Quality of Life of Rural People and Associated Socio-Demographic Factors: A Cross Sectional Study in Noakhali, Bangladesh

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Abstract: *Background:* A large number of people in Bangladesh are live in rural areas, these areas considered difficult to get modern facilities so the facilities are very much desired object of them. Though Bangladesh is now a developing country but the rural people of this country still income less than 1 US dollar per day (World Bank 2006). More than 170 million people of Bangladesh crowded in the area of 1, 47,570 square km, 1.41% annual growing rate of population with 85% of them draws the economic sustenance directly or indirectly from agriculture. *Objective:* The objective of this study was to find out the factors associated with the quality of life among rural people. *Methods:* This was a cross-sectional study conducted in Noakhali district. The study sample was 384 adults selected by convenient sampling technique. *Results:* The study revealed that, the mean age was 40.91 and the mean score of quality of life was 70.54. From the linear regression model, it has been found that those who have completed SSC, HSC, graduation, post-graduation has higher scores as compared to illiterate person (β = 5.80, CI 2.988-8.618, p-value = <0.001), (β = 7.58, CI 5.257-9.917, p-value = <0.001), (β = 11.90, CI 6.997-16.803, p-value = <0.001), (β = 15.82, CI 12.932-18.710, p-value = <0.001). *Conclusion:* The mean score was 70.54 ($\pm$ 10.079) for quality of life among rural people of Noakhali district. Being educated were positively associated with quality-of-life scores.

Keywords: Rural Development, Quality of Life, Educational Attainment, Socioeconomic Factors, Cross-sectional Study.

INTRODUCTION

A large number of people in Bangladesh are live in rural areas, these areas considered difficult to get modern facilities so the facilities are very much desired object of them [1]. Quality of lifestyles is "an individual's evaluation of their position in existence in the context of the way of life and cost structures in which they stay and in relation to their goals, expectations, standards and issues [2]. Though Bangladesh is now a developing country but the rural people of this country still income less than 1 US dollar per day (World Bank 2006). More than 170 million people of Bangladesh crowded in the area of 1, 47,570 square km, 1.41% annual growing rate of population with 85% of them draws the economic sustenance directly or indirectly from agriculture [3]. Cultural issue, physical health, psychological state, economic crisis, low level of education, poor transport system, low social interaction is the main indicators which affect the quality of life [4]. Bangladeshi rural adults are mostly unable to read and write, facing inadequate health service and lead a poor life [5]. In current years health indicators like mortality and morbidity focusing on quality of life (QOL) leads a vital effect in medical and interventional studies [6]. Research conducts on QOL draw attention on chronic physical health disease such as diabetes, cancer, stroke and HIV/AIDS [7-10]. Over two decades a verity of equipment developed measuring the QOL [11]. Besides some exception the QOL impact by particular disease [12-14]. An American psychologist John Flanagan first develops the QOL scale (QOLS) that specified more generalized definition of QOL which is use to evaluate QOL in daily context [15-16]. WHO build a method of shortened WHO quality of life BREF (WHOQOL-BREF) version of 26 item equipment rated on 5-point Liker type scales, used for large population studies [17]. But the tool is not applied yet in Bangladesh or any other developing countries. In 2005 only Dhaka the capital of Bangladesh ware used the Bangla version of WHOQOL-BREF for study of adolescents and adults

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[18-19]. Since 2005 the scale of Bangla version has been used some rural areas of Bangladesh [20-21]. A classical test theory (CTT) has been followed by the Bangla version of WHOQOL-BREF dimension [22-23]. A study of rural people in a northern district of Bangladesh [24] found that they reported a low mean quality of life score. This study also reported that participant sex, family type, and occupation influenced quality of life scores. However, these results may not be transferable to other regions of Bangladesh due to regional differences in adult persons' physical status, level of education, and economic status. The present study, therefore, investigates rural people quality of life and its relationship to various socio-demographic characteristics in Noakhali district of Bangladesh. The population of rural area in Bangladesh is far from fundamental needs in their daily life. Peoples in rural area are suffering from different types of disaster as hungry, limited cloths, lack of education even some of those has no safe home for living properly. Some peoples are living under the poor socioeconomic status in rural area of Bangladesh. In rural area population's quality of life has no standard score with their living status. Difference economical categories of rural people have different quality of life with their living status. Depends on the socioeconomic status the enjoyment of rural area population has different expose style with lough cry happiness sadness and so. The children of rural area peoples cannot enjoy their childhood life with their circle as other children of society due to attend in the household work or work for food with their parents. Not only the enjoyment or leisure time spend but also the children have no opportunity to get proper education in their child life due to their quality of life in rural area of Bangladesh. In this situation a study is needed to assess the real situation and find out the socio-demographic factors associated with the quality of life among rural area people. The study will show the exact quality of life in rural area population in Bangladesh. The findings of the study will be helpful to expose the resolving process of these by find out real problems of rural area peoples and it will be easy to rearrange the quality of life and provide them a way to survive with better living status in rural area.

Research Question
- What is the status of quality of life of rural people in Noakhali, Bangladesh?
- What is the socio-demographic factors associated with the quality of life of rural people in Noakhali, Bangladesh?

Objectives of the study
General Objectives
- To identify the status and socio-demographic factors associated with the quality of life of rural people in Noakhali, Bangladesh.

Specific Objectives
- To describe the socio demographic characteristics of rural people.
- To determine the socio demographic variables related to quality of life among rural people.
- To assess the status of quality of life of rural people.

MATERIALS AND METHODS
Study Design: This was a cross- sectional study. The target population was all adult people of rural area. The study was carried out in Noakhali district of Bangladesh. The study was carried out from October 2020 to January 2021. Convenience sampling technique was used to select the sample.

Inclusion criteria
- Rural people from Noakhali district.
- All adult people more than 18 years.

Exclusion criteria
- Those who had history of mental health problem or severely unstable person was excluded from the study.
- Those who did not willing to participate in the study.

Data Collection Tool: A semi structured questionnaire was used to collect data from the respondents. After pre-testing, questionnaire was finalized. Face to face interview was used to collect data from the respondents.

Data Management & Analysis Plan
- Collected data was checked for their correctness and completeness according to objectives.
- Corrected data was then entered into computer for organizing and processing for analysis.
- Pearson's chi-squared test was applied.
- Multivariate logistic regression model was used to explore the associations of quality of life and the socio-demographic factors.
- The data was analyzed via statistical software Statistical Package for the Social Sciences (SPSS, version 22.0).

RESULTS
The data comprised 384 respondents who lived in Noakhali district of Bangladesh. The socio-demographic characteristics of the participants, such as age, gender, marital status, educational level, monthly family income, occupation etc. and quality of life are described. Among the 384 studied respondents, the mean age was 40.91 and the mean score of quality of life was

70.54 (Table-VII). We fit a linear regression model to find out the significant association between the quality of life' scores and different sociodemographic factors. From the linear regression model, it has been found that those who have completed SSC, HSC, graduation, post-graduation have higher scores as compared to illiterate person (β = 5.80, CI 2.988-8.618, p-value = <0.001), (β = 7.58, CI 5.257-9.917, p-value = <0.001), (β = 11.90, CI 6.997-16.803, p-value = <0.001), (β = 15.82, CI 12.932-18.710, p-value = <0.001). (Table-VIII).

Table-I: shows that out of 384 respondents female were 50 (13%) and male were 334 (87%).
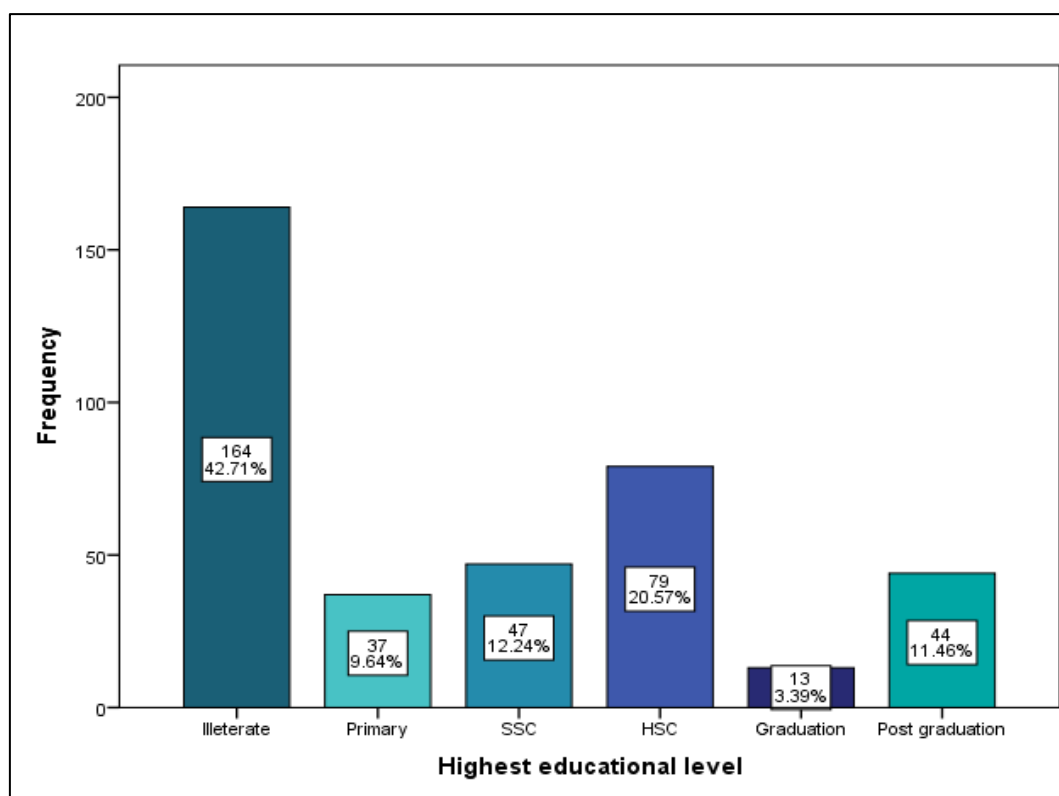
Table-II: shows that out of 384 respondents, the largest 372 (96.9%) were married and 12 (3.1%) were single.

Table-I: Distribution of respondents by gender (n=384)

Gender	Number	Percentage
Male	334	87%
Female	50	13%
Total	**384**	**100%**

Table-II: Distribution of respondents by their marital status (n=384)

Marital status	Number	Percentage
Single	12	3.1%
Married	372	96.9%
Total	**384**	**100%**

Figure I: Graphical presentation of respondents by their highest educational level (n=384).

Figure I: Shows that most of the respondents 164 (47.71%) was illiterate, followed by 79 (20.57%) completed higher secondary, 47 (12.24%) completed secondary education, 44 (11.46%) completed post-graduation, 37 (9.64%) completed primary education and above and only 13 (3.39%) completed their graduation.

Table III: Distribution of the respondents by mean age and quality of life (n=384).

Variables	Mean	Std. deviation
Age	40.91	± 10.203

Quality of life	70.54	± 10.079

Table VII shows that the mean age was 40.91 (± 10.203) and the means score for quality of life was 70.54 (± 10.079)

Table- IV: Factors associated with the quality of life (n=384)

Variables	Reference	β	LCL	UCL	P-value
Gender- Male	Female	-1.19	-1.809	4.204	**0.434**
Marital status- Single	Married	0.043	-5.77	5.86	0.988
Education					
Primary	Illiterate	2.72	-0.376	5.818	**0.085**
SSC	Illiterate	5.80	2.988	8.618	**<0.001**
HSC	Illiterate	7.58	5.257	9.917	**<0.001**
Graduation	Illiterate	11.90	6.997	16.803	**<0.001**
Post-graduation	Illiterate	15.82	12.932	18.710	**<0.001**
Asset- agricultural land	At least 20 inch TV	11.181	9.414	12.418	**<0.001**
Materials of floor					
Tiles	Mud	25.454	18.270	68.347	**<0.001**
Cement	Mud	12.312	10.310	30.349	**<0.001**
Cooking materials- wood	gas	-9.886	-12.27	-7.50	**<0.001**
Respiratory disease- No	Yes	10.589	7.327	13.851	**<0.001**
Muscoskeletal- No	Yes	5.538	3.173	7.902	**<0.001**

DISCUSSION

The mean score was 70.54 (± 10.079) for quality of life among rural people of Noakhali district. Not having chronic diseases, being educated, had better household condition was positively associated with quality-of-life scores, whereas being owner of agricultural land was also associated with higher scores. This large-scale cross-sectional study of adult people was conducted in rural areas of Noakhali district in Bangladesh, evaluating QoL and its association with factors including sociodemographic characteristics, living/health conditions, clinical factors. The mean score was 70.54 ± 10.079 for quality of life among rural people of Pabna district, which were higher than the international average levels (16.20 ±2.90, 15.00 ±2.8, 14.30± 3.2, and 13.50±2.60) for different domains of quality of life [42]. This result indicated that people living in rural area had average level of quality of life. In our study, we found that not having chronic diseases, being educated, had better household condition all were positively associated with quality of life scores. From the linear regression model, it has been found that those who have completed SSC, HSC, graduation, post-graduation had higher scores as compared to illiterate person (β = 5.80, CI 2.988-8.618, p-value = <0.001), (β = 7.58, CI 5.257-9.917, p-value = <0.001), (β = 11.90, CI 6.997-16.803, p-value = <0.001), (β = 15.82, CI 12.932-18.710, p-value = <0.001). The respondents whose have not suffered any respiratory disease and musco-skeletal disease have higher score compared to those who have suffered from those diseases (β = 10.589, CI 7.327-13.851, p-value = <0.001), (β = 5.538, CI 3.173-7.902, p-value = <0.001). In another study found that chronic

diseases, left behind status were negatively and significantly associated with quality-of-life scores among the study participants, which was consistent to these findings [43, 44, 45]. Out of 384 respondent's female were 50 (13%) and male were 334 (87%). In contrast, no significant difference was found regarding the associations between sex, average income, current working status and QOL.

CONCLUSION

The mean score was 70.54 (± 10.079) for quality of life among rural people of Noakhali district. Not having chronic diseases, being educated, had better household condition were positively associated with quality-of-life scores, whereas being owner of agricultural land was also associated with higher scores. Public health strategy should support to increase the quality of life.

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