RESEARCH ARTICLE

A STUDY TO ASSESS THE RISK FACTORS OF SELECTED NONCOMMUNICABLE DISEASES (NCDS) AMONG WOMEN IN URBAN COMMUNITIES OF MYSURU

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ABSTRACT

Introduction: Chronic Non-communicable diseases (NCDs) and their associated risk factors have emerged rapidly and are reaching epidemic proportions worldwide. The impact of NCDs is devastating in terms of premature morbidity, mortality, and economic loss. The rise of NCDs has been driven by primarily four major risk factors: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets. NCDs are chronic diseases of long duration and generally slow progression and are the result of a combination of genetic, physiological, environmental, and behavioural factors. India being a patriarchal society, women have very little role to play in their health care issues. A famous slogan, "Healthy Women, Healthy World", embodies the fact that as custodians of family health, women play a critical role in maintaining the health and overall well-being of her communities. In developing countries like India, where resources are limited, preventive measures and lifestyle modification appears to be the only essential weapon. **Aim and Objective:** The aim of the study was to assess the risk factors for NCDs among women residing in selected urban communities of Mysuru and to find the association between the selected non communicable diseases and the selected personal variables of women. **Methods:** Research design adopted for the study was an exploratory survey method. Non probability purposive sampling was used to select 150 women for the study. Risk factors of women for NCDs was assessed by using risk assessment tool for NCDs. Risk scores of women were entered into a datasheet and classified as low, moderate and high risk groups. 72 women were having low risk and 78 women were having moderate to high risk for NCDs. **Results:** The results of the study revealed that 52% of women had moderate to high risk for NCDs. There was a statistically significant association between the risk factors of women for NCDs and their selected personal variables viz. age, family history of NCDs, BMI, and waist circumference. **Conclusion:** The study findings stress the increasing responsibility of health professionals in planning and implementing various educational strategies to improve the knowledge of the public regarding prevention and management of selected NCDs which in turn help to reduce their risk for NCDs in their later life.

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INTRODUCTION

Non-communicable diseases (NCDs) are the leading public health challenges globally in the twenty-first century, resulting in ill health, economic loss, life loss, diminished quality of life, and poor social development equally in both high-resourced and low-resourced countries.[1] It is well demonstrated in the literature that the burden of non-communicable diseases (NCDs) is rising and is expected to surpass the morbidity and mortality burden due to communicable diseases by 2030.[2] A healthy lifestyle promotes health as well as prevents the risk for chronic non- communicable diseases.[3] It is well established the co-existence of two or more risk factors is associated with increased risk of developing NCDs.[4]

Risk factors for the development of NCDs are broadly classified as modifiable and nonmodifiable risk factors. The non-modifiable risk factors involve age, gender, genetic factors, race, and ethnicity. The non-modifiable factors can be classified into three classes: (i) biological factors, such as obesity, dyslipidemia, diabetes, and hypertension; (ii) behavioral factors, such as unhealthy diet, physical inactivity, tobacco smoking, and alcohol consumption and (iii) societal factors, which involve complex combinations of interacting socioeconomic, cultural and environmental parameters.[5] Women have long been disadvantaged in many respects such as social and economic power which restricts their access to the necessities of life including health care, and the greater the level of disadvantage, such as in developing countries, the

greater adverse impact on health. Women represent the cornerstone of a family's overall health, ensuring they have access to quality care also can lead to improved health for children and families. The health of families and communities are no doubt, tied to the health of women. [6]

The women play in many roles, they too often are focused on the health care of their spouse and children, while neglecting their own needs. Because of this, it is important that women take the time to maintain good health for themselves as well. In fact, a number of illnesses that affect women can actually be prevented with appropriate preventive measures. Very few studies being documented on NCDs and their effect on health of women in urban.

Knowledge about the risk factors is an important prerequisite for women to implement behavioral changes towards the prevention of chronic diseases. In a country like India, where resources are limited, preventive measures and life style modification appears to be the only essential weapon. It is important to assess the prevalence of risk factors for NCDs to identify areas for preventive intervention strategies. Realization of this responsibility motivated the researcher to conduct a study to assess the risk factors for NCDs.

OBJECTIVES

- To assess the risk factors of selected NCDs among women
- To determine the association between the risk factors of selected NCDs and the selected personal variables of women.

HYPOTHESIS

H_1: There will be statistically significant association between the risk factors of NCDs and the selected personal variables of women

RESEARCH METHODOLOGY

Research design adopted for the study was an exploratory survey method. Non probability purposive sampling was used to select 150 women for the study. Risk factors of women for NCDs was assessed by using risk assessment tool for NCDs. The tool is based on the "RISKO" Model of Michigan Heart Association and the Coronary Risk Status Assessment Tool by Sr. Nancy. The proforma for selected personal variables and risk assessment tool for NCDs were content validated by experts from the field of Medicine and Nursing.

The concept of construct validity was used to assess the reliability of the tool. Construct validity was established by the contrast group technique; the tool was administered to two groups of women, 30 women with NCDs and second group with 30 women, who were not having NCDs. Behavioural risk for NCDs in the first group ranged from 07-28 with a median of 16. The risk score for NCDs in the 2nd group of 30 women with NCDs ranged from 22-46 with a median of 30. The difference in the risk scores in both groups ensured the construct validity of the tool.

RESULTS

SECTION 1

Table 1. Frequency and percentage distribution of women according to their selected personal variables

n=150

Sl No.	Personal Variables	Frequency (f)	Percentage(%)
1.	Age in years		
	1.1 30-45	105	70
	1.2 46-60	045	30
2.	Educational Qualification		
	2.1 ≤ SSLC	047	31.33
	2.2 PUC	029	19.34
	2.3 Degree and above	074	49.33
3.	Marital Status		
	3.1 Single	003	02
	3.2 Married	143	95.33
	3.3 Widow	004	02.67
4.	Monthly income of the Family in rupees		
	4.1 20,000-30,000	025	16.67
	4.2 30,001-40,000	054	36
	4.3 >40,001	071	47.33
5.	Religion		
	5.1 Hindu	126	84
	5.2 Muslim	003	02
	5.3 Christian	021	14
6.	Dietary Pattern		
	6.1 Vegetarian	032	21.33
	6.2 Mixed	118	78.67
7.	Family history of NCDs		
	7.1 Yes	059	39.33
	7.2 No	091	60.67
8.	Blood pressure		
	8.1 < 120/80 mm Hg (Normal)	125	83.33
	8.2 121-139/81-90 mm Hg (Pre Hypertension)	020	13.33
	8.3 >140/91 mm Hg (Hypertension)	005	3.34
9.	Body Mass Index		
	9.1 <18.6-24.9 (Normal)	071	47.33
	9.2 >25 (Overweight)	066	44
	9.3 >30 (Obesity)	013	08.67
10.	Waist Circumference		
	10.1 <80cm	039	26
	10.2 >80cm	111	74

Description of selected personal variables of women: The study sample comprised of 150 women residing in RMP Colony, Mysuru. Data presented in table 1 reveals that 70% of women were in the age group of 30-45years and 30% were in the age group of 46-60 years, the educational status of women reveals that the majority (49.33%) have completed the degree and above, the majority (95.33%) of women were married, 2.67% were widows and 2% were single. Data related to the religion of women reveals that 84% were Hindu, 14% were Christian, and 2% were Muslim. The majority (78.67%) of women were consuming a mixed diet and 21.33% were vegetarians. Data related to the family history of NCDs reveals that 60.67% of women were not having family history of NCDs and 39.33% were having positive family history of NCDs. 83.33% of women were having normal Blood pressure (≤120/80 mm Hg), 13.33% of women were Pre hypertensive (121-139/81-90 mm Hg) and 3.34% of women were Hypertensive.

The data related to Body Mass Index reveals that majority (47.33%) were having normal BMI, 44% were overweight and 8.67% of women were obese and the majority of women (74%) had more than 80cmwaist circumference and 26% had waist circumference lass than 80cm.

SECTION 2

Risk factors of women for selected NCDs

Table 2. Frequency and percentage distribution of the risk status of women for NCDs

n = 150

Risk Factors	Frequency (f)	Percentage (%)
Low risk	72	48
Moderate risk	58	38.67
High risk	20	13.33

Table 2 shows that 13.33% of women were having a high risk for NCDs, 38.67% had a moderate risk for NCDs, and 48% of women had a low risk for NCDs.

SECTION 3

Association between the risk factors of women for selected NCDs and their selected personal variables: To find out the association between the risk factors of women for NCDs and their selected personal variables, chi-square was computed and the following null hypothesis is stated.

H_{01}: There will be no statistically significant association between the risk factors of women for selected NCDs and their selected personal variables.

Table 3. Chi square values between the risk factors of women for NCDs and their selected personal variables

n= 150

Sl No.	Personal Variables	Low risk	Moderate risk	High risk	Chi-Square
1.	Age in years				
	1.1 30-45	56	41	08	10.75*
	1.2 46-60	16	17	12	
2.	Family history of NCDs				
	2.1 Yes	19	28	12	10.56*
	2.2 No	53	30	08	
3.	Body Mass Index				
	3.1 <18.6-24.9	47	21	03	#20.6*
	3.2 > 25	25	37	17	
	Waist Circumference				
	4.1 <80cm	27	11	01	#13.83*
	4.2 >80cm	45	47	19	

$\chi^2_{(2)}$ =5.99, $\chi^2_{(4)}$ =9.48, p<0.05, # Yates correction, * Significant

Results revealed that there was a statistically significant association between the risk factors of women for NCDs and their selected personal variables viz. age, family history of NCDs, BMI, and waist circumference (p<0.05). Increasing age and family history of NCDs had an influence on the risk status of women for selected NCDs. Data also revealed that body mass index of 25 and above, and waist circumference of 80cm and above also increased the risk of women towards selected NCDs.

CONCLUSION

The present study was focused to assess the risk factors of women for selected NCDs and analysis of findings revealed that 52% of women had moderate to high risk for NCDs. The study findings stress the increasing responsibility of health professionals in planning and implementing various educational strategies to promote healthy lifestyle strategies among public which in turn help to reduce their risk for NCDs in their later life.

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