.

3. Computerization: Edited and coded data were next processed in a computer. At first, I tried to enter each data in the worksheet. Entire computerization of data has been performed by a computer package named EPI Info for windows version 3.5.1.0, the most convenient program for data analysis for social science. Microsoft Excel and Microsoft Word also used for completing the research. To analyze the data, all the qualitative variables were transferred by suitable numeric values.

3.10 Descriptive analysis of the variable

Demographic and economic performance of respondents influences the information of analysis and identification of the issue of ageing in Bangladesh. These characteristics are categorized into sex, age group, educational qualification, marital condition, income, social help, working ability and quality of

life related variables. Some basic characteristics of the elderly derived from the study are shown in the following table:

Table 3.1 Description of the Variables

	Variable	Categories with codes	Scale of measurement
Demographic variable	Sex	1=male, 2=female	Nominal
	Age group	1=60-69 years, 2=70-79 years, 3=80+ years	Ordinal
	Education	0=No education, 1=Primary, 2=SSC,3=HSC, 4=Graduate, 5=Masters	Ordinal
	marital condition	1=married, 2=unmarried, 3=live together, 4=separation, 5=divorce, 6=widow	Nominal
Economic variables	social help	0=Yes, 1=No	Nominal
	help type	None	Nominal
	Work	0=No, 1=Yes	Nominal
	Income	0=No, 1=Yes	Nominal
	satisfaction with income	0=No, 1=Yes	Nominal
	Savings	0=No, 1=Yes	Nominal
Overall quality of life related variables	opinion on quality of life	1=very poor, 2=poor, 3=neither poor nor good, 4=good, 5=very good	Ordinal
	satisfaction with health	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
Physical health related variables (D1)	physical pain (q1)	1=an extreme amount, 2=very much, 3=a moderate amount, 4=a little, 5=not at all	Ordinal
	medical treatment (q2)	1=an extreme amount, 2=very much, 3=a moderate amount, 4=a little, 5=not at all	Ordinal
	energy for everyday life (q3)	1=very poor, 2=poor, 3=neither poor nor good, 4=good, 5=very good	Ordinal
	physical ability (q4)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	satisfaction of sleep (q5)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
	ability of daily activity	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied	Ordinal

	(q6)	nor dissatisfied, 4=satisfied, 5=very satisfied	
	working ability (q7)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal

	Variable	Categories with codes	Scale
Psychological QOL related variables (D2)	enjoying life (q8)	1=very poor, 2=poor, 3=neither poor nor good, 4=good, 5=very good	Ordinal
	meaningful life (q9)	1=very poor, 2=poor, 3=neither poor nor good, 4=good, 5=very good	Ordinal
	concentration in work (q10)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	ability of moving body (q11)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	satisfaction with yourself (q12)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
	negative feeling (q13)	1=an extreme amount, 2=very much, 3=a moderate amount, 4=a little, 5=not at all	Ordinal
Satisfaction related variables (D3)	satisfaction of personal life (q14)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
	satisfaction of married life (q15)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
	satisfaction with support from friends (q16)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
Environment related variables (D4)	Feeling safety(q17)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	healthy environment (q18)	1=very poor, 2=poor, 3=neither poor nor good, 4=good, 5=very good	Ordinal
	enough money for removing scarcity (q19)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	having daily information (q20)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	scope of leisure activities (q21)	1=not at all, 2=a little, 3=moderately, 4=mostly, 5=completely	Ordinal
	satisfaction of living place (q22)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal
	satisfaction of health	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor	Ordinal

	services (q23)	dissatisfied, 4=satisfied, 5=very satisfied	
	satisfaction with transportation (q24)	1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied	Ordinal

3.11 Methods of analysis

The data were analyzed by means of distributions, means, variances, correlations and regressions. They were tested with chi-square on levels $P < 0.05$. The analyses were conducted by the SPSS programs.

3.12 Calculation of quality of life index (QOLI)

The WHOQOL quality of life assessment was developed by the WHOQOL group with fifteen international field centers, simultaneously, in an attempt to develop a quality of life assessment. We can calculate overall quality of life index following WHOQOL-BREF (WHO, 1996). The calculation procedure of QOLI is given below:

Domain score calculation:

D1=Raw score of first domain (Physical health related variables) = $(q1+q2+.....+q7)$

Possible range of D1 = 7 to 35

D2=Raw score of second domain (Psychological QOL related variables) = $(q8+q9+.....+q13)$

Possible range of D2 = 6 to 30

D3=Raw score of third domain (Satisfaction QOL related variables) = $(q14+q15+q16)$

Possible range of D3 = 3 to 15

D4=Raw score of forth domain (Environmental QOL related variables) = $(q11+q18+.....+q24)$

Possible range of D4 = 8 to 40

Transformed domain score (TD1) calculation:

$$TD1 = \frac{D1 - \text{Lowest possible } D1}{\text{Maximum possible } D1 - \text{Lowest possible } D1} \times 100$$

$$TD2 = \frac{D2 - \text{Lowest possible } D2}{\text{Maximum possible } D2 - \text{Lowest possible } D2} \times 100$$

$$TD3 = \frac{D3 - \text{Lowest possible } D3}{\text{Maximum possible } D3 - \text{Lowest possible } D3} \times 100$$

$$TD4 = \frac{D4 - \text{Lowest possible } D4}{\text{Maximum possible } D4 - \text{Lowest possible } D4} \times 100$$

Overall quality of life index calculation:

$$\text{Quality of life index}(QOLI) = \frac{TD1 + TD2 + TD3 + TD4}{4}$$

Quality of life index category:

QOLI is categorized into four categories and has been ranked in ascending order from 1 to 4 and those are shown in (table: 4.3) and categorization procedure is also provided in (section 4.3).

3.13 Statistical Analysis

Methodologies used in applied research are equally important as the data. Every methodology is not suitable for analyzing every set of data. Matching of an appropriate methodology for graduating & analyzing a set of data is of data is a difficult task for researcher. For this reason, in most of the times, researches use alternative at methodology to graduate & analyze a set of data. Finally they compare the findings obtained from different methodology & support the most, logical one as compared with the reality. So here I use the statistical analysis: Firstly I observe all selected variables by frequency distribution and graphically and correlation test.

The following formula due to Struggles may be used to determine an approximate number of K classes:

$$K = 1 - 30322 \log_{10} N$$

Where, N is the total frequency.

The structure of the Univariate frequency distribution table is as follows:

Class interval	Frequency
$I_1 - u_1$	f_1
$I_1 - u_1$	f_2
:	:
:	:
$I_1 - u_1$	f_n

Where l_i is the lower limit of the i-th class interval, u_i is the upper limit of the i-th class interval; f_i is the frequency of the corresponding class interval,

To test the association between two variables $r \times c$ contingency table is used. The may be representing as below:

Contingency table

$\begin{matrix} & Y \\ X & \end{matrix}$	$Y_1 \ Y_2 \ \dots\dots\dots Y_c$	
X_1	$0_{11} \ 0_{12} \ \dots\dots\dots 0_{1c}$	
X_2	$0_{21} \ Y_{22} \ \dots\dots\dots Y_{2c}$	
:	:	
X_r	:	
:	$0_{r1} \ 0_{r2} \ \dots\dots\dots 0_{rc}$	
Grand total		N

Here $X_1 \ X_2 \ \dots\dots\dots X_r$ are the r- category of the attribute X and $Y_1 \ Y_2 \ \dots\dots\dots Y_c$ are the c- category of the attribute Y. 0_{ij} is the observed frequency of i-th category of X and j-th category of Y. N is the grand total. To test the homogeneity between two attributes the following hypothesis is used.

Null hypothesis (H_0): There is no association between X and Y

Alternative hypothesis (H_1): H_0 is not true

$$\chi^2 = \sum_i \sum_j \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \approx \chi^2_{(r-1)(c-1)}$$

To test the homogeneity the following statistics is used:

We know that the null hypothesis might be accept at the 5% level of significance, if the 2-sided asymptotic significance level is less than. 0.05, otherwise the null hypothesis is may be reject. For this particular problem, we observe that the null hypothesis is might be accepted at the 5% level of significant when the when the Pearson's chi-square test is used.

3.14 χ^2 – Test

χ^2 -test is mainly used to test the hypothesis which specifics the nature of one or more distribution. We know the mathematical form of the distribution; hypothesis regarding the sample that has been drowning from the distribution is tested by χ^2 -statistic. For testing hypothesis, we used to compare observed set frequencies with a corresponding set of frequencies that are expected under null hypothesis. The test statistic χ^2 is defined as,

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i} = \sum_{i=1}^k \frac{O_i^2}{E_i} - n$$

Where O_i = observed frequencies,

E_i = expected frequencies, $i = 1, 2, 3, \dots, k$

$n = \sum_{i=1}^k E_i = \sum_{i=1}^k O_i$ which is distributed as χ^2 with $(k-p)$ degree of freedom, where p is the number of independent restrictions imposed for the calculation of the set expected frequencies.

3.15 Software and Technical Support of the Study

Data used in this study contain information of 240 aging persons 60 years and over. Since this is large set of data, a suitable technological support is necessary for performing these analyses. In this study entire analysis is done in personal computer which is now one of the most effective and wonderful technological inventions. Different software has been used to complete this study. The entire analysis of the study is done by statistical package named SPSS (Statistical Package for Social Sciences) for windows (version 22) SPSS can take data from almost any type of the file and use them to generate tabulated reports charts and plots of distributions and trends, descriptive statistics and complex analysis. Survey data is input in the SPSS for windows format. Hence, it is found to be much easier to read the data through this software. Different variables are computed as well as recorded with it. Some first hand analyses such as frequencies, tests are performed through this software.

3.16 Problem Faced in data collection

During the period of data collection of my project, I have faced many problems. The problems which I faced are given bellows:

- The tendency hiding the correct answer of some respect like income, property etc was noticed among the respondents.
- Some of the respondents did not co-operate frankly. Most of the time they were disinterest to answer my question.
- Some of the problems arise due to illiterate patients. In some cases they are unable to understand the meanings of the question. I had to spend a lot of time to enable them for understanding the questions.
- Some female patients did not give interview directly for the protection of religious bindings.
- The other problem relates to answer which needed recalling of events from a distant past memory lapse might have worked in this case.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

Information on the background characteristics of the study population is essential for interpretation of the survey result and examination of any cause effect relationship among the study variables. Besides, it helps in comparing the findings with similar characteristics in other independent survey findings. One of the objectives of the present study has been to investigate the interrelationships of the variables considered in the analysis. The purpose of this chapter is to include analysis of simultaneous effects of several variables and their statistical significance. In this chapter we would like to represent only analytical result and comment. Besides there have been presented all the individual analysis of the respondents by the frequency distribution and different graphical representation. In any research, it is important to know the background characteristics of the study or target population or nature of the data. This assessment leads to the interpretation of results and to examine any cause-effect relationship among the study variables. In order to study the background characteristics of different variables, it is important to focus on the frequency distribution of the considered variables. Frequency distribution shows the pattern of distribution and observations in different groups.

The major purpose of this section is to provide a short descriptive summery of economic condition, social help related variables of older persons and quality of life in Rajshahi City. Thus important preliminary step of this study is to examine the frequency distribution of some considered variables.

The purpose of the study has been investigated the interrelationship of the variables considered in the analysis. The aim of this chapter is to indicate of the effect of several variables on one independent variables and their statistical significance. This chapter also leads to make contingency analysis of the selected variables. The contingency analysis investigates the degree of association together the dependency criterion between the selected variables. Examine of association is performed by means of contingency table. Here, we will discuss the associations between my different independent variables with the dependent variables.

This chapter we have discussed result due to Chi-square test statistic. By using Chi-square statistic we have tried to get a preliminary idea of independency of economic and demographic characteristics with quality of life of older persons. Since an empirical association between two variables also not necessarily imply a causal relationship between them, it is essential to adjust for the effect of correlated variables in order to determine more precisely the net effect that any particular factor has on quality of life.

4.2 Demographic economic and quality of life related characteristics of older person in Rajshahi District

Demographic characteristics, social help and economic characteristics play a vital role in the analysis of quality of life of older person among male and female. Here different demographic and economic variables have been discussed. The frequency distributions of respondents according to selected characteristics are given bellow:

4.2.1 Percentage distribution of older persons according to different characteristics

The following tables gives a comparative figure of the respondents by various demographic variables such as sex, age group, Education, marital condition and physical condition etc. These are related to my research project. The frequency distributions of respondents according to selected demographic characteristics are given bellow:

Table-4.1 Percentage distribution of the selected demographic variables

Variables Name	Frequency and percentage (%)		
	Male	Female	Both
Sex	139(57.9%)	101(42.1%)	240(100%)
Age Group (Years)			
60-69	85(61.2%)	63(62.4%)	148(61.7)
70-79	45(32.4%)	27(26.7%)	72(30.0)
80 and above	9(6.5%)	11(10.9%)	20(8.3)
Education			
No education	44(31.7%)	52(51.5%)	96(40%)
Primary	33(23.7%)	27(26.7%)	60(25%)
SSC	24(17.3%)	16(15.8%)	40(16.7%)
HSC	15(10.8%)	3(3.0%)	18(7.5%)
Graduate	10(7.2%)	2(2.0%)	12(5%)
Masters	13(9.4%)	1(1.0%)	14(5.8%)
Marital condition			
Married	112(80.6%)	41(40.6%)	153(63.8%)
Unmarried	4(2.9%)	0	4(1.7%)
Live together	0	0	0
Separation	0	1(1.0%)	1(.4%)
Divorce	3(2.2%)	4(4.0%)	7(2.9%)
Widow	20(14.4%)	55(54.5%)	75(31.3%)

4.2.2 Percentage distribution of older persons according to economic characteristics

The following table gives a comparative figure of the respondents by various economic variables such as social help, work, income, Satisfaction with income and savings. The frequency distributions of respondents according to selected economic characteristics are given bellow:

Table-4.2 Percentage distribution of the selected economic condition related variables

Variables Name	Frequency and percentage(%)		
	Male	Female	Both
Social help			
Yes	33(23.7%)	39(38.6%)	72(30.0%)
No	106(76.3%)	62(61.4%)	168(70.0%)
Work			
No	68(48.9%)	84(83.2%)	152(63.3%)
Yes	71(51.1%)	17(16.8%)	88(36.7%)
Income			
No	48(34.5%)	66(65.3%)	114(47.5%)
Yes	91(65.5%)	35(34.7%)	126(52.5%)
Satisfaction with income			
No	103(81.3%)	89(88.1%)	192(80.0%)
Yes	26(18.7%)	12(11.9%)	48(20.0%)
Savings			
No	113(95.7%)	95(95.0%)	209(87.1%)
Yes	26(18.7%)	5(5.0%)	31(12.9%)

4.3 Quality of life index category:

QOLI is categorized into four categories and has been ranked in ascending order from 1 to 4. Where 1 indicate first 25 percent persons and they have very poor quality of life, 2 indicate next 25 percent persons and they have poor quality of life, 3 indicate next 25 percent persons and they have good quality of life and 4 indicate last 25 percent persons and they have very good quality of life.

Table4.3: Distribution of older persons according to quality of life category

Percentile group of QOLI	Frequency	Percentage	Value of QOLI
1=Very poor	60	25.0	22.77 to 48.21
2=Poor	60	25.0	48.22 to 57.22
3=Good	60	25.0	57.23 to 64.77
4=Very good	60	25.0	64.78 to 95
Total	240	100.0	

4.4 Level of quality of life of older persons

The following table gives a comparative figure of the respondents by various economic characteristics such as social help, work, income, Satisfaction with income and savings. The mean value of QOLI of respondents according to selected economic characteristics are given bellow:

Table-4.4: Level of quality of life according to gender and economic characteristics

Variables Name	QOLI (Mean \pm SD)		
	Male	Female	Both
Overall QOL	57.8(\pm 12.83)	54.92(\pm 13.1)	56.59(\pm 13)
Social help			
Yes	51.27(\pm 11.28)	50.61(\pm 14.41)	50.94(\pm 12.98)
No	59.84(\pm 12.65)	57.61(\pm 11.56)	59.01(\pm 12.27)
Work			
No	52.59(\pm 13.04)	54.51(\pm 13.7)	53.65(\pm 13.4)
Yes	62.79(\pm 10.50)	57.00(\pm 9.77)	61.67(\pm 10.56)
Income			
No	50.23(\pm 11.00)	52.17(\pm 13.83)	51.36(\pm 12.7)
Yes	61.80(\pm 11.94)	60.12(\pm 9.88)	61.33(\pm 11.39)
Satisfaction with income			

No	54.10(±11.18)	53.95(±13.09)	54.02(±12.07)
Yes	68.39(±11.37)	62.21(±11.32)	66.84(±11.56)
Savings			
No	55.27(±12.03)	54.55(±13.02)	54.94(±12.47)
Yes	68.82(±10.23)	62.16(±14.29)	67.75(±10.98)

QOL of persons getting social help

Male, female and both who get social help have mean QOLI 51.27(±11.28), 50.61(±14.41) and 50.94(±12.98) respectively. The persons who do not get social help have mean QOLI 62.79(±10.50), 57.00(±9.77) and 61.67 (±10.56) respectively. So persons getting social help have poor quality of life regarding others.

QOL of persons working

Male, female and both who do not work have mean QOLI 52.59 (±13.04), 54.51(±13.7) and 53.65 (±13.4) respectively but who work have mean QOLI 59.84(±12.65), 57.61(±11.56) and 59.01(±12.27) respectively. So persons working have good quality of life regarding others.

QOL of persons having income

Male, female and both who have no income have mean QOLI 50.23(±11.00), 52.17(±13.83) and 51.36(±12.7) respectively but who have income have mean QOLI 61.80(±11.94), 60.12(±9.88) and 61.33(±11.39) respectively. So the persons having income have good quality of life regarding others.

QOL of persons satisfied with income

Male, female and both who satisfied with income have mean QOLI 54.10(±11.18), 53.95(±13.09) and 54.02 (±12.07) respectively but who is not satisfied with income have mean QOLI 68.39(±11.37), 62.21(±11.32) and 66.84(±11.56) respectively. So the persons satisfied with income have good quality of life regarding others.

QOL of persons having savings

Male, female and both who have no savings have mean QOLI 55.27(± 12.03), 54.55(± 13.02) and 54.94(± 12.47) respectively but who have savings have mean QOLI 68.39(± 11.37), 62.21(± 11.32), 66.84(± 11.56) respectively. So the persons having savings have good quality of life regarding others.

4.5 Relationship between quality of life and economic variables:

We would like to study whether there is any association between quality of life and different phenomena like age, education, marital condition social help, work, income, satisfaction with income, savings etc. For this reason we have used Chi-square statistic for testing any association between quality of life index and demographic or economic variables. Relationship between quality of life and economic variables obtained by using Chi-square statistics described in methodology chapter. So, the hypothesis,

H_0 : There is no association between quality of life and different phenomena.

H_1 : H_0 is not true.

The table given bellow presents result of association of different attributes with their corresponding cross tabulation, calculated chi-square, tabulated chi –square value with the corresponding d.f, p- value, the significance level of association at 5% between my dependent variable “quality of life” and the category of my independent variable “demographic and economic variables”.

4.6 Differentials in QOL of older persons according to demographic conditions:

The following table gives a comparative figure of the respondents by distribution of older persons according to QOL category and some demographic characteristics. The distribution of older persons are given bellow:

Table 4.5: Distribution of older persons according to QOL (category) and some demographic characteristics.

Variable Name	Quality of life					Cal χ^2 , tab χ^2 , and p value	Significance level of associations at 5% significance
	Very poor	Poor	Good	Very good	Total		
Sex							
Male	31 22.3%	39 28.1%	31 22.3%	38 27.3%	139 100.0%	$\chi^2_{cal}=3.881$ $\chi^2_{tab}=7.815$ df=3 and p=0.275	Insignificant
Female	29 28.7%	21 20.8%	29 28.7%	22 21.8%	101 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		
Age group							
60-69	22 14.9%	32 21.6%	48 32.4%	46 31.1%	148 100.0%	$\chi^2_{cal}=34.950$ $\chi^2_{tab}=12.592$ df=6 p=.000	Significant
70-79	27 37.5%	22 30.6%	10 13.9%	13 18.1%	72 100.0%		
80+	11 55.0%	6 30.0%	2 10.0%	1 5.0%	20 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		
Education							
No education	31	31 32.3%	24 25.0%	10 10.4%	96 100.0%	$\chi^2_{cal}=46.688$ $\chi^2_{tab}=24.996$ df=15 and p=.000	Significant
Primary	19 31.7%	19 31.7%	9 15.0%	13 21.7%	60 100.0%		
SSC	6 15.0%	4 10.0%	14 35.0%	16 40.0%	40 100.0%		
HSC	2 11.1%	3 16.7%	5 27.8%	8 44.4%	18 100.0%		
Graduate	2 16.7%	2 16.7%	2 16.7%	6 50.0%	12 100.0%		
Masters	0 0.0%	1 7.1%	6 42.9%	7 50.0%	14 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		
Marital condition							
Married	28	43	37	45	153		

	18.3%	28.1%	24.2%	29.4%	100.0%	$\chi^2_{cal}=27.797$ $\chi^2_{tab}=21.026$ df=12 and p=.006	Significant
Unmarried	0 0.0%	0 0.0%	3 75.0%	1 25.0%	4 100.0%		
Separation	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1 100.0%		
Divorce	5 71.4%	1 14.3%	0 0.0%	1 14.3%	7 100.0%		
Widow	27 36.0%	16 21.3%	19 25.3%	13 17.3%	75 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		

Discussion about Bivariate distribution of the given quality of life according to the selected demographic characteristics:

Gender differences in quality of life

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Sex of the respondents” and “Quality of life” is 3.881 with 3 degrees of freedom but the tabulated value for the same degrees of freedom is 7.815 at 5% level of significance, which implies that calculated chi-square value is lower than tabulated chi-square value. Hence, there is insignificant (P=0.275) association between “gender of the respondents” and “Quality of life” at 5% level of significance.

Age of the respondents

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Age of the respondents” and “Quality of life” is 34.950 with 6 degrees of freedom but the tabulated value for the same degrees of freedom is 12.592 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant (P=0.000) association between “Age of the respondents” and “Quality of life” at 5% level of significance.

Education of the respondents

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Education of the respondents” and “Quality of life” is 46.688 with 15 degrees of freedom but the tabulated value for the same degrees of freedom is 24.996 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant (P=0.000) association between “Education of the respondents” and “Quality of life” at 5% level of significance. So persons have good quality of life who has better level of education.

Marital condition of the respondents

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Marital condition of the respondents” and “Quality of life” is 27.797 with 12 degrees of freedom but the tabulated value for the same degrees of freedom is 21.026 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant (P=0.006) association between “Marital condition of the respondents” and “Quality of life” at 5% level of significance.

4.7 Differentials in QOL of older persons according to economic conditions:

The following table gives a comparative figure of the respondents by distribution of older persons according to QOL category and some economic characteristics. The distribution of older persons are given bellow:

Table 4.6: Distribution of older persons according to quality of life (category) and some economic characteristics.

Variable Name	Quality of life					Cal χ^2 , tab χ^2 , and ρ value	Significance level of associations at 5% significance
	Very poor	Poor	Good	Very good	Total		
social help							
Yes	32 44.4%	17 23.6%	14 19.4%	9 12.5%	72 100.0%	$\chi^2_{cal}=23.333$ $\chi^2_{tab}=7.815$ df=3 and	Significant
No	28 16.7%	43 25.6%	46 27.4%	51 30.4%	168 100.0%		

Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%	P=.000	
Work							
No	51 33.6%	39 25.7%	32 21.1%	30 19.7%	152 100.0%	$\chi^2_{\text{cal}}=19.378$ $\chi^2_{\text{tab}}=7.815$ df=3 and P=.000	Significant
Yes	9 10.2%	21 23.9%	28 31.8%	30 34.1%	88 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		
Income							
No	45 39.5%	29 25.4%	24 21.1%	16 14.0%	114 100.0%	$\chi^2_{\text{cal}}=30.008$ $\chi^2_{\text{tab}}=7.815$ df=3 and P=.000	Significant
Yes	15 11.9%	31 24.6%	36 28.6%	44 34.9%	126 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		
satisfaction with income							
No	57 29.7%	55 28.6%	46 24.0%	34 17.7%	192 100.0%	$\chi^2_{\text{cal}}=34.375$ $\chi^2_{\text{tab}}=7.815$ df=3 and P=.000	Significant
Yes	3 6.3%	5 10.4%	14 29.2%	26 54.2%	48 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		
Savings							
No	59 28.2%	58 27.8%	51 24.4%	41 19.6%	209 100.0%	$\chi^2_{\text{cal}}=30.634$ $\chi^2_{\text{tab}}=7.815$ df=3 and P=.000	Significant
Yes	1 3.2%	2 6.5%	9 29.0%	19 61.3%	31 100.0%		
Total	60 25.0%	60 25.0%	60 25.0%	60 25.0%	240 100.0%		

Discussion about distribution of the given quality of life according to the selected economic characteristics:

Getting social help

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Getting social help of the respondents” and “Quality of life” is 23.333 with 3 degrees of freedom but the tabulated value for the same degrees of freedom is 7.815 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant ($P=0.000$) association between “Getting social help of the respondents” and “Quality of life” at 5% level of significance.

Working status

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Work of the respondents” and “Quality of life” is 19.378 with 3 degrees of freedom but the tabulated value for the same degrees of freedom is 7.815 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant ($P=0.000$) association between “Work of the respondents” and “Quality of life” at 5% level of significance.

Income

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Income of the respondents” and “Quality of life” is 30.008 with 3 degrees of freedom but the tabulated value for the same degrees of freedom is 7.815 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant ($P=0.000$) association between “Income of the respondents” and “Quality of life” at 5% level of significance.

Satisfaction of income

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Satisfaction of income of the respondents” and “Quality of life” is 34.375 with 3 degrees of freedom but the tabulated value for the same degrees of freedom is 7.815 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant

($P=0.000$) association between “Satisfaction of income of the respondents” and “Quality of life” at 5% level of significance.

Savings

It is observed from the above table-4.2 that, the calculated chi-square value for the association between “Savings of the respondents” and “Quality of life” is 30.634 with 3 degrees of freedom but the tabulated value for the same degrees of freedom is 7.815 at 5% level of significance, which implies that calculated chi-square value is greater than tabulated chi-square value. Hence, there is significant ($P=0.000$) association between “Savings of the respondents” and “Quality of life” at 5% level of significance.

CHAPTER FIVE

CONCLUTION

5.1 Introduction

Global population situation in respect of age structure has been changing and showing the elderly 60+ as a growing segment. The ageing population is increasing day by day. It has many socio-economic effects on national development. In demographic context and view of age structure, aged people are considered as a dependent portion of manpower. People consistently view a small group of nations as best providing for their citizens. In Bangladesh as well as Rajshahi city corporation area QOL is poor. In developed QOL is very good.

5.2 Overview of the study

Overall quality of life index value in Bangladesh is 36.10 and it is very poor. Overall quality of life index value in our study in Rajshahi city for male is $57.8(\pm 12.83)$, for female is $54.92(\pm 13.1)$ and for both sexes is $56.59(\pm 13)$. So according to our study QOL in Rajshahi city corporation area is poor.

According to World Bank like last year, Canada ranks No. 1 overall for providing a good quality of life. Survey respondents ranked the North American country top for its well-developed education system, a perception supported by independent research. The North American country is seen as the most politically stable nation and ranks No. 2 for its economic stability, trailing only Switzerland. In fact, Canada is rated in the top 10 in all but one of the nine attributes, affordability, where Asian countries dominate.

Seven European countries are ranked in the top 10, and 13 from the continent rank in the top 20. Like last year, Sweden and Denmark immediately follow Canada, with Australia, Norway, Switzerland, Finland, the Netherlands, New Zealand and Germany also finishing in the top 10.

Countries perceived to provide a lower quality of life perform most poorly in areas concerning personal safety and economic opportunity. Iran, followed by Algeria, Lebanon and Pakistan, are at the bottom of the quality of life ranking.

Sex is an Important factor which influences old age and demographic condition of any country. 57.3 % respondents were male and 42.7 % respondents were female. So it observes that most of the people are male. This study reveals that, 61.7% elderly people are in the age group 60-69, 30% elderly people are in the age group 70-79 and only 8.3% percent belong to the age 80 and above years.

Marital status and its differentials play a vital role in the composition and structure of population. Most of the elderly women are married. In Bangladeshi society, widows are a kind of social problem. This problem is greater among elderly women. In my study area 54.5% of elderly women are widowed but only 14.4% of elderly men are widowed. 80.6% of elderly men are married and 40.6% of elderly women are married. Most of the older men in the world are married, while older women are not. Instead, older women are likely to be widowed. Worldwide, roughly four out of five men aged 60 years or over currently have a spouse, but the same is true for under half of the women in the same age group (UN, 2011).

Most of the respondent does not have enough individual income. In my study area, 47.5% older persons have no income. In Rajshahi city corporation area a vast majority of the respondents (52.5 percent) have income. 65.5% men have income but only 34.5% women have income. So men have better income than women in Rajshahi city. Since older persons have usually lower income and a higher proportion of them are living below the poverty line, population aging is associated with poverty, particularly in developing countries (Gavrilov L.A., 2003). A wide discussion on working status, educational status is also made. The socio-economic condition of the elderly women of Bangladesh is gradually decline.

It has been revealed from the data that most of the elderly persons do not work 63.3% and 36.7% people are working. Worldwide in 2008, approximately 30 percent of men and 12 percent of women aged 65 or over were economically active. This compares to activity rates at the peak ages of labor force participation (ages 24-54) of 95 percent for men and 67 per cent for women. (Department of Economic and Social Affairs Office of the High Commissioner for Human Rights, 2010) But our study area labor force participation rate is lower. They are economically insecure in our study. A significant number of respondents are illiterate which 40%, completed primary education is 25%, 16.7% completed secondary, 7.5% completed higher education and only 10.8% completed graduation and post-graduation. 30% older persons get social help and 70% older persons do not get social help.

The study has found an overwhelming popularity of this program. It has created a lot of interest and confidence in the neglected elderly of the society. Old age allowance talks about the positive existence of the government among the people. It is a good safety net program achieving more or less the goals it is aimed at. The budget allocation for OAAP is increasing from year to year and Bangladesh government seems to adopt incremental policy to expand this program. But the expansion should be done as quickly as possible as there are still a lot of old people in Rajshahi who do not have the least income necessary for a human being to live on and who need to be covered by this program.

5.3 Conclusion

Aged population in the next decades will encounter different socio-economic circumstances and rapid technology changes. Social integration is the best way to help develop themselves under the changing situation. As the number of aged people will increase dramatically in the future, support from the family and government has been inadequate. They have to work in order to self-reliance and sustainable under the difficult circumstances of existing economic situation. So they have to better change and develop skills more widely.

The elderly women are in problems with the changing situation of our traditional joint family system. The, social, physical and economic supports provided by the families are indispensable and can not be replaced by their institutions. Policy makers and planners, community leaders as well as government should look on those forces that have adverse effect on the capacity of the family to support and care for older persons.

It is a time of emphasize the need for policies and programs to create awareness of ageing women both from national and individual family concerned. There should be voluntary organizations to support the elderly. Special economic care for the older is needed. In order to create a positive attitude towards the elderly and promote awareness and understanding of the younger to the old, Bangladesh should observe “National Old Day”. Although 1st October in every year “National Old Day” has been observing since 1999, the observation of national old day will enhance social and family value prestige of the old. Programs so far taken to improve the quality of life of the elderly are quite inadequate. The increasing role of the public and private sectors in economic and social aspect of the population 60+ is now a day highly appreciated.

Elderly populations are the asset of any nation and people getting social help (OAA) have very poor quality of life. A universal agreement among the policy makers regarding the ageing issues signifies the importance of the issues in the national developmental agenda. The existing amount of OAA is insufficient and it should be increased significantly. Many lessons can be learned from industrial societies who are facing the problems associated with their increasing aged people and it is appropriate time for Bangladeshi policy makers to give due importance to the forthcoming age wave especially prioritizing the following programs:

- i. The amount of money and the number of beneficiaries under OAAP should be increased,
- ii. The elderly should be provided community based services with their active involvement,
- iii. Government should try/make efforts to achieve the targets of Sustainable Development Goals (SDGs) regarding ageing, involving all the related organizations of the government and non-government sectors.

In Bangladeshi society older persons are enormously respected and valued. They have a significance presence in both formal and informal sectors. So the Government should take necessary steps of the well fare for elderly women side by side mass education and awareness should be increased about the duty towards elderly women. In this context the Government should give economic security, (like pension, medical, allowance, recreational facility, etc.). To improve economic condition and quality of life of elderly, necessary curriculum included in the national text.

From the above discussion the following recommendations should be followed:

- Should be established formal pension scheme.
- Should be established old pension scheme.
- Should be established eight centers for the elderly in eight Divisions under ADP.
- Should be established alleviation of Rural Poverty under Fifth-Five-Year plan.
- To ensure the dignity of the elderly people in the society.
- To identify the problems of the elderly women and address those.
- To change the attitude of the mass people towards the elderly women.
- To adopt new programs to address the needs of the elderly women fostering their socio-economic development.
- To develop special measures to help the elderly women during emergencies like natural calamities, cyclone, earthquake etc.

- To ensure social security, health care, employment and rehabilitation.
- The government should take necessary steps to enhance the care giving capacity of family through appropriate programs.
- The government should take necessary steps for the welfare of the aged by taking mass education program and awakening the people about the duty towards elderly women.
- Access to treatment facility should be available and cheap for elders and special emphasize on care of geriatrics should be taken every health center, medical college, community clinic in both rural and urban areas.

Aging is the process of life. We will age if we live longer, then we want to live in peace and harmony. Let the national come forward for the well-being of our respected senior citizens of Bangladesh, and also should foreword come to meet up their basic needs and provide the needed services for their well-being.

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