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Obesity and Health Related Quality of Life among the Housewives in a Selected Rural Community of South India - A Correlation Study

Research Article

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Abstract

Obesity is a global health problem. It has emerged as the most prevalent serious public health problem. A descriptive correlative approach was adopted to find out the correlation between obesity and Health Related Quality of Life (HRQoL) among housewives in selected rural community of Bantwala, Dakshinakannda, Karnataka. A number of 200 housewives who are aged between 18-70 years were selected by using purposive sampling technique. Housewives were categorized as normal weight, overweight, obese using Body Mass Index (BMI) calculation formula i.e, BMI=Weight in (kg)/Height in (m2) and HRQoL measured by using SF36 questionnaire. Result showed that, maximum percentage (37.5%) of obese housewives were in the age group of 58-70 years. Among subject's majority (46%) of housewives were had normal weight, 20% were obese and 34% were overweight. Correlation between obesity and physical functioning (r= -0.45P=0.004), Energy/Fatigue(r= -8.91P=<0.00001) and Pain (r= -0.49 P=0.0013) shows positive correlation and highly Significant. Results also showed that there was significant association of HROoL with age (p=.001). It is recommended to conduct longitudinal studies to find the relationship between and obesity and Health Related Quality of Life (HRQoL) among rural housewives.

Keywords: Obesity; Health Related Quality of Life; Housewives; Rural community

Introduction

Obesity due to increased weight has become a global epidemic everywhere. World health organization estimated that, there will be about 2.3 billion overweight people and over 700 million obese people worldwide in 2015 [1]. Over the period of 1960 to 2004 adults between the age of 20 and 74 years were classified as obese raised from 44.9% to 66.2% respectively. The rate of individual who are overweight but not obese ranged from 31.5% to 33.4% over the same time period [2].

India, with 1.2 billion people is the second most populous country in the world and is currently experiencing rapid epidemiological transition and witness higher prevalence of non-communicable diseases in adults [3]. In addition, 44% of the diabetes burden, 23% of the ischemic heart disease and between 7% and 41% of certain cancer burdens are contributing to the problems of overweight or obesity [1]. Under nutrition due to poverty dominated the past, is being rapidly replaced by obesity. Industrialization and urbanization also contributes to increased prevalence of obesity. Studies from different parts of India have provided evidence of the rising prevalence of obesity. However, most reports have been region specific. The prevalence rate of generalized obesity in urban south Indians was 4% using BMI>30; 9.9% using BMI>27.5; 26.5% using BMI>25; and 45.9% using BMI>23 kg m⁻² [4,5]. Further, different studies have used different methodologies, definitions and cut-off points for defining obesity, making comparisons difficult [6,7]. Researcher had interactions with many women in the rural communities found that most of them appeared obese for their size and stature and felt the need to conduct study on the correlation of obesity and health related quality of life among women in the selected rural communities.

Materials & methods

A descriptive correlative approach was adopted to find out the correlation between obesity and Health Related Quality of Life (HRQoL) among housewives in selected rural community of Bantwala,

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Dakshina Kannda, Karnataka. A number of 200 housewives who are aged between 18-70 were selected by using purposive sampling technique. Prior to data collection, permission was obtained from the concerned authority for conducting the study. Subjects were selected according to the selection criteria and confidentiality was taken into account. The purpose of the research study was explained to the subjects. Height and weight were measured by using inchtape and calibrated weighing machine. Housewives were categorized as normal weight, overweight and obese by using BMI calculation formula, *i.e.*, BMI=Weight in (kg)/ Height in (m²) and HRQoL was measured by using SF36 questionnaire. The data obtained was analysed by both descriptive and inferential statistics on the basis of objectives of the study. Karl Pearson correlation coefficient and scatter diagram was used to find the correlation between Obesity and HRQoL.

Results

Result showed that, maximum percentage (37.5%) of obese housewives were in the age group of 58-70 years, whereas maximum percentage (39.71%) overweight housewives were in the age group of 38-47 years. Among subject's, majority (46%) of housewives were normal weight, 20% were obese and 34% were overweight. BMI of the housewives ranged between 19.6 - 37.1 and mean was 23.04 ± 4.24 .

Table 1 shows that obese and overweight housewives had less mean score in all sub scales of HROoL in comparison with normal weight housewives. Overall HROoL mean of, obese housewives were 355.63 ± 151.46 , overweight housewives were 601.38 ± 173.08 and Normal housewives were 796.24 ± 83.25 . Correlation between obesity and physical functioning (r= -0.45 P=0.004), and Pain (r= -0.49 P=0.0013) shows negative correlation and Significant. Correlation between obesity and Energy/Fatigue (r= -0.20 P=0.21) , Role limitations due to physical health (r= -0.15P=0.36), Role limitations due to emotional problem(r= -0.01 P=0.95), Emotional wellbeing (r= -0.12 P=0.172), Social functioning (r= -0.24 P=0.14) and overall QoL among obese sub scales shows negative correlation and non-significance. Results also showed that there was significant association of HROoL with age (p=.001).

 Table 1: Mean SD and Median of subscale and overall Health Related Quality of Life (HRQoL) among housewives.

Subscales of SF36	Normal n=92	Overweight n=68	Obese n=40
Physical functioning	85.20±12.80	65.54±17.98	42.37±18.39
Role limitations due to physical health	93.75±16.89	60.86±34.01	22.5±23.20
Role limitations due to emotional problem	97.22±9.41	72.46±30.87	36.66±25.93
Energy/Fatigue	83.33±9.74	66.41±20.94	40.25±21.48
Emotional wellbeing	87.66±11.12	68.43±19.23	41.1±19.88
Social function limitation	91.14±11.34	72.01±23.88	42.43±20.19
Pain	90±9.61	67.17±22.34	41.56±21.65
General health	86.87±11.21	69.23±15.98	45.62±16.49
Health change in past one year	76.04±15.60	59.23±17.76	43.12±21.17
Overall QoL	796.24±83.25	601.38±173.08	355.63±151.46

n=92, n=68, n=40

Discussion

The findings of the present study showed that majority of (37.5%) of obese housewives were in the age group of 58-70 years, whereas (39.71%) overweight housewives were in the age group 38 to 47. The study on Overweight and obesity among women by Economic Stratum in Urban India contradicts the present study findings where prevalence of overweight and obesity is higher among urban women than their rural counterparts. More than 23% of women in the urban area are either overweight or obese compared to only 7% of women in rural areas [8].

A cross-sectional analysis on obesity and health-related quality of life of the US population by M k Hassan, AV Joshi, SS Madhavan, showed approximately 36% overweight, 14% obese, and 7% severely obese [9].

Research conducted among 10,308 British civil servants reported a significant linear trend between increasing BMI and poor physical functioning [10]. In the present study Correlation between obesity and physical functioning (r=0.45 P=0.004) shows significance. Lack of association was observed when more detailed mental health subscales were used, and whether or not the mental health was adjusted for clinical (and sub threshold) depression. The lack of significant differences in mental health between obese and non obese subjects has been reported previously in U.S. community-based studies [11,12]. Current study shows Correlation between obesity and Role limitation due to emotional problem(r= -0.01 P=0.95), Emotional wellbeing (r= -0.22 P=0.172), Social functioning (r=ions due to physical health(r= -0.15P=0.36), Social functioning (r= -0.17P=0.29), General health (r= -0.13 P=0.42), Health change(r= -0.24 P=0.14) and overall QoL among obese sub scales shows negative correlation and non-significance. Obese and overweight women overall health more negatively have poor health than normal weight women [13,14]. This finding was more generalized when perception of subscales results about general health was showing negative correlation, Further decreases in vitality were prominent in obese women. Other investigators have also shown lower SF-36 scores for general health perceptions and vitality in patients seeking treatment for obesity (mean BMI, 38.1 kg/m²) [15]. Furthermore, IT IS recommended to conduct longitudinal studies to find the relationship between and obesity and Health Related Quality of Life (HRQoL) among rural housewives.

Conclusion

Obesity has emerged as the most prevalent serious public health problem. It is a complex disorder, which is a detrimental to good health and well being. There is a growing body of literature describing its association with lower Health Related Quality of Life (HRQoL). When comparing these two variables a common or unique feature arises i.e., both these variables can be prevented and the effect of these variables can be reduced to some extent by adequate precautions. As a nursing personnel, it is our duty and responsibility to ensure that the mortality and morbidity caused by obesity can be reduced as soon as possible.

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