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Research Article

Leisure Time Physical Activity and Associated Factors Among Civil Servants Working in Ambo Town

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Abstract

Background: Physical activity is known to decrease the risk of different chronic diseases including diabetes mellitus type 2, obesity, different cardiovascular disease including problems related to atherosclerosis. A study aimed at identifying leisure time physical activity practices among employed adults civil servants in Ambo town 2018.

Methods: A quantitative cross sectional study design was employed on 338 civil servants working in Ambo Town from February 15 to March 15/2012. Participants were selected by systematic sampling and interviewed by using structured and pre tested questionnaires at their office level. The data were analyzed using SPSS version 16.0 software. Bivariate and binary logistic regression models were used to see the association of independent variables with smoking practices among civil servants.

Result: Among the participated civil servants 93(27.2%) have regular physical activity practice at their leisure time in a week from which 40.9% meet the world health organization recommendation of 150 min per week. Average monthly income, gender and age were factors significantly associated with employees leisure time physical activity program.

Conclusion: The overall prevalence leisure time physical activity among civil servants in Ambo town is low and consistence with other countries. Governmental and nongovernmental concerned bodies to public health should consider health information dissemination that stress the health benefits of leisure time physical activity.

Keywords: Leisure; Physical Activity; Civil Servants

Introduction

The role of physical activity is very important as the statistical association of physical activity and fitness in health is scientifically well established in different literatures [1]. The human capital model draws a comprehensive evidence of the benefits of Physical activity. The benefits are independent and not autonomous rather the benefits reinforce and optimize each other. The benefits of physical activity includes; improvement of the quality of life by enhancing knowledge and intellectual competencies of the individuals and the society at large [2].

Some of the reasons for benefits of physical activity are that it is known to protect chronic diseases such as hypertension, chronic obstructive pulmonary disease, type 2 diabetes mellitus, mental problems and different musculoskeletal disease [3]. For instance research conducted on the association of leisure-time physical activity and psychological well-being in university students have identified a positive association of physical activity and high self-stem and self-reported vitality feeling [4]. In addition a study conducted to identify the benefit of leisure time physical activity have revealed 20% lower mortality risk among those performing less or no physical activity [5].

Globally none communicable diseases; among which most of them are preventable with physical activity are also increasing in developing countries like Ethiopia. WHO recommends regular

physical activity to prevent a these diseases. At least 150 minutes per week of moderate intensity physical activity, are recommended to obtain health benefits [1]. These part of disease prevention is very important for officials employees as the nature of their work make them physically inactive. Different studies have revealed a chronic diseases prevalence among these community groups. A study conducted in Dar es Salaam municipality district, Tanzania has reported around 19% prevalence of obesity among adults. According to that study associated factors with obesity includes high socio economic status [6]. Obesity is a risk factor for chronic disease like hypertension and type 2 diabetes mellitus, and in turn the cause for obesity is physical inactivity. A study conducted in east hararge have reported a 7% fasting blood sugar among employees, after an overnight fasting which ma directly or indirectly necessitate preventive practices [7].

This shows that programmed physical activity has paramount benefits for community parts which have a limited physical activity due to the nature of their routine work such as office workers (officials). The cumulative long term health benefits of physical activity needs to be considered in developing nations like Ethiopia where the impact of infectious disease is fueling the deterioration of quality of life. Physical activity could lower the disease burden and cost of health care; but there is limited information regarding any aspects of physical activity and its practice in the country among all community groups. There is a need to assess the practice of physical activity and socio-demographic factors associated with physical inactivity. The aim of the study was to narrow this gap by identifying prevalence of programmed (scheduled) physical activity among government employees.

Methods and Materials

Study area and period

The study was conducted from February 15 to March 15/2018 G.C in Ambo town Oromia region which is 110 km far from Addis Ababa, capital city of the country. Ambo is a zonal town and there are different regional, zonal, district and town administrative offices. In general there are a total of 2, 527 civil servants in a total of 66 offices found in Ambo Town. From the offices 22 are under town administrative offices, 27 are zonal offices and 16 are Ambo rural district offices.

Study design

Cross sectional quantitative study design was employed.

Population

Source population

The source population for this study was all civil servants working in government offices found in Ambo Town, West Shoa Zone of Oromia region, Ethiopia.

Study population

Systematically selected civil servants working in government offices in Ambo Town, Westhead zone from February 15 to March 15/2012.

Sample size and sampling technique

The sample size for this study was calculated by using a formula for estimating a single population proportion. To calculate the proportion formula, an estimate of 50% was taken because there was no base line data that shows the proportions of government employees having regular physical activity.

$$n = \frac{\left(\frac{z\alpha}{2}\right) 2 * p(1-p)}{d2}$$

Where

P = Estimated proportion of the population, Z = Level of confidence interval 95%=1.96, d =Degree of precession (the margin of sampling error to be used = 0.05, q = 1-p

$$\frac{(1.96)2*0.5(1-0.5)}{(0.05)2}=384$$

Since the total number of employees found in the study area do not exceed ten thousand the final sample size(nf) was calculated by using correction formula.

$$nf = n/(1+\frac{n}{N})$$

Nf= 384

1+384/2527 =333

Where nf= Final sample size, N = Total number of civil servants and n = Sample size.

In addition, by considering 10% none response rate the final sample size was calculated as; n = nf+10%. According to this formula the sample size was 366 civil servants.

Then the final sample size was proportionally distributed for the 66 offices primarily identified according to their staff size. Finally from these offices participants were selected by systematic sampling technique by using list of civil servants as a sampling frame.

Data collection tool

Data collection instruments were adapted from different literatures and adjusted according to the objective of the study. The tools were edited and translated to the local language (Afan Oromo) and back translated to English for insuring consistency and the quality of the data. Data collected through face to face interviewing at their offices by using the tools.

Data processing and analysis procedures

The data were analyzed using SPSS software version 16.0 windows. Prior to the analysis data was checked for the assumptions like normality and multi collinear. Descriptive statistics was done first to understand the general characteristics of the respondents. The level of association between the dependent variable and independent variable was checked by binary logistic regression analysis. Variable which are associated at significant level of less than 0.25 ($p < 0.25$) were taken to the multiple variable binary logistic regression to see the independently predictive tendency of the independent variables. The results were interpreted using odds ratio, p values and confidence intervals. The finding was refreshed, discussed and updated with very recent studies (litratures).

Result

Socio-demographic characteristics of the study participants

A total of 338 civil servants participated with a response rate of 92.35%, from which 200 (59.8%) were male, 153 (45.3%) fall in <= 29 years age group, 193 (57.9%) have been educated at degree and above level, 184 (54.44%) have married and 289 (85.5%) of them belongs to Oromo ethnic group followed by Amhara which is 27(8%). In addition majority, 149 (44.1%) of the workers was orthodox religion followers, followed by protestant followers which cover 40.1%. The average monthly income of participants was 1800 ETB. Regarding the professional back ground, 77 (22.78%) were health professionals and the rest were non health professional.

Factors associated with leisure time physical activity

The association of socio-demographic variable with leisure time physical activity was checked by using multiple logistic regression models. Gender (p-value 0.028, (95% CI, 0.341, 0.940)), age group (p-value 0.001, (95% CI, 0.449, 0.833)) and monthly income (p-value, (95% CI, (1.021, 5.458) were factors statistically significantly associated with leisure time physical activity.

Prevalence of physical activity practice among government employees

Among the participated civil servants 93 (27.2%) have regular physical activity practice at their leisure time in a week from which 40.9% meet the world health organization recommendation. Among participants large number of respondent 71 (76.3%) practice the regular physical activity at leisure time for less than three days a week.

S. N	Variables (n=338)		Frequency	Percent
1	Sex	Male	200	59.8
		Sex	138	40.2
		Total	338	100
2	Age	≤29	153	45.3
		30-39	123	36.4
		≤40	62	18.3
		Total	338	100
3	Educational status	Degree/above	193	57.9
		Diploma/below	145	42.1
		Total	338	100
4	Marital status	Married	184	54.44
		Single	149	44.06
		Others	5	1.5
		Total	338	100
5	Ethnicity	Oromo	289	85.5
		Amhara	27	8
		Others	22	6.5*
		Total	338	100
6	Religion	Orthodox	149	44.1
		Protestant	136	40.2
		Wakefata	34	10.1
		Others	19	5.6**
		Total	338	100
7	Monthly income Median = 1800	<1000	61	18.02
		1001-2000	142	42.34
		2001-3000	85	25.23
		3001-	50	14.41
		Total	338	100
8	Professional background	Health	77	22.8
		Non health	261	77.2
		Total	338	100

Table 1: Distribution of the socio-demographic characteristics of the civil servants working in Ambo Town in 2018.

	Patterns of physical activity		Frequency	Percent
1	Do you have Physical activity program at leisure time	Yes	243	72.3
		No	93	27.7
		Total	336	100
2	For how many days per week you practice (n=93)	<3 days	71	76.3
		>= 3 days	22	23.7
		Total	93	100
3	What is the total time duration you practice per week (n=93)	<=150min	38	40.9
		>=150 min	55	59.1
		Total	93	100

Table 2: Prevalence of physical activity and its characteristics among government employees working in ambo town in 2018.

Variables	Response	p-value	COR (CI, 95%)	p-value	AOR (CI, 95%)
Profession	None health	0.046	0.55(0.305, 0.99)	0.159	0.674(0.389, 1.167)
	Profession	1		1	
Sex	Female	0.014	0.509(0.296, 0.87)	0.028	0.556(0.341, 0.940)
	Male	1		1	
Age	≤29	0.498		0.268	
	30-40	0.010	0.421(0.222, 0.61)	0.001	0.846(0.449, 0.833)
	>40	0.018	0.217(.265, 0.691)	0.105	0.552(0.269, 0.653)
Family Hx of CVD	No	0.397	1.341(0.68, 2.643)	0.065	1.797(0.963, 3.350)
	Yes	1		1	
Monthly in come	>3001	0.045		0.048	
	≤1000		2.55(0.965, 6.761)	0.061	2.437(0.961, 6.184)
	1001-2000		2.39(1.007, 5.667)	0.045	2.361(1.021, 5.458)
	2001-3000		1.117(.424, 2.946)	0.727	1.182(0.463, 3.015)

Table 3: Shows socio-demographic variables significantly associated with leisure time physical activity among civil government employees in Ambo town 2018.

Discussion

Leisure time physical activity program was assessed and 27.2% of government employees have a regular physical activity program and practice. The study did not consider any physical activities related with daily activities such as walking from home to office (work place), activities of daily living like shopping, fetching, and intensity of the physical activity they do. The finding is lower when compared to the finding of a study conducted on Nigerian professionals [8], and urban and rural adults of South African people [9]. The difference might be from the fact that, study area, set up and geographical was different. The study populations are also variable in terms of residency area which is not considered in the current study. But our finding is quite higher when compared with the study from East Asia which reported a 24.3% regular physical activity [10], regardless of the trues that, the study was based on the general population not only professionals or government employees.

The study also have identified that, 6.5% of the study population are attending physical activity program for three days or more days where as the remaining 21% do it for less than three days. Another study conducted in USA, Tennessee have reported 18%

employees practicing physical activity less than one day per week and physical inactivity related to high prevalence of cardiovascular disease, poor or fair health status and high absenteeism from work [11]. Even though it is difficult to compare the above two findings, only 27.3% employees with physical activity program among which 76.3% attends the physical activity program may lead to the conclusion that physically inactive individuals dominate in west shoa zone, Ethiopia. This will put majority of employees at risk of different chronic disease or poor health condition. Another study conducted on university employees in America also reported that employees spend more than 75% of their work time seated [12]. This also strengthens the fact that, employment and physical activity have a relation.

The amount of physical activity, which is measured by duration of the practice per week or the intensity of the activity, is a very important factor to obtain the benefits expected. World health organization recommends a minimum of 150 minuet physical activity to be health and both physically and intellectually competent. Because studies have identified the fact that, vigorous or enough intensity physical activity are preventive for chronic disease like diabetes mellitus type 2 [13]. The current study has revealed that, 16.3% of employees do the physical exercise for more than what is recommended by WHO (more than 150 minuet per week) and the remaining employees either does not have physical activity program or practice less than what is recommended. The finding is also in line with what is concluded from study on Nigerian urban professionals which reported more than 80% under practice (does not meet WHO criteria of physical activity) [8].

Socio-demographic variables (age, gender and average monthly income) are the variables significantly associated with leisure time physical activity. According to the study female gender is preventive for physical activity practice. This is also in line with the study done on portages which identified different patterns of physical activity among men and women [14]. An article review on physical activity among south Asian countries also identified more inactive females than male adults in the region [15]. Another study from Nigeria also have identified age and income as protective of physical activity among adult workers [16]. The problem might have a relation with the gender based socioeconomic variations specifically in resource poor countries like Ethiopia. There will be a negative attitude against such practices in such countries.

Declarations

Ethics approval and consent to participate

The study proposal was initially approved by the ethical review board of Ambo University. A formal letter of permission was obtained from the college and submitted to department. The information about the study was given to the participants. Verbal and then written informed consent was sought from each participant who agreed to participate in the study and full filled the inclusions criteria. Only anonymous data collected in private rooms.

Availability of data and materials

This study is a part of institutional based a descriptive cross sectional study on to assess Leisure Time Physical Activity And Associated Factors Among Civil Servants Working In Ambo Town. The dataset pertaining to this study will be shared upon reasonable request.

Conflict of Interests

The authors declare that they have no competing interests.

Authors' Contributions

Abebe D. has involved work all part of activities. All of us read and approved the final manuscript. Teferra L. has involved in editing all part of the manuscript.

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