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Impact of physical inactivity on the health of women in urban Srinagar

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ABSTRACT

A cross sectional study was carried out covering four areas of urban Srinagar to obtain empirical information about the level of physical activity and its impact on the health of women. A sample of 400 adult women was randomly selected from four areas of urban Srinagar vis-à-vis Hazratbal, Hawal, Shivpora and Hyderpora during the year 2017. The study revealed that53% of respondents had sedentary life style and women were more inclined towards sedentary life style particularly in the older age groups, as their level of activity decreased and also the required balance in the nutrient intake was not maintained. Thus, health issues such as non-communicable diseases were commonly noticed in the older age groups (n=100) out of n=142 (medically effected).Difference in BMI of women belonging to different lifestyles were also statistically significant.

Key Words: Women, physical activity, non-communicable diseases, dietary pattern, urban, Srinagar.

INTRODUCTION

Globally, tremendous advancement in science has led to mechanization in every field which has drastically the lifestyle of people.Socio-economic development due to industrialization and urbanization has caused various lifestyle changes worldwide. The lifestyle changes causes life threatening diseases amongst a large number of populations. As per World Health Organization, (WHO, 2018) 41 million people die every year due to Non Communicable Diseases (NCDs) that means NCDs are the major cause of death for 71% of all deaths that occur globally. Thus, lifestyle disorder played a key role in the occurrence of non-communicable diseases (NCDs). International guidelines encourage young people to participate in physical activity (PA) of moderate or higher intensity for at least an hour on a daily basis, while at least three times a week in PA for about 20 min and with such intensity that maintains and promotes fitness (Cavil et al., 2001).

India, being a country in developmental transition, faces the dual burden of pre-transition diseases like under nutrition and infectious diseases as well as post-transition, lifestyle-related degenerative diseases such as obesity, diabetes, hypertension, cardiovascular diseases and cancers. The Indian population is also passing through a transition phase while subsistence conditions are being replaced by plentiful food but reduced physical work and therefore, an understanding of the changing nutritional scene and physical activity is critical. A large percentage of people in India are inactive with fewer than 10% engaging in recreational physical activity. (Ranjit et al., 2014)

Kashmir has witnessed tremendous lifestyle changes over the past few decades and sedentary lifestyles are becoming particularly prevalent among urban Srinagar adults. The activity pattern of Kashmiri adult women has undergone a notable change as housewife in Kashmir used to have very hectic work at home, but the scenario has changed. Machines and servants do most of the laborious jobs, thus making the nutritionists to reconsider the nutritional and physical activity requirements. This sedentary life style has been further substantiated by the turmoil in Kashmir since last 27 years. The curfews and strike calls in Kashmir have restricted people to stay at home most of the time, resulting in taking good consumption of processed foods. Keeping the above fact into consideration, it becomes necessary to study the level of physical activity among women of different age groups and its impact on the health and morbidity. Hence, the present study was carried out to assess the activity pattern of adult urban women in Srinagar and its impact on their health.

MATERIAL AND METHODS

Study area and sample size

The area under study was the urban areas of Srinagar district, which was divided in four areas *viz.*, Hazratbal, Hawal, Shivpora and Hyderpora covering almost all directions of Srinagar district. Cluster sampling technique has been used to select the areas. A sample of 400 adult urban women of Srinagar (100 for eacharea)from early

adulthood to late adulthood belonging to age groups *viz.*,20-30, 30-40, 40-50 and >50 years were majorly selected from households in the year 2017.

Tools used

A questionnaire was used to collect data. After a thorough and detailed study of the problem and the related literature, a preliminary questionnaire was framed. The questionnaire was pre-tested for its validity on 10 adult urban women. After modifications, it was used for the collection of data. Questionnaire was also supplemented by an interview schedule. The questionnaire had six sections. Section A sought information of the respondents (name, residential address, age, marital status etc.).Section B included questions on the socio-economic status of the respondents as per Kuppuswamy's scale (2014). Section C was on the height and weight of the respondents.BMI was calculated from the observed measurements of weight and height using the formula:

$$\text{BMI} = \frac{\text{Weight (Kg)}}{\text{Height}^{2}\text{(m)}}$$

Section Dincluded information regarding the nutritional intake of the respondents, which was carried out following the 24-Hour recall method (Quantitative Assessment)https://dietassessmentprimer.cancer.gov/profiles/recall .Section Epertained to the information on activity pattern of the respondents obtained using the physical activity index as per GPPAQ (practitioners physical activity questionnaire)GPPAQ

The occupational jobs viz; sedentary, standing and physical of the respondents carried between 0 to 2.9 hrs/wk were studied for determining the physical activity index. The respondents were classified as Active, Moderately Active, Moderately Inactive and Inactive based on their activity pattern. Section Fdealt with various physiological conditions or health problems of respondents and their management.

Data analysis

Various statistical tools including mean, standard deviation, chi square were used to analyze the data and the inferences were drawn.

RESULTS AND DISCUSSION

The study showed 36%, 30.5%, 18.8% and 14.8%of the respondents were in the age group of 20-30 years,30-40 years, 40-50 years and > 50 years respectively (Figure 1)with majority of the respondents in the age group of 20-30 years. The physical activity performed by the respondents (in hrs/week) revealed that 53% of respondents in this category had sedentary life style, which indicated that they never performed any physical activity (0hrs/wk),25% of respondents were occupied in jobs where they had to perform mostly in standing position and 22% were involved in jobs where mostly physical activity was to be performed (Table 1).The respondents who practiced physical activity or exercises for less than 1 hr per week (<1 hr/wk) included those doing sedentary jobs (59.86%), standing jobs (35%) and physical jobs (5.64%). Similarly, majority of the respondents (71.87%) who did physical activity or exercise for 1 to 3 hr per week(1 to 2.9 hrs/wk)were involved in sedentary jobs and 28.13% were in standing jobs. No one in this category was doing a physical job. Also, 76.66% of the respondents who practiced physical activity or exercises for more than 3 hr per week(≥ 3hr/wk)had sedentary jobs and 23.33% were engaged in standing jobs. No one in this category was doing a physical job. Thus the study revealed that the women had a sedentary life style. Based on the physical activity of the respondents majority of them (53.2%) were classified as moderately inactive or inactive (Table 2). Only 14% and 33%of respondents were active and moderately active, respectively. Survey on health issues of the respondents based on their age group revealed that the most susceptible respondents were in the age group of 40 - 50 years. About 142 women (35.5%) suffered from non-communicable diseases (Table3). The measures adopted by the women to improve their medical/health problems revealed that out of 142 women, majority n = 68 (47.9 %) of the women managed their medical problems by following restrictions in diet and exercise only (Table 4).

These measures implied that a change in dietary intake and physical activity had a direct relation in controlling health issues particularly non-communicable diseases.

One of the study given by Gurpreet Kaur, Kiran Bains, Harpreet Kaur (2012) reveals that age related changes in body composition are associated with long term dietary intake profiles. Age related increase in body fat is primarily attributed to decline in physical activity and basal metabolic rate as well as dietary intake.

The study by Jayamani et al. (2013) reveals that the odds of the rural women engaging in high physical activity are 3.61 times greater than urban women (95% confidence interval (CI) = 2.36−5.54). The odds of the urban women consuming a high calorie diet are 1.923 times that of the rural women (95% CI = 1.282−2.857). The odds of the urban women being overweight/obese are 5.555 times than that of the urban women (95% CI = 3.333−10). Women who were housewives and not doing household work were significantly less physically active, took higher calorie diet, and were more overweight and obese compared to women who were involved in active household work. Urban

women had unfavorable diet and physical activity levels compared to rural women. They also had higher levels of overweight and obesity. There is a need for targeted NCD prevention interventions among urban women.

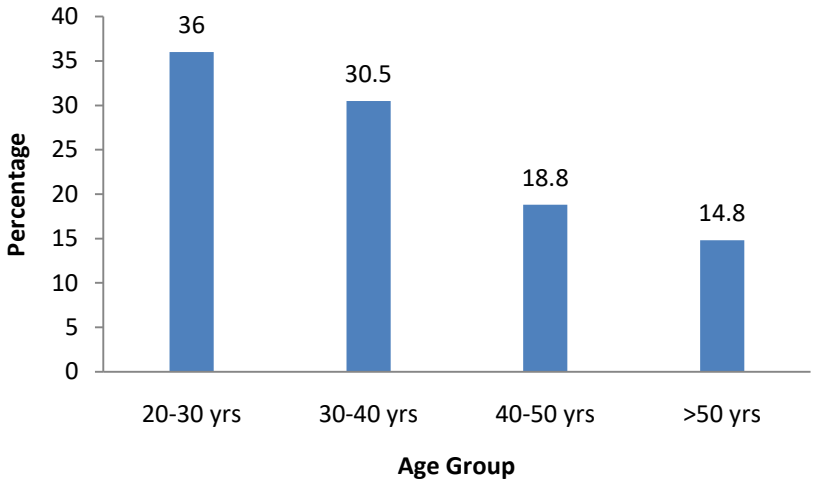

Figure 1.Age group of the respondents in the study area

Table 1. Physical activity performed by the respondent's hrs/week

Physical activity (hr/week)	Occupation	Total	
		Number of respondents	Percentage of respondents (%)
0 hrs/wk	Sedentary	87	53.05
	Standing	41	25.0
	Physical	36	21.95
	Total	164	100.0
<1 hrs/ wk	Sedentary	85	59.86
	Standing	49	34.5
	Physical	8	5.64
	Total	142	100.0
1 to 2.9 hrs/wk	Sedentary	46	71.87
	Standing	18	28.13
	Physical	0	0.0
	Total	64	100.0
≥ 3 hrs / wk	Sedentary	23	76.66
	Standing	7	23.34
	Physical	0	0.0
	Total	30	100.0
Total Sample		400	

Table 2. Physical activity index of the respondents as per GPPAQ

Physical activity index (PAI)	Number of respondents	Percentage of respondents (%)
Active	56	14.0
Moderately Active	131	32.8
Moderately Inactive	126	31.4
Inactive	87	21.8
Total	400	100.0

Table 3. Prevalence of health issues among the respondents

Age group (Years)	Number of respondents with health issues	Number of respondents without health issues
20 – 30	15	64
30 – 40	27	95
40 – 50	64	51
>50	36	48
Total	142	258

$x^2 = 42.54$; p-value = 0.00^*; *significant at 0.01 level

Table 4.Measures adopted by women to manage medical problems

Age-group (Years)	Diet & exercise		Diet, exercise & medication		Only medication	
	Number of respondents	Percentage of respondents (%)	Number of responders	Percentage of respondents (%)	Number of respondents	Percentage of respondents (%)
20 - 30	8	11.76	4	8.7	3	10.71
30 - 40	14	20.59	10	21.74	3	10.71
40 - 50	28	41.18	22	47.83	14	50.0
>50	18	26.47	10	21.74	8	28.58
Total	68	100.0	46	100.0	28	100.0

$x^2 = 15.50$; p-value = 0.01^*;*significant at 0.01 level

The physical activities of the respondents with respect to their age, occupation, duration of the physical activity showed that only a small percentage i.e. 14% of the respondents were active. Thus, the results indicated the sedentary behaviour observed among majority of women in urban Srinagar particularly in the upper age groups, which was also largely responsible for their medical problems. However, the women of lower age group encountered very less medical problems due to their physical engagements.

CONCLUSION

Overall results reveal that the majority of the women lead a sedentary life style with less or no physical exercise. More than half of the women were inactive or moderately inactive and as the age progressed, the activity levels got reduced and became the reason for the illness observed in middle aged and older women. Therefore the results indicate that lower or lack of physical activity may lead to morbidity in women.

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