

An Evaluation into the Physical Activities of Housewives at Different Educational Level (Case of Amasya)

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Abstract

The main premise of this paper is to examine the physical activities of housewives at different educational level in the center of Amasya Province. A total of 340 volunteer housewives from different socioeconomic status were randomly recruited. We collected the data through the Physical Activity Assessment Questionnaire (PAAQ). We employed descriptive statistics, including mean, standart deviation, minimum and maximum values, frequencies and percentages regarding physical qualities and activities. We performed the a Pearson Correlation Analysis to evaluate the relationships between physical qualities and activities. Based on the statistics, the distribution of the weekly activities of the participants are as follows: 44.4% of housewives walking, 8.8% jogging, 80.0% housework, 51.8% shopping, 52.4% climbing up stairs (40 steps or less). 2.4% doing step-aerobic activities, 24.1% babysitting, 2.6% using a computer and 52.2% watching television. Further, we found that as the education level of housewives increased, their use of cars and reaching a destination on foot increased ($p < 0.05$, $p < 0.01$); that BMI levels decreased significantly ($p < 0.01$) with the increase in education levels, working days and on foot transportation, and BMI levels increased ($p < 0.01$) with the increase in passive recovery times. In conclusion, it can be suggested that housewives in Amasya have some levels of physical activities to some extent, but these activities are mostly walking, shopping, babysitting and doing households.

Keywords: Physical activity, Housewives, Body mass index

1. Introduction

Physical activity is defined as any bodily movement that results in energy expenditure. Further, physical activity is considered as physical activities performed with energy consumption by using muscles and joints in daily life, increasing heart and respiratory rate and resulting in different fatigue. Daily activities such as shopping, cleaning, using stairs, walking, various sports branches that include all or some of the basic body movements such as head and body movements, running, swimming, cycling, exercise and games can be considered as physical activities. Therefore, physical activity does not necessarily have a special time and a specific place, and it is an indispensable part of life by taking place in every spheres of life (Baltacı, 2012; Ehrman et al., 2005).

The sedentary lifestyle, which is common today, is seen as an important public health problem due to its negative effects on health. Physical activities reduce the risk of many chronic diseases and early mortality by supporting physiological, metabolic and psychological parameters and help maintain bone, muscle and joint health (Heyward, 2006). Many research results (e.g., ACSM, 2009; Baltacı, 2012; Ehrman et al., 2005; Glassberg & Balady, 1999; Heyward, 2006; Karaca et al., 2000) show that physical activity habits contribute significantly to the preservation of health and quality of life. However, rapidly developing technology causes a decrease in the level of physical activity both in daily work and in the workplace (Karaca et al., 2000). The beneficial effects of regular physical activity on health are related to the duration and severity of exercise, and it is stated that regular exercise reduces cardiac events (such as infarction, hypertension), type 2 diabetes, colon and breast cancer, obesity, depression and anxiety, gallbladder diseases and osteoporotic fractures (ACSM, 2009).

Physical activity gains more and more value day by day in terms of maintaining a healthy life. From this point of view, the relationship between health and physical activity is felt more and more every day. The protection and improvement of physical health seems possible with a balanced diet and increasing the level of physical activity. Sedentary life is an important risk factor for systemic diseases such as obesity, blood lipid imbalance, atherosclerosis, hypertension, coronary heart disease, stroke and osteoporosis. In Turkish society, women have more sedentary lifestyles, that is, far from physical activities, and their health is significantly adversely affected by this sedentary life. In line with the traditional view that coronary artery disease primarily affects men, it seems to affect women to the same extent (Erkan, 2000; Glassberg & Balady, 1999; Kalyon, 1995).

Given that housewives tend to have a sedentary lifestyle and therefore stay away from physical activities, the purpose of this research was to examine the physical activities of housewives in the center of Amasya Province.

2. Method

2.1 Participants

We recruited a total of 340 healthy volunteer housewives, 85.0% of whom were married and 14.7% of them were single, living in the city center of Amasya, with a mean age of

36.72±11.01 years.

2.2 Data Collection

We collected the data through the Physical Activity Assessment Questionnaire (PAAQ), developed by Karaca, Ergen, and Koruç (2000). The official permission was taken by the governorship of Amasya. We randomly selected the houses to do survey.

2.3 Data Analysis

We employed descriptive statistics, including mean, standart deviation, minimum and maximum values, frequencies and percentages regarding physical qualities and activities. We performed the a Pearson Correlation Analysis to evaluate the relationships between physical qualities and activities. The formula we employed for BMI levels of the participants was $BMI = \text{kg}/\text{m}^2$.

3. Findings

Table 1. Physical qualities of women

Varaiables	n	x±Sd	Minimum	Maximum
Age (years)	340	36.72±11.01	15.00	75.00
Height (m)	340	1.64±0.07	1.47	1.80
Weight (kg)	340	58.86±10.92	40.00	91.00
BMI (kg/m ²)	340	22.00 ± 4.22	13.36	41.54

The mean age of housewives was 36.72±11.1, the mean height was 1.64±0.07, the mean weight was 58.86±10.92, and the mean BMI was 22.00±4.22 (Table 1).

Table 2. Educational background of the participants

Variables	f	%
Primary	86	25.3
Secondary	54	15.9
High school	117	34.4
University	69	20.3
Missing information	14	4.1
Total	340	100.0

As shown in Table 2, the majority of women are primary and secondary school graduates. It is seen that 41.2% of the women are primary and secondary school graduates, while 34.4% of them are high school graduates. The rate of graduation from university is 20.3%.

Table 3. The number of the children

Varaiables	f	%
1-2	147	43.3
3-5	95	27.9
6-9	4	1.2
Missing information	94	27.6
Total	340	100.0

The findings have revealed that 43.3% of housewives have 1-2 children, 27.9% have 3-5 children and 1.2% have 6-9 children (Table 3).

Table 4. Weekly working status of the participants

Variables	Weekly Working Days	
	f	%
2-3 days	16	4.7
4-5 days	64	18.8
6-7 days	52	15.3
Missing information	208	61.2
Total	340	100.0

As shown in Table 4, 23.5% of housewives work 2-5 days a week and 15.3% work 6-7 days a week.

Table 5. Daily working status of the participants

Variables	Daily Working Hours	
	f	%
1-8 hours	84	24.7
9-12 hours	37	10.9
13+ hours	3	0.9
Missing information	216	63.5
Total	340	100.0

The findings show that 24.7% of the women work 1-8 hours a day, and 11.8% of them work 9 hours or more (Table 3).

Table 6. The physical activity status of the participants

Activity	Weekdays (Between 20-60 and 150 minutes)		Weekdays (Between 1 and 7 days)		Weekend (Between 20-60 and 150 minutes)		Weekend (1-2 days)		Months (Between 3-6 and 24)	
	n	%	n	%	n	%	n	%	n	%
Walking	148	43.5	151	44.4	-	-	-	-	123	36.2
On foot	215	63.2	218	64.1	-	-	-	-	126	37.1
By car	79	23.2	86	25.3	-	-	-	-	126	37.1
Jogging	28	8.2	30	8.8	-	-	-	-	19	5.6
Doing step and aerobic	8	2.4	8	2.4	-	-	-	-	7	2.1
Using a computer	7	2.1	9	2.6	-	-	-	-	7	2.1
Cooking	277	81.5	302	88.8	208	61.2	212	62.3	-	-
Cleaning	283	83.3	298	87.6	239	70.3	242	71.2	-	-
Washing-up	266	78.2	277	81.5	194	57.1	201	59.1	-	-
Doing the laundry	235	69.1	254	74.7	130	38.2	137	40.3	-	-
Ironing	176	51.7	191	56.2	138	40.6	149	43.8	-	-
Shopping	128	37.6	176	51.8	107	31.5	116	34.1	-	-
Babysitting	40	11.7	82	24.1	30	8.7	53	15.6	-	-
Watching TV	149	43.9	178	52.4	126	33.2	138	40.6	-	-
Climbing up stairs (f%)	1-40 stairs 223%/ 65.6		21-40 stairs 14/4.1		41-100 stairs 3/0.9		-	-	-	-

When the daily physical activities of women are examined, it is seen that 44.4% have a walk every week, 43.5% have walks lasting for between 20-150 minutes, 64.1% reach their destinations on foot, and 63.2% have between 20-150 minutes walks. In addition, 25.3% of them reach their destinations by car every week and 23.2% of them use a car between 20-150 minutes. Again, about 80.0% of women do housework every week, 75.0% do housework between 20-150 minutes, 51.8% do shopping every week and 37.6% do 20-150 minutes. 8.8% run every week, 8.2% run between 20-150 minutes, 2.4% do step-aerobics every week, and 2.4% do step-aerobics 20-150 minutes. Further, 2.6% use a computer every week, 2.1% use a computer between 20-150 minutes, 24.1% take care of children every week, and 11.7% 20-150 minutes. It was determined that they do babysitting between 150 minutes, 52.4% watched TV every week, 43.9% watched TV between 20-150 minutes, and 65.6% used stairs 40 steps or less every day (Table 6).

Table 7. The Relation between Women's Physical Activity Levels and BMI Levels

Variables	Educational Background	Working Day/Week	Working Minutes/Day	By car/Day	On foot/Day	Walking Minutes/Day	Running Minutes/Day	Passive Recovery	BMI
Educational Background	r:1	-0.21*	0.03	0.25*	0.32**	0.11	0.32	-0.12	-0.43**
	n:326	121	112	84	207	138	28	112	318
Working Day/Week	r:-0.21*	1	0.21*	0.16	0.30**	-0.22	-0.64	-0.33**	-0.23**
	n:121	133	124	48	83	54	9	116	126
Working Minutes/Day	r:0.03	0.21*	1	0.08	-0.09	-0.17	-0.01	-0.11	-0.08
	n:112	124	124	47	81	50	9	115	117
By car/Day	r:0.25*	0.16	0.08	1	0.47**	0.19	0.86**	0.09	-0.02
	n:84	48	47	86	46	34	11	44	83
On foot /Day	r:0.32**	0.30**	-0.09	0.47**	1	-0.02	0.19	-0.03	-0.18**
	n:207	83	81	46	218	102	17	82	212
Walking Minutes/Day	r:0.11	-0.22	-0.17	0.19	-0.02	1	0.21	-0.14	-0.14
	n:138	54	50	34	102	148	21	51	147
Running Minutes/Day	r:0.32	-0.64	-0.01	0.86**	0.19	0.21	1	0.67*	0.05
	n:28	9	9	11	17	21	28	10	28
Passive Recovery	r:-0.12	-0.33**	-0.11	0.09	-0.03	-0.14	0.67*	1	0.24**
	n:112	116	115	44	82	51	10	124	117
BMI	r:0.43**	-0.23**	-0.08	-0.02	-0.18**	-0.14	0.05	0.24**	1
	n:318	126	117	83	212	147	28	117	331

Note. *: $p < 0.05$; **: $p < 0.01$.

As seen in Table 7, as the education level of housewives increases, both their car use and walking activities increase ($p < 0.05$, $p < 0.01$). Further, BMI levels decrease significantly ($p < 0.01$) as education level, working days and walking activities increase. However, both walking activities and running times increase significantly ($P < 0.01$) as car transportation increases. In addition, as passive rest periods increase, BMI levels also increase ($p < 0.01$).

4. Discussion and Result

This study was to delve into the physical activities of housewives in the center of Amasya Province. There is evidence in the literature that people of all age groups, including men and women, who exercise or have a high level of daily activity are more fit and healthy than those who lead a sedentary life. When physically active people are compared with those who are less active, it has been reported that exercise has a protective effect from diseases according to the level of physical activity (Hossack & Bruce, 1982; Onat et al., 2017).

In their studies, Haşıl Korkmaz and Deniz (2013) examined the relationships between the physical activity levels of adults and their socio-economic levels. It was determined that there is no significant relationship between education level and physical activity level ($r = -0.032$; $p = 0.470$), although the socio-economic status affects the physical activity level, inactive ones are more common. In addition, it was stated that individuals with high physical activity levels lead a better quality and healthy life. Although there are relationships between socio-economic characteristics and physical activity levels of individuals, it was emphasized that individuals' physical activity levels should be increased. Akdur et al. (2003) compared the physical activity levels of housewives compared to working women, and it was seen that the physical activity levels of housewives were low in daily life and it was revealed that housewives should be made aware of for a more active life and they should do more intense sports. In this present study, the physical activities of housewives are insufficient and most of the physical activities they do are housework (Table 6). In this context, the findings of this present study corroborated with those of Akdur et al. (2003), and Haşıl Korkmaz and Deniz (2013). Therefore, it is inevitable to increase the duration and quality of daily physical activities of housewives.

In another study, it has been revealed that people who exercise in all age groups or have a high level of daily activity are healthier than those who lead a sedentary life. When physically active people are compared with those who are less active, it is stated that exercise has a protective effect from diseases according to the level of physical activity (Onat et al., 2017). It is also reported that the degree of physical activity is among the main determinants of the development of hypertension and related disorders in the future (Onat et al., 2017). Similarly, Vural et al. (2010) examined the relationship between physical activity level and quality of life of desk workers, 25.2% of the individuals were not physically active, 48.9% had low physical activity levels, and only 25.9% had a sufficient level of physical activity to maintain their health. they said it could be. However, it has been reported that 26.1% of individuals with a BMI below 25 kg/m^2 are not physically active enough, and the participation rate of individuals with a BMI of 25 kg/m^2 and above is 23.5%. In addition, it was stated that 21.3% of individuals with a BMI below 25 kg/m^2 and 35.3% of individuals with a BMI of 25 kg/m^2

and above had adequate physical activity. Similarly, in their studies of Leslie et al. (1999) found that physical activity levels of Australian college students and Rowland and Freedson (1994) related to physical activity, fitness and health in children were found to be lower in those with higher BMI. When the physical activity and BMI level relationships of housewives in this study are examined, it is seen that BMI levels decrease significantly ($p < 0.01$) with the increase in reaching a destination on foot and weekly working days, and increase in the BMI levels with the increase in passive rest periods (Table 7). When we look at the physical activity details of housewives, it is seen that most of them cover housework (Table 6). When the results of this study are compared with the research data of Onat et al. (2017), it is concluded that the protective effect of exercise from diseases and the development of hypertension and related disorders can be determined by the degree of physical activity; There are similarities with other studies in terms of low BMI levels in individuals with high physical activity levels.

In a study investigating the relationship between the physical activity levels and cognitive status of the elders, it was seen that the gender and education level of the individuals affected the physical activity level; It was concluded that there is a strong direct relationship between cognitive status and physical activity level, and that cognitive functions decrease as physical activity level decreases (N. Lök & S. Lök, 2016). In another study in which physical activity levels of teachers were investigated, it was reported that 20.4% of individuals with a BMI below 25 kg/m^2 were not physically active, and 15.2% of those with a BMI of 25 kg/m^2 and above were inactive. As a result, it was observed that teachers were not physically active enough; it was suggested that teachers' physical activity habits, who are expected to be a model for society and their students in all fields, should also be high in terms of social development (Şanlı & Güzel, 2009). In a study investigating the relationship between physical activity and brain health in older adults, it was concluded that physical activity is a lifestyle factor associated with brain structure and function in older ages (Benedict et al., 2013). In a study titled total daily physical activity and risk of alzheimer disease and cognitive decline in older adults, it was suggested that higher levels of daily physical activity were associated with a reduced risk of alzheimer disease (Buchman et al., 2012). In a study examining complex mental and physical activity and cognitive performance in elderly women, it was emphasized that participation in new stimulating activities in healthy older women may contribute to cognitive fitness and delay cognitive decline (Klusmann et al., 2010). According to the findings of this research, as the education level of housewives increases, both their car use and pedestrian transportation increase ($p < 0.05$, $p < 0.01$), however, BMI levels decrease significantly ($p < 0.01$) as education level, working days and pedestrian transportation increase, however, both pedestrian reach and running times increase significantly ($P < 0.01$) as the car accessibility increases (Table 7). When we look at the literature results, the positive effects of physical activity on brain structure and functions in advanced ages (Benedict et al., 2013; N. Lök & S. Lök, 2016), the literature results suggesting that regular and effective daily physical activity level in adults and participation in new stimulating activities in healthy older women can contribute to cognitive fitness (Buchman et al., 2012; Klusmann et al., 2010; N. Lök & S. Lök, 2016) suggest the relationship between education level and success and physical activity. When evaluated with these results; This study is similar to the results of the

literature in terms of low physical activity, increased pedestrian access and running time with increased use of cars, although not in terms of higher levels of education in women driving more cars.

Another study emphasizes the importance of increasing physical activity opportunities for women, based on the changes that participation in physical activity creates in women's lives. Considering the low participation of women in physical activity and sports, the development of special projects to increase participation should be one of the priority areas (Bulgu et al., 2007). In this present study, the fact that housewives are more involved in walking, housework and hobbies as physical activity suggests that they should not face health problems in later ages or they should be guided about regular physical activity. Undoubtedly, raising awareness of housewives about regular physical activity on certain days of the week and encouraging them to exercise within the programs should undoubtedly be evaluated. With the increase in the education level of the housewives in this study, both their car usage and walking activity increased ($p < 0.01$, $p < 0.05$), and the BMI levels increased significantly ($p < 0.05$) with the increase in education levels, working days and walking activity. The decrease in BMI levels and the increase in passive rest periods (Table 7) emphasize the importance of providing physical activity opportunities to women. Therefore, even the fact that housewives work every week and provide their transportation on foot increases the duration and quality of physical activity, and decreases their BMI levels significantly ($p < 0.01$), as observed in Table 7.

In conclusion, it can be suggested that housewives at different educational level in Amasya have some levels of physical activities to some extent, but these activities are mostly walking, shopping, babysitting and doing households.

References

- ACSM (American College of Sports Medicine). (2009). *ACSM's Guidelines for Exercise Testing and Prescription* (6th ed., pp. 5-7). USA: Lippincott Williams & Wilkins.
- Akdur, H., Doruk, B., Korkmaz, A., Polat, G., & Şahin, S. (2003). Ev Kadınları ve Çalışan Kadınların Fiziksel Aktivite Düzeyinin Araştırılması. *İÜ Spor Bilimleri Dergisi*, 2003-11, 44-46.
- Benedict, C., Brooks, S. J., Kullberg, J., Nordenskjöld, R., Burgos, J., Le Grevès, M., ... Schiöth, H. B. (2013). Association Between Physical Activity and Brain Health in Older Adults. *Neurobiol Aging*, 34, 83-90. <https://doi.org/10.1016/j.neurobiolaging.2012.04.013>
- Buchman, A. S., Boyle, P. A., Yu, L., Shah, R. C., Wilson, R. S., & Bennett, D. A. (2012). Total Daily Physical Activity and the Risk of AD and Cognitive Decline in Older Adults. *Neurol.*, 78, 1323-1329. <https://doi.org/10.1212/WNL.0b013e3182535d35>
- Bulgu, N., Koca Arıtan, C., & Aşçı, F. H. (2007). Gündelik Yaşam, Kadın ve Fiziksel Aktivite. *Hacettepe J. of Sport Sciences*, 18(4), 167-181.
- Ehrman, J. K., Gordon, P. M., Visich, P. S., & Keteylan, S. J. (2019). *Clinical Exercise Physiology* (4th ed.). USA: Human Kinetics Publishers. Retrieved from <https://www.amazon>.

com/dp/1492546453/ref=rdr_ext_tmb

Glassberg, H., & Balady, G. (1999). Exercise and heart disease in women. *Cardiol Rev*, 7, 301-308. <https://doi.org/10.1097/00045415-199909000-00015>

Haşıl Korkmaz, N., & Deniz, M. (2013). Yetişkinlerin Fiziksel Aktivite Düzeyleri İle Sosyo-Ekonomik Düzeyleri Arasındaki İlişkinin İncelenmesi. *NWSA-Sports Sciences*, 8(3), 46-56. <https://doi.org/10.12739/NWSA.2013.8.3.2B0094>

Heyward, V. H. (2006). *Advanced Fitness Assessment and Exercise Prescription* (5th ed., pp. 1-5). USA: Human Kinetics.

Hossack, K. F., & Bruce, R. A. (1982). Maximal Cardiac Function in Sedantary Normal Men and Women: Comparison of Age Related Changes. *Appl. Physiol.*, 4, 799-804. <https://doi.org/10.1152/jappl.1982.53.4.799>

Kalyon, T. A. (1995). *Spor Hekimliği*. Ankara: GATA Basımevi.

Karaca, A., Ergen, E., & Koruç, Z. (2000). Fiziksel Aktivite Değerlendirme Anketi (FADA) Güvenirlik ve Geçerlik Çalışması. *Spor Bilimleri Dergisi*, 11.

Klusmann, V., Evers, A., Schwarzer, R., Schlattmann, P., Reischies, F. M., Heuser, I., & Dimeo, F. C. (2010). Complex Mental and Physical Activity in Older Women and Cognitive Performance: A 6-Month Randomized Controlled Trial. *J Gerontol A Biol Sci Med Sci*, 65, 680-688. <https://doi.org/10.1093/gerona/glq053>

Leslie, E., Owen, N., Salmon, J., Bauman, A., Sallis, J. F., & Lo, S. K. (1999). Insufficiently Active Australian College Students: Perceived Personal, Social and Environmental influences. *Preventive Medicine*, 28, 20-27. <https://doi.org/10.1006/pmed.1998.0375>

Lök, N., & Lök, S. (2016). Yaşlıların Fiziksel Aktivite Düzeyleri İle Bilişsel Durumları Arasındaki İlişki. *Yeni Sempozyum Dergisi*, 54(2), 21-24.

Onat, A., Can, G., Yüksel, H., Ademoğlu, E., Erginel Ünaltuna, N., Kaya, A., & Altay, S. (2017). Tıp Dünyasının Kronik Hastalıklara Yaklaşımına Öncülük. In A. Onat (Ed.), *TEKHARF 2017* (p. 113). Tasarım ve Basım, Turkey. Retrieved from <https://file.tkd.org.tr/PDFs/TEKHARF-2017.pdf>

Özer, D., & Baltacı, G. (2008). *İş Yerinde Fiziksel Aktivite* (Sağlık Bakanlığı Yayın No: 730). Ankara: Klasmat Matbaacılık.

Rowland, P. W., & Freedson, P. (1994). Physical Activity, Fitness and Health in Children: A Close Look. *Pediatrics*, 93(4), 669-672.

Şanlı, E., & Güzel, N. A. (2009). Öğretmenlerde Fiziksel Aktivite Düzeyi-Yaş, Cinsiyet ve Beden Kütle İndeksi İlişkisi. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, 14(3), 23-32.

Vural, Ö., Eler, S., & Güzel, N. A. (2010). Masa Başlı Çalışanlarda Fiziksel Aktivite Düzeyi ve Yaşam Kalitesi İlişkisi. *Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi*, 8(2), 69-75. https://doi.org/10.1501/Sporm_0000000178

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