

WOMEN'S INTENSITY OF NON-COMMUNICABLE DISEASE COMPARED TO MEN IN BANGLADESH

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Abstract. Noncommunicable diseases (NCDs) are strongly connected with human mortality and morbidity. Bangladesh has a high rate of chronic illnesses. Global efforts for women's health are mostly focused on improving sexual and reproductive health. The purpose of this study is to determine the severity of Noncommunicable diseases in women by comparing risk variables by gender. Between February and May 2023, a cross-sectional survey was undertaken to identify the baseline status of Noncommunicable disease risk variables among men and women over the age of 35 in chosen intervention and control locations in rural Bangladesh as part of a noncommunicable diseases project. We conducted blood pressure and anthropometric assessments on 100 men and 100 women using the World Health Organization STEPS questionnaire and normal operating procedures. We performed a descriptive analysis with SPSS Statistics 20.0. According to the findings, 75% of males are married, 5% are single, and 20% of women are widowed. Approximately 46% are working women. Women had a greater prevalence than males of lack of physical activity (28% vs 72%), overweight and obesity (45% vs 55%), excessive waist circumference (21% vs 79%), Noncommunicable diseases (35% vs 65%), and uncontrolled diabetes mellites after medication (47% vs 53%). Women are less likely than males to seek medical treatment (83% vs 17%), have self-reported ailments (69% vs 31%), consume fruits and vegetables (77% vs 23%), or use medicines (59% vs 41%). Women are more likely to suffer from anxiety (67%) and depression (86%). In Bangladesh, women have a greater incidence of certain behavioral and clinical risk factors than males. A thorough assessment of such differences between men and women might increase knowledge of situations and help health providers and policymakers optimize preventative policies to reduce the global illness burden more effectively in both men and women.

Keywords: *Noncommunicable diseases, women's health, healthy lifestyle, Bangladesh*

Introduction

Noncommunicable diseases (NCDs) have emerged as a major danger to global health, with far-reaching consequences for individuals, communities, and healthcare systems worldwide. Cardiovascular disease, cancer, chronic respiratory problems, and diabetes are examples of noncommunicable diseases (NCDs). According to the World Health Organization (WHO), NCDs are responsible for nearly 71% of all global fatalities, making them the leading cause of death worldwide (WHO, 2023). The impact of NCDs extends beyond death, putting significant economic costs on healthcare systems and society. The World Economic Forum projects that non-communicable diseases will cost the global economy \$47 trillion over the next two decades. This economic impact is especially severe in low- and middle-income nations, where resources are typically few and healthcare systems are unable to meet the expanding NCD load (World Economic Forum, 2021). Gender inequalities in the burden of noncommunicable diseases (NCDs) have emerged as a major public health problem, with men and women having significantly different illness frequency, risk factors, and outcomes. NCDs, which include cardiovascular diseases, cancer, diabetes, and respiratory illnesses, are responsible for the vast majority of worldwide fatalities and

cause considerable disability and economic consequences. Research and data from numerous sources have revealed unique gender patterns in NCDs, providing insight into the complex interaction of biological, behavioral, and cultural variables that contribute to these inequalities (WHO, 2021). Three studies consistently indicate differences in the frequency of NCDs between men and women. Men, for example, are more likely to develop cardiovascular illnesses and certain malignancies, whereas women are more prone to autoimmune diseases such as rheumatoid arthritis and thyroid problems. These gender disparities in illness prevalence are likely to be driven by hormonal variables, genetic variants, as well as differences in lifestyle and behavioral risk factors (American Heart Association, 2021).

Furthermore, behavioral risk factors influence gender differences in NCDs. Men and women may have differing health habits, with men being more prone to participate in dangerous activities such as smoking and excessive alcohol use, whereas women may have greater rates of obesity and sedentary lives. Sociocultural norms and expectations can also influence access to healthcare and preventative services, thereby delaying or restricting early detection and treatment (WHO, 2014). Furthermore, women's health-seeking behavior and access to healthcare might be impacted by their responsibilities as caregivers, as well as their social position within homes and communities. These problems may limit their capacity to seek prompt and appropriate medical treatment, affecting illness outcomes (Boniol et al., 2019). Although there is a significant research shortage in this area, there are still a few papers accessible on women's health difficulties. The purpose of this study is to offer a thorough picture of the gender-specific link between women's health and noncommunicable diseases (NCDs).

Materials and Methods

This is descriptive cross-sectional research followed by a quantitative analysis. This study used semi-structured data obtained between February and May 2023. Men's and women's lifestyles, eating habits, self-care, and NCDs are studied to compare severity. A semi-structured data-based questionnaire is used to poll men and women over the age of 35 but no older than 65. This research comprised 100 males and 100 women, for a total of 200 participants. The venue is in Keranigonj, Dhaka. Dhaka division is chosen using a multi-stage random sampling process from among Bangladesh's eight divisions. Participants who presently or previously resided in this area are physically and mentally fit and willing to participate. A pre-tested and semi-structured questionnaire is used to collect data through face-to-face interviews. The survey took the interviewer just 10 to 15 minutes to complete. All authors have access to participant information both during and after data collection. The poll is conducted in both English and Bangla with full assistance (Begum et al., 2023).

Respondents were notified of the research and were not compensated for their participation. At the start of the survey, respondents are asked to provide verbal informed agreement, and they could withdraw at any point. Two independent reviewers pre-validated the questionnaire, which was then pre-tested with three respondents. The questionnaire's quality is based on the pre-test replies. The questionnaire consisted of many segments: (1) Socio-demographic data: marital status, family structure, religious beliefs (2) Professional information: working place, working time (3) Daily activities and nutritional information: fruits and vegetable consumption, physical exercise, Basal Metabolic Rate (BMR), and High Waist Circumference (HWC). (4) Personal

compliance with NCDs: knowing about NCDs, and possessing any NCDs. (5) Treatment difficulties include doctor visits and drug use. (6) Adherence to mental health. Using the SPSS-20 version for Windows, the data are examined for mean, interquartile range, percentage, standard deviation, Chi-square test, multiple correlation, and multivariate analyses. Univariate and multivariate logistic regression analyses are carried out as mixed effects analyses using the outcome variable. To identify relevant factors, a univariate analysis was conducted first, followed by a multivariate analysis that included statistically significant variables ($p\text{-value} < 0.05$) (Nobi et al., 2023).

Results and Discussion

Dempgraphic distribution

Figure 1 shows the gender distribution. The result shows that there is 100 men and 100 women. *Figure 2* shows the marital status. The result shows that among the respondents, 75% are married, 5% are unmarried and 20% are widowed. *Figure 3* represents the number of women respondents where 46% are working women. *Figure 4* represents the prevalence of fruit and vegetable consumption.

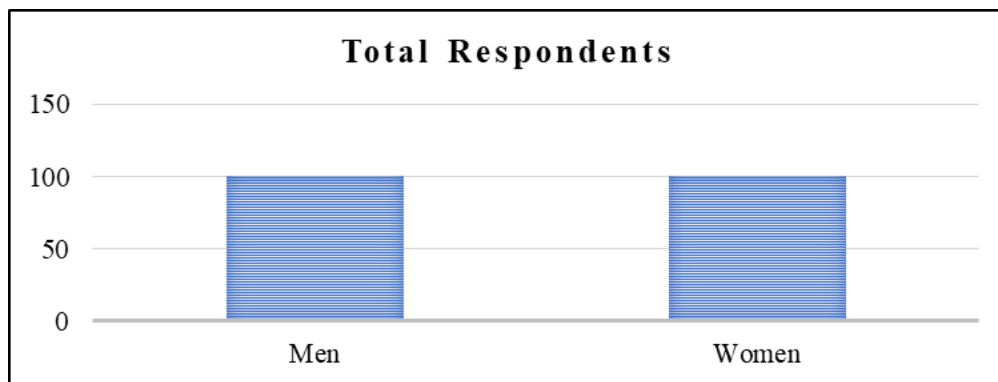


Figure 1. Total number of respondents according to gender ($N=200$).

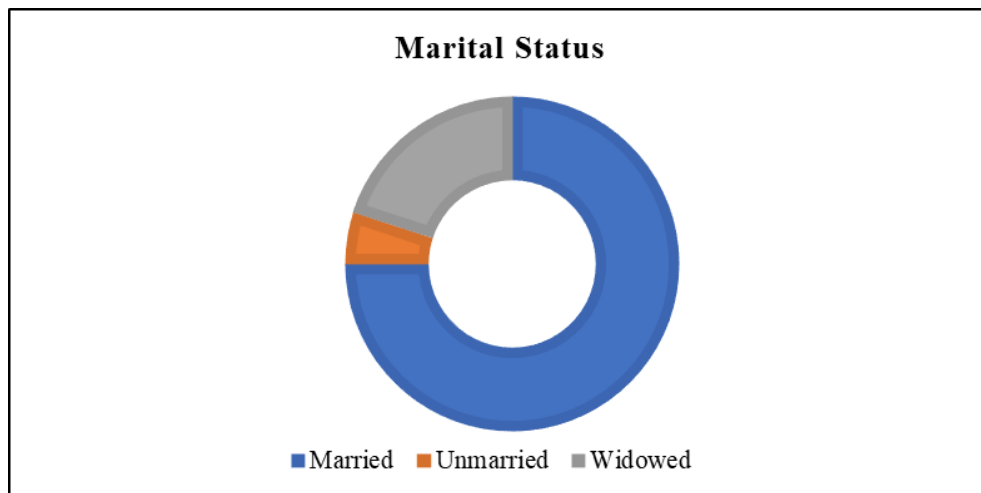


Figure 2. Total Marital status of the respondents ($N=200$).

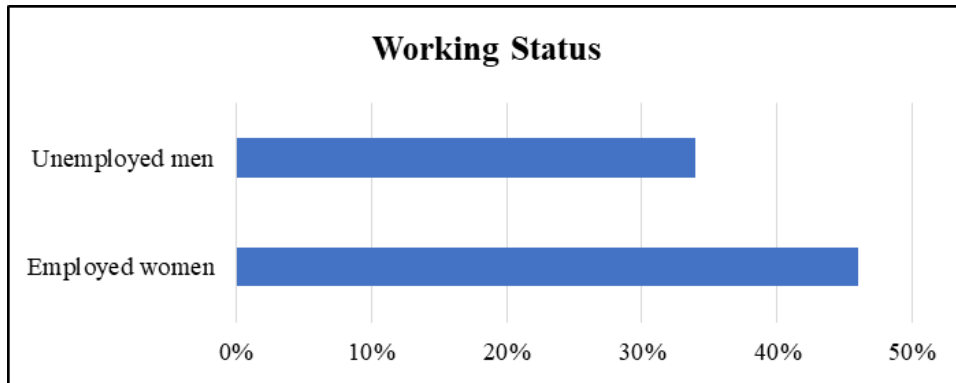


Figure 3. Professional status of women respondents (N=200).

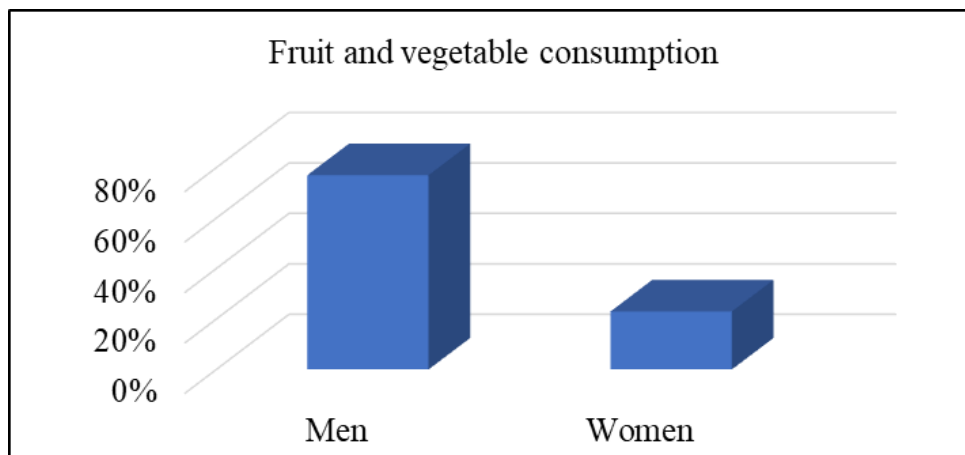


Figure 4. Prevalence of fruit and vegetable consumption (N=200).

Physical & mental health issue

Table 1 represents the physical factors associated with the respondents. Where women are less concerned about NCDs than men. Figure 5 represents the treatment-seeking behavior of the respondents. Figure 6 represents the level of intake of drugs according to the treatment of the respondents. Table 2 represents the mental health issues of the respondents where women are suffering more than men.

Table 1. Status of physical issues of the respondents.

Variable	Lack of physical activity	Overweight and obesity	High waist situations	Suffering from NCDs	Uncontrolled DM after medication	Self-reported diseases
Men	28%	45%	21%	35%	47%	69%
Women	72%	55%	79%	65%	53%	31%

Table 2. Mental health status of the respondents.

Variable	Anxiety	Depression
Men	33%	14%
Women	67%	86%

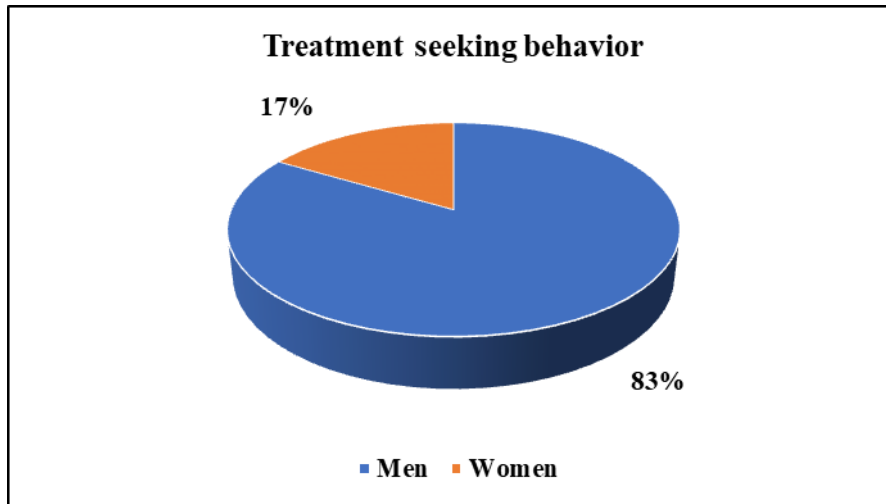


Figure 5. Treatment-seeking behavior of the respondents (N=200).

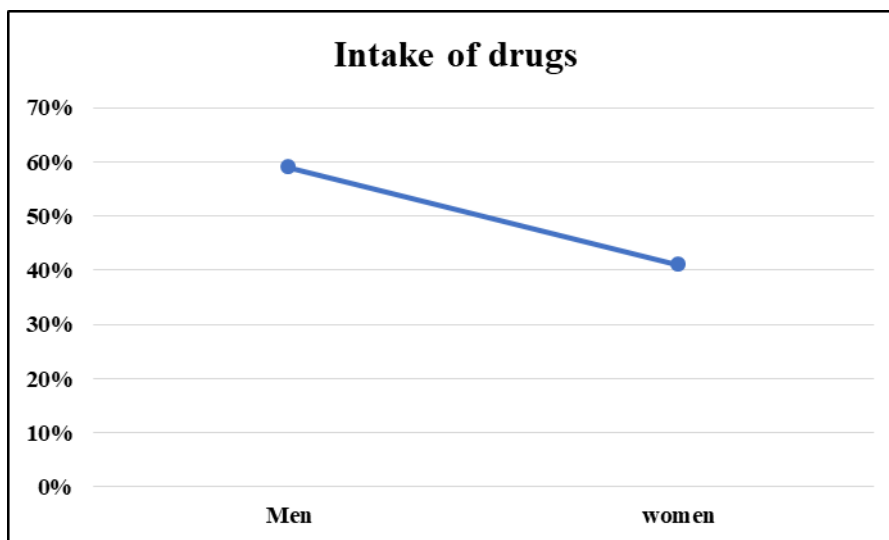


Figure 6. Level of intake of drugs according to the treatment of the respondents (N=200).

The risk variables for noncommunicable diseases (NCDs) reported in this study are not significantly modified by age, gender, employment, or working experience (Haque et al., 2023). However, this study found that respondents' dietary concerns, physical issues, treatment behavior, and mental health issues are well communicated with NCDs (Noncommunicable Diseases). The results suggest that men and women responded equally. In another study, we received 57 male and 43 female responses (Lisa et al., 2023). The majority of responders (75%) are married. There are 46% working women. Others say it was 67% in 2010 (Rahman and Islam, 2013). From 1994 to 2005, men's and women's consumption rates of fruits and vegetables in the United States (United States) were nearly identical (28.4% and 29.6%) respectively (Blanck et al., 2008). However, our study reveals deficiency among women responders. Some physical variables are connected with responders, with women reporting lower levels of anxiety about their health than males. Physical activity is popular among 28% of men and 72% of women. However, as in Australia, males are more physically active than females, regardless of age or size (Hands et al., 2016). 55% of women are overweight or obese. 21% of males have a larger waist circumference than women. Approximately 65% of

women are suffering from NCDs, with uncontrolled DM following treatment. In our survey, males (69%) reported more ailments than women (31%). Research in Europe revealed the same results (Caroli and Weber-Baghdigian, 2016). According to our findings, there is a depressed scenario in treatment-seeking behavior among women. Men (83%) are more likely to seek therapy than women (17%). Men account for over 60% of all drug use. However, it was only 40% in the case of women. An article in India discusses nearly the same tendency among women owing to financial reliance (Das et al., 2018). We also analyzed our responders' mental health difficulties. In general, we discovered that women are more likely to suffer than males in this regard. However, one piece from Canada paints a different view of it. They addressed additional pain among males (Affleck et al., 2018). In our study, women had an anxiety level of 67% and a depression level of 86%. However, the percentage of males is modest (anxiety: 33%, depression: 14%).

Conclusion

Recognizing and treating the relationship between women's health and noncommunicable diseases is crucial for achieving global health equity. Societies may aim to empower women, prevent NCDs, and ultimately enhance women's overall well-being by establishing a holistic and gender-appropriate strategy. To address this issue, both the government and non-governmental groups should take action. Adopting an evolutionary approach to NCDs, as well as using sex-disaggregated healthcare data from a gender perspective, has the potential to greatly improve the health of women and men worldwide. Large-scale research is required to generalize the results and improve the situation. As a result, this research will provide a firm basis for future academics studying this issue, as well as a significant resource for policymakers in the relevant industry. Due to scheduling constraints, this cross-sectional study was single-blinded and carried out at a single institution. Furthermore, the sample size is limited and may not accurately reflect the country's general position.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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