

LEVEL OF PHYSICAL ACTIVITY AND DOMESTIC WORKLOAD OF MIDDLE AGED NIGERIAN WOMEN

Samuel O Bolarinde*¹; Oluwatoyin, A Ewemooje²; Olayemi, G Omotola³;
Oluwatobi L, Salami⁴

^{1,2,3,4} Physiotherapy Department, Federal Medical Centre, Owo, Ondo-State, Nigeria

*Corresponding Author: Samuel Olufemi Bolarinde

Abstract: This study assessed the level of domestic workload and physical activity among working middle age women in relation to meeting the recommended guidelines for physical activity.

Methods: The cross-sectional survey recruited seventy middle aged women from Federal Medical Centre, Ondo-state, South-western Nigeria. Ethical approval for the study was obtained from the Health Research Ethic Committee of Federal Medical Centre, Owo, Ondo-state, Nigeria. Informed consent of all participants were sought and obtained after the rationale behind the study has been explained to them. A self-administered questionnaire was used to assess the domestic workload and the level of physical activity of the participants. Data were summarized using descriptive statistics statistics of percentages and frequency tables.

Results: The result of this study showed that 73.86% of the respondents were daily engaged in heavy domestic workload while 26.14% were daily engaged in light domestic workload. 51.4% of the respondents engaged in vigorous physical activities of not less than 3 days in a week, 55.6% in moderate physical activities while 83.9% participated in brisk walking of not less than 3 days in a week. The result also showed that greater proportion of the respondents that engaged in vigorous physical activities (91.42%), moderate physical activities (95.71%) and brisk walking (82.86%) spent more than 30 minutes during each exercise session.

Conclusion: Majority of Nigerian women in paid employment lead a very active life by engaging in leisure time physical activity in spite of their heavy domestic workload thereby meeting the minimum criteria for adequate physical activity.

Keywords: Physical activity, Domestic workload, Middle-aged, Women.

1. INTRODUCTION

Physical activity levels of women have been reported to be lower than PA levels of men [1]. Although women live longer than men and are more likely to experience functional disabilities that require functional assistance in older age more than men, the age-related changes in women's health with associated hormonal changes such as an increase in bodyweight and waist circumference are frequently noted around the time of menopause and beyond.

Previous studies have reported the health benefits of physical activity to include reduction in the likelihood of an increase in bodyweight, minimizing the effects of physical disability that are associated with aging [2],[3] improving in quality of life measures [4] and maintenance of daily life independence regardless of bodyweight.

Research into the social determinants of women's health has been dominated by the role framework in which women's primary role is basically identified as housewives and mothers and paid employment as an adjunct. Most studies recognized that paid employment has a beneficial effect on women's health, the job environment offer opportunities to build self-esteem and confidence in decision-making, social support for otherwise isolated individuals, and experiences

that enhance life satisfaction [5], [6]. However, a lack of sleep and leisure time physical activity are more frequent among employed women due to their lack of time derived from the combination of job and family responsibilities.

Higher workload with reduced leisure time physical activity has been found to increase the risk of developing mobility limitations. The health benefits of leisure time physical activity on functioning are widely documented in literatures [7],[8],[9],[10],[11].

Adequate physical functioning is required for managing daily life independently and limitations in mobility [12],[13],[14],[15]. Restrictions in physical functioning due to sedentary lifestyle are considered as important outcomes in epidemiological and intervention studies [16]. Findings from many cross-sectional and retrospective studies have shown that physical workload is inversely related to physical functioning among middle-aged and aging population [17], [18],[19],[20],[21]. Although, mixed or even opposite results especially among younger workers have also been observed [22],[23],[23],[24],[25].

The physical activity guidelines by the Centers for Disease Control and Prevention (CDC) provides adults with three different categories to meet the minimum criteria for adequate physical activity: (1) 150 min of moderate intensity aerobic activity and muscle strengthening activities on 2 or more days of the week, (2) 75 min of vigorous intensity aerobic activity and muscle strengthening activities on 2 or more days of the week, or (3) 150 min of an equivalent mix of moderate and vigorous intensity aerobic activity and muscle strengthening activity on 2 or more days of the week [1].

Researches on physical activities in healthy adult women has focused on leisure time and occupational activity rather than domestic activities [26],[27],[28]. Therefore this study seeks to assess the level of domestic workload and physical activity among working middle age women in relation to meeting the recommended guidelines for physical activity.

2. MATERIAL AND METHODS

Only seventy middle aged and married women who consented to participate in this study were recruited into this cross sectional survey. The participants were recruited from Federal Medical Centre, Owo, Ondo-state, South-western Nigeria. Ethical approval for the study was obtained from the Health Research Ethic Committee of Federal Medical Centre, Owo, Ondo-state, Nigeria. Informed consent of all participants were sought and obtained after the rationale behind the study has been explained to them.

A self-administered questionnaire was used to assess the domestic workload and the level of physical activity of the participants. The questionnaire sought information on the socio-demographic characteristics of participants (Part A), domestic workload (Part B) and the level of physical activity using the International Physical Activity Question- IPAQ (Part C). Data were summarized using descriptive statistics statistics of percentages and frequency tables.

3. RESULTS

A total of 70 women participated in this study. The highest percentage in the age distribution was in the range 41-45 (34.3%). 92.9% were married, 2.9% were divorced and 2.9% were separated. 55.7% of the participants had Higher National Diploma as their highest qualification followed by individuals with Ordinary diploma with 32.8%. 5.7% had University first degree and 4.3% with Secondary School Certificate. 40.0% of the total population of the participants were earning above #150,000 monthly while 14.3% earn less than #50,000 monthly (Table I).

The result of this study showed that 82.9% of the respondents had no house help and were daily involve in highly demanding, energy sapping and time consuming domestic work, 97.1% prepare daily food for the family, 80.0% manually wash cloth, 90.0% hand wash plates, 94.0% daily sweep the compound, 57.1% manually grind pepper/ grains while 74.3% daily prepare children for school. Majority of the respondents (90.0%) close from paid job at 16 hour of the day (4:00pm), and 78.56% of the respondents spent more than 4 hours on each of the working days caring for the home before retiring to bed at night. The average proportion of the respondents that daily engaged in heavy domestic workload was 73.86% while only 26.14% of respondents were daily engaged in light domestic workload (Table 2).

The result from this study showed that 51.4% of the respondents engaged in vigorous physical activities of not less than 3 days in a week, 55.6% in moderate physical activities of not less than 3 days in a week while 83.9% participated in brisk walking of not less than 3 days in a week (Table 3). The result also showed that greater proportion of the respondents that engaged in vigorous physical activities (91.42%), moderate physical activities (95.71%) and brisk walking (82.86%) spent more than 30 minutes during each exercise session (Table 4).

4. DISCUSSION

The aim of this study was to determine the level of domestic workload among working middle age women in relation to meeting the guidelines for physical activity. A total of 70 women participated in this study. The highest percentage in the age distribution was in the range 41-45years (34.3%) with majority of them married (92.9%). This is in line with a study conducted by Marques et al, where most of the respondents were 41-50 years of age [29]. 60.0% of the total population of the participants in this study were earning less than #150,000 monthly, this indicated that majority of Nigerian working population are poorly remunerated. This study also showed that 94.2% of the participants were educated at tertiary level. Higher level of education has been reported in previous studies to have contributed to the likelihood of attainment of the recommended physical activity levels [29],[30],[31], furthermore, individuals with higher educational levels are more likely to be more informed about health benefit of physical activity and have a greater ability to seek, understand, and act on health messages that promote physical activity.

Majority of the respondents in this study were daily involved in heavy domestic workload after a busy day at work. The unavailability of house helps and use of labour saving technologies in the home to assist with domestic chores as observed in this study is most likely due to poor remuneration which limit the financial capability to hire a house help or purchase of labour-saving technologies [30],[31],[32],[33]. However, in spite of heavy domestic work, a good number of participants in this study engaged in regular physical activities of more than 30 minutes, 3 times a week in line with Centers for Disease Control and Prevention (CDC) recommended standard for physical activities.

The results showed that, even though majority of the women (78.56%) spend more than 4 hours carrying out domestic work at home almost immediately after closing from work, 51.4% still participated in vigorous physical activities in not less than 3 days in a week, 55.6% in moderate physical activities in not less than 3 days in a week while 83.9% participated in mild physical activities in not less than 3 days in a week. It has been established from previous studies, that working class women of high socio economic status are more involved in vigorous physical activities, albeit with mild to moderate domestic workload [34],[35],[36]. This is mostly due to the fact that women of high socio economic status are financially capable of securing the services of a house help who can take care of domestic activities in the house, thereby giving them enough time to participate in physical activities. On the contrary, other studies have also shown that women of high socio economic status with mild domestic workload are less involved in physical activities compared to those of middle and low socio economic status [30],[33]. This could be highly attributable to possession of cars which might limit regular and active commuting such as walking, thus increasing high level of physical inactivity. The present study revealed that greater number of the respondents engaged in adequate physical activity in spite of their heavy domestic workload. This could however be attributed to high level of educational attainment which probably must have exposed them to understand the health benefits of physical activity.

5. CONCLUSION

Active participation in physical activity has been known to reduce the likelihood of an increase in bodyweight, minimizing the effects of physical disability that are associated with aging, improving in quality of life measures and maintenance of daily life independence regardless of bodyweight. Different avenue has been created by health educator to enlighten the public on the benefit of living an active life. Majority of Nigerian women in paid employment seems to understand the health benefits physical activity hence they lead a very active life by engaging in leisure time physical activity in spite of their heavy domestic workload thereby meeting the minimum criteria for adequate physical activity. Engagement in leisure time physical activity therefore, should be encouraged regardless of the level of physical or domestic workload.

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Table 1: Socio-demographic characteristics of Respondents (N=70)

Socio –demographic		FREQUENCY	PERCENTAGE
Age	26-30	8	11.4
	31-35	5	7.1
	36-40	16	22.9
	41-45	24	34.3
	46-50	11	15.7
	51-55	6	8.6
Marital Status	Single	1	1.4
	Married	65	92.9
	Divorced	2	2.9
	Separated	2	2.9
Educational Status	Primary	1	1.4
	Secondary	3	4.3
	OND	23	32.8
	HND	39	55.7
	BSc	4	5.7
Monthly Income	< #50,000	10	14.3
	#50,000 - #100,000	19	27.1
	#100,000 - #150,000	13	18.6
	>#150,000	28	40.0

Table 2: Participants' Domestic work load

Workload	Yes		No		
	N	%	N	%	
Do you have a house help?	12	17.1	58	82.9	
Do you prepare meal yourself?	68	97.1	2	2.90	
Do you prepare children for School?	52	74.3	18	25.7	
Do you fetch water manually?	30	42.9	40	57.1	
Do you break firewood to cook?	14	20.0	56	80.0	
Do you manually grind pepper or grains?	40	57.1	30	42.9	
Do you manually wash cloths?	56	80.0	14	20.0	
Do you manually wash plates?	63	90.0	7	10.0	
Do you manually sweep your floor?	66	94.3	4	5.70	
Do you engaged in paid job	70	100.0	0	0.0	
What time did you close from paid job on week days	14 hour 1 (1.4%)	15 hour 1 (1.4%)	16 hour 63 (90.0%)	17 hour 4 (5.7%)	18 hour 1 (1.4%)
How many hours did you spend each day caring for your home after work	2 hours 5 (7.14%)	3 hour 10 (14.28%)	4 hours 35 (50.0%)	5 hours 17 (24.28%)	6 hours 3 (4.28%)
Heavy domestic workload	73.86%				
Light domestic workload	26.14%				

Table 3: Respondents' involvement in physical activities by days

Variables	1 day	2 days	3 days	4 days	5 days	6 days	7 days
How many days in a week were you involve in vigorous physical activities?	11 (15.7%)	23 (32.9%)	17 (24.3%)	4 (5.7%)	10 (14.3%)	5 (7.1%)	0 (0.0%)
How many days in a week were you involve in moderate physical activities?	11 (15.7%)	20 (28.6%)	18 (25.7%)	7 (10.0%)	5 (7.1%)	4 (5.7%)	5 (7.1%)
How many days did you walk for at least 10 minutes during the last seven days at a time?	4 (5.7%)	7 (10.0%)	13 (18.6%)	9 (12.4)	15 (21.4%)	2 (2.9%)	20 (28.6%)
Vigorous Physical Activities, not less than 3 days a week = 51.4%							
Moderate Physical Activities, not less than 3 days a week = 55.6%							
Brisk Walking not less than 3 days a week = 83.9%							

Table 4: Respondents' involvement in physical activities by duration

	< 30 minutes	30 minutes	30 - 60 minutes	>60 minutes
How much time did you usually spent doing vigorous physical activities on one of those days?	6 (8.6%)	30 (42.85%)	14 (20.0%)	20 (28.57)
How much time did you usually spent doing moderate physical activities on one of those days?	3 (4.3%)	37 (52.86%)	17 (24.28%)	13 (18.57%)
How much time did you spent walking on one of those days?	12 (17.14%)	22(31.42%)	20 (28.57%)	16 (22.87%)
Respondents in Vigorous exercise of duration > 30 minutes = 91.42%				
Respondents in Moderate exercise of duration > 30 minutes = 95.71%				
Respondents in Walking exercise of duration > 30 minutes = 82.86%				