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THE TRIPLE ISSUES: PHYSICAL ACTIVITY; WORKFORCE; NUTRITION IN DEVELOPMENT SCENARIO

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ABSTRACT

The working status and the level of physical activity performed by the female population largely impact their nutritional outcome. Physical activity, work force, and nutrition are the three burning issues that affect the development activities of any region. The present study is an attempt to understand nutritional status of women and their involvement in physical activity and contribution in work force sector in both rural and urban areas of Hailakandi district of Assam. The rural and urban areas are selected from the three development blocks of Hailakandi district viz., Hailakandi development blocks, Algapur development block, and Lala development block. 10% of the total households are selected as a representative sample from each of these development blocks by using purposive sampling technique. The total sampled women are 1291 out of 529 households which is carried out on the basis of primary survey. The results states that the women performing low physical activities(P.A) in rural areas holds BMI status as: 56.89% normal Nutritional status (N.S), 31.89% over-weight N.S and 11.2% under-weight N.S. while in urban areas, the data reveals 58.67% normal N.S, 26.85% over-weight N.S and 14.46% under-weight N.S. The data on moderate P.A performed by women in rural areas reports 57.25% normal N.S, 24.8% over-weight N.S and 17.93% under-weight N.S. While, in urban areas, it reveals 67% normal N.S, 23.85% over-weight N.S and 9.13% under-weight N.S. The study also reports there is marginal difference in rural-urban non-working women attaining normal N.S. But the case of working women (WW) reports a huge difference in rural-urban WW attaining normal N.S. In rural areas, over-weight NW is 22.46% and WW is 33.74%. While in urban areas, over-weight NW is 28.02% and WW is 32.25%. The study found under-weight NW is 13.91% in rural areas and WW is 19.34% in urban areas; 9.73% NW in urban and 12.9% WW in rural areas respectively. The study reveals that most of the sampled women are involved in moderate PA, whose N.S is normal (BMI ranges $>18.5 \leq 25$). The overall female work-force participation is not satisfactory but most of these working women attain normal N.S.

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Keywords: Nutritional status, low physical activity, moderate physical activity, working women, non-working women.

INTRODUCTION

Nutrition and physical activity are the two important components of good health status. To sustain healthy life one need to be very much concerned about these two fundamental aspects. Good dietary intake and proper physical activities leads people to remain both mentally and physically active. This in turn helps them to enter into work-force participation. Productive labour force is the engine of economic growth of an economy. The work-force participation largely depends on women nutritional status and their level of physical activity they perform in their daily chorus. If the women having improper dietary intake and less physical activities then they are likely to give birth to low weight infant and also less likely to be able to provide food and adequate care for their children. This low weight infant by birth is less effective in their school days and this further drives them out of the productive work force in the economy. This in turn reduces their ability to work and ability to earn. Women's health affects not only household economic wellbeing but also the economic wellbeing of the nation. A study conducted by Yadav, K and A. Krishnan (2008) found that rural women reported seven times physical activity as compared to urban women. BMI was highest among urban women followed by slum women. Rao et al. 2013 studied that poor dietary intake combined with excessive energy expenditure due to high levels of daily physical activity, related to agriculture and domestic activities in India has been reported to influence maternal malnutrition with adverse impact on birth weight. Singh, et al. 2006 study on 'Prevalence of obesity, physical in-activity, and under-nutrition, a triple burden of diseases during transition in a developing economy' conducted on the five cities found that the prevalence of sedentary behaviour and mild activity showed a significant increasing trend in women after the age of 35-44 years. Sedentary behaviour was significantly greater in Trivandrum, Calcutta, and Bombay compared to Nagpur. The overall prevalence of under-nutrition was 5.5% which was significantly more common in Moradabad, north and Nagpur, central India compared to other cities. The study conducted by Muthayya, Sumithra, (2009) reveals that there is an inverse relationship between daily physical activities and birth weight in a cohort of rural women, the majority of whom has high levels of physical activity related to agricultural and domestic activities. It also reveals that in India, women are responsible for a wide range of household work and child care duties, as well as work outside the home. These women are also the women at highest risk or a poor birth outcome. In some states of India such as Orissa, Assam and Rajasthan inspite of high calorie intake, under-nutrition rates among women are high. This might be due to higher level of physical activity during occupational or household activities in women. Inspite of low cereal intake, under-nutrition rates in women in Kerela are low, perhaps because physical activity levels in these women are lower due to ready

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access to water, fuel and transport. Thus, physical activity pattern is becoming one of the major determinants of the nutritional status. A study conducted by Prema Ramchundran (2007) found in a time trends data in nutritional status of adults collected from NNMB surveys, that there has not been any increase in dietary intake but a reduction in under nutrition rates and an increase in over nutrition rates. It is found that both under- and over- nutrition is more common in women. Increasing disparity in dietary intake and physical activity between different segments of population (men- women), poverty, and affluence appear to be responsible for the emergence of this dual nutrition burden. The nutritional aspects of women, their involvement in physical activity and contribution in work force sector needs to be analyzed and researched for. So this study is an attempt to analyse physical activity, nutritional status, and female work force in Hailakandi district of Assam.

STUDY AREA

To understand women involvement in physical activity and nutritional aspects and their contribution in work force sector at Hailakandi district of Assam, regions have been selected on the basis of the strength of number of households, i.e. those regions which comprise 500-550 households, and then randomly selected out of those regions –two areas from rural area and the other two from urban areas from each blocks at Hailakandi district. Since all the blocks at Hailakandi district does not comprise both rural and urban areas. So, only those blocks which comprise both rural and urban areas have been selected as a sample, i.e. Hailakandi development block, lala development block, and Algapur development block. These blocks comprise both rural areas an urban areas but Algapur block comprises only one block, so only one urban area i.e. H.P.C township is taken as a sample area. 10% of the total households are selected purposively, (households where women dwell). The data collection is done on the basis of interview cum schedule method. Since, the study is focused on women, so, from those households, only women belonging to age group atleast or above 15 years is chosen as a representative sample. It is based on primary survey carried out among 1291 women from 529 households of the three development blocks of Hailakandi district.

In this study, physical activity is characterized into low physical activity, moderate physical activity and vigorous physical activity. Low physical activity includes no participation of work at home or any other physical exercise. Moderate physical activity includes participation of women in daily household chorus along with kitchen-gardening, physical exercise or engagement in any professions like teaching, nursing, official staffs, etc. Vigorous physical activity includes participation of women in heavy works like carrying heavy loads or working in agricultural field to produce marketable surplus or commercial crops and any other activities of similar exertion. But women involved in vigorous physical activity have not been found in the sample of the

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study. Therefore, selected women involved in low physical activity and moderate physical activity have been studied in this paper.

RESULTS AND DISCUSSION

1.1 Low Physical Activities (PA) and moderate Physical Activities

The women performing physical activities in their day to day life affect their nutritional status. The level of physical activities that the women are performing daily varies. Some women might be indulged in low physical activities, while some might be indulged in moderate physical activities. The following table is depicted to show the aspects of different level of physical activities performed by the women in Hailakandi district of Assam and their nutritional status.

Table no.1: The nutritional status of women performing physical activities

Nutritional status	% of Rl-low PA	% of Ur-low PA	% of Rl-Moderate PA	% of Ur-Moderate PA
normal	56.89	58.67	57.25	67
over-weight	31.89	26.85	24.8	23.85
under-weight	11.2	14.46	17.93	9.13

Source: Field Survey (2017)

To discuss the aspects of rural (Rl) and urban (Ur) women attaining different nutritional status, the above table states that incase of normal N.S (nutritional status), 56.89% women are found to be performing low physical activity (PA) in rural area and 58.67% women are found in urban area respectively. Regarding low PA women, it shows that in rural areas, 31.89% women are found to be suffering from over-weight N.S and 26.85% over-weight women in urban areas. It is also found that 11.2% women are under-weight women who are indulged in low PA in rural areas. While, 14.46% under-weight women are found in urban areas pertaining low PA in Hailakandi district. To look into the aspects of moderate physical activity (PA), it reflects that 57.25% women are attaining normal nutritional status who is indulged in moderate PA in rural areas of Hailakandi district. While 67% urban women performing moderate PA, are found to be attaining normal nutritional status. Among the malnourished women, it reveals that 24.8% over-

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weight women are found in rural areas, who are involved in moderate PA. On the other, 23.85% urban women are found to be suffering from over-weight who is indulged in moderate physical activity (PA). Moreover, 17.3% rural women are suffering from under-weight nutritional status who is involved to performing moderate physical activity. While, 9.13% urban women are sufferer of under-weight nutritional status indulged in moderate PA. It thus reveals that urban women are performing better nutritional status (normal N.S) as compared to rural women. While, over-weight women are found to be more in rural areas as compared to urban women, either indulged in low PA or moderate PA. But the scenario of under-weight women reflects that women indulged in low PA are found to be worst sufferer in urban areas than rural areas. While the case of moderate PA reveals that rural women are mostly suffering from under-weight PA than urban women. It can be urged that women performing moderate PA are found to be able to maintain normal nutritional status.

1.2 Working Women (WW) and Non-working Women (NW)

The nutritional status of women differs from region to region as found in the study area. The following table reflects the nutritional Status of working women and the non-working women.

Table no. 2: Nutritional status of working women in Rural-Urban Hailakandi

Nutritional status	% of Rl-NW	% of Ur-NW	% of Rl-working	% of Ur-working
normal	63.61	62.23	46.91	54.83
over-weight	22.46	28.02	33.74	32.25
under-weight	13.91	9.73	19.34	12.9

Source: Field Survey (2017)

The above table shows the nutritional status of working women in Rural-Urban Hailakandi. It has been found in the study area that the majority working women in urban areas attains normal nutritional status as compared to rural working women (WW). The data reflects that 54.83% working women in urban areas enjoy normal nutritional status while 46.91% rural WW attains normal nutritional status. It has been reported that overweight working women are found to be

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more in rural areas as compared to over-weight urban working women. Again, it reveals that rural WW are found to suffer from under-weight N.S than urban WW. The percent of rural under-weight working women is 19.34 while the percentage of urban working women is 12.9 respectively.

To discuss the aspects of non-working women, it reveals that the nutritional status of non-working women attaining normal N.S. in rural areas is 63.61% and that of in urban areas is 62.23%. It implies that there is marginal difference in rural-urban non-working women attaining normal nutritional status. Regarding malnourished women in rural-urban Hailakandi, we find that 22.46% NW women are suffering from over-weight N.S in rural areas while the percentage of over-weight women are 28.02 in urban areas, which is much high as compared to rural areas. The under-weight non-working women are 13.91% in rural areas and 9.73% in urban areas respectively. Thus, it states that under-weight non-working women are much lower in urban areas as compared to rural areas.

CONCLUSION

The working status and the performance of physical activity status affect the aspects of women nutrition in the study area. Nutrition plays a crucial role in human resource development since deficiencies in essential nutrients lead to malnutrition, which affects an individual's mental and physical state, resulting in poor health and poor work performance. Nutrition has major effects on health which enables one to lead socially and economically active life. The unbalanced diet not only reduces the health status of women but also their economic status. Women health needs to be prioritized, concerned, and researched for, specially the health of marginalized and poor women because they are doubly vulnerable to discrimination. It has been found in the regions of Hailakandi district, women nutritional status is satisfactory but not an adequate one. Majority of the women in urban areas are attaining normal BMI status as compared to rural women and this shows that the women of this region are more aware of their heath or might be involved in the activities like daily domestic chores, physical activities, which helps them to remain physically fit and fine. While, over-weight women are found to be more in rural areas as compared to urban women, either indulged in low PA or moderate PA. But the case of under-weight women states that women indulged in low PA are found to be worst sufferer in urban areas than rural areas. It is reflected that urban women are performing better nutritional status (normal N.S) as compared to rural women. On the other, the case of moderate PA reveals that rural women are mostly suffering from under-weight PA than urban women. To consume healthy and nutritious dietary intake, purchasing power is required which further states that the nutritional status of working women is better than non-working women as more consumption of calorie intake makes people to work efficiently in the labour force market. It has been found in the study area that overweight

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working women are more in rural areas as compared to over-weight urban working women. While, rural WW are found to suffer from under-weight N.S than urban WW. Thus, overall mal-nutrient working women are found in rural areas as compared to urban areas. There is marginal difference in rural-urban non-working women attaining normal nutritional status. The percentage of over-weight non-working (NW) urban women is much higher as compared to rural NW women. While the under-weight non-working women are much lower in urban areas as compared to rural areas. The nutritional status and the female work force participation and their involvement in physical activities in the study area give a clear idea that female work-force participation is not a satisfactory one. The women of this district are mostly involved in moderate physical activity both in rural and urban areas. The study reveals that the nutritional status of the women in Hailakandi district is satisfactory but not an adequate one. The female folk need to be more concerned for their nutritional status and also to be involved in work-force as women empowerment is possible with satisfactory money busket.

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