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An Investigation of the Factors Hindering Adults' Participation in Physical Activity*

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Abstract

This study focuses on the non-participation of adults in physical activity and the reasons that have been preventing them to participate. The study is carried out with 283 participants (116 men and 167 women) who live in Adana, Turkey. Their ages range from 18-66. The average age of the adult participants is 31.81 ±10.12. The demographical features, their conditions to be able to participate in physical activity and the conditions that restrain them from participation have been determined by the 35 question through a questionnaire prepared by the researcher. In analyzing the information the x^2 test has been used. According to the results of the analysis it is found out that 59.5% of the man and 53.7% of the woman who have participated in the study are involved in physical activities.. In the study it has been observed that participation in physical activity increases in direct proportion to better education and higher income. The marital status has also affected the participation. The participants have brought to the fore the most important reasons for not participating in physical activities as, not finding friends, that the places where physical activity is performed is crowded, not having enough time, not being supported by the family or not having enough information in their answers. As a result, participation in physical activity is made up by factors related to each other and at the same time independent of them.

Keywords: adults, participation, physical activity

1. Introduction

The lifestyle and habits of people have changed rapidly since the beginning of the years 1900 with the industrial revolution to date. With the developing technologies there have been profound changes in the daily life of people (Rejeski, Brawley and Shumaker, 1996). Several chores which were manually (by sheer physical force) made in the past have been made by machines (USDHHS, 1996). And with the changes in life styles there has been lot less physical activity and this has also come to an almost standstill (Brady, 1998). This sedentary lifestyle and decreased physical activity has also brought with it several health concerns. Looking at the information data of World Health Organization, we see that every year several thousand people die and suffer from heart, cardiovascular problems, diabetes, cancer or obesity which is directly related to physical activity (WHO, 2000; Hillsdon, Thorogood and Foster, 2002). Nevertheless, several researches have shown us that physical activity could change the sedentary lifestyle and illnesses that pronounce themselves from the static life. Modern life which is the base of sedentary work is the basis of physical, physiologic illnesses and can cause several other illnesses, such as psychological illnesses. Psychological symptoms such as depression and anxiety, to feel not to have any energy and stress diminish the quality of life. In addition to the unpleasant situations obese persons suffer from various social negative attitudes (Beeken and Wardle, 2013; Poon and Tarrant, 2009; Schwartz and Puhl, 2003; Uluöz E., 2016a; Yılmaz C.Y., 2009). Several researches show that participation in a physical activity can help solving some of these problems (Bauman, 2004; Daley et al., 2007; Penedo and Dahn, 2005; WHO, 2000)

In principle, the human body is designed to be in movement. Muscles, tendons, ligaments and bones in human body work as a whole and are organized in such a way that they can do several movements (Casaburi, 1994 and Wasserman et al, 1987). This functional team works in tandem with the centralized nervous system, the cardiovascular system, the breathing, digestion and the endocrinal system (Jette et al, 1999; Rodman et al, 2002; Wasserman et al, 1987). Researchers realized in recent years that physical activity affects positively all the systems in the human body. Obesity, hypertension, diabetes, cancer and rheumatism, are illnesses that can be cured, as studies show (Blair et al, 1984;

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Bouchard et al, 1994 ; P èreira et al, 1999 and Salonen, Puska and Tulomilehto, 1982).

The big expenditures that have been realized during last years, have brought governments to take serious preventive measures in this domain to diminish health expenditures. It should be kept in mind that the budget for medical treatments is measured in billions only in the United States and Europe (Belli, Berman and Bossert, 2002; Pan American Health Organization, 2002; WHO, 2005). When we look at the studies carried out in the last century, we realize that several illnesses are directly related to having a life style without movement. Several scientific studies show us that many of these aliments (illnesses) can be prevented from appearing if we were to have a physical activity (Bouchard, Shephard and Stephens, 1994; Jette et al, 1999; Pereira et al, 1999). With this in mind, many countries are taking legal steps to support physical activity and organize physical activity programs (Bauman 2004). It has been shown that, these organized physical activities have had a positive impact on health and life span by excluding problems. Moreover, as this has a real impact on the country economy, it adds to a comfortable and quality in life (Katzmarzyk, Gledhill and Shephard, 2000; Stewart, 2001).

Overweightness and obesity rates are rising all over the world by day by. The researches have made numerous studies focused on the high rates of overweightness and obesity on various countries (Bassett et al, 2008 ; Hatemi et al, 2002; Martinez et al, 2004; Monteiro et al, 2004; Ogden et al, 2006; Ulu öz E., 2016b). In opposite to the unpleasant situations, it is reported that regularly physical activity positively affects our daily life. People find out about the benefits of regular physical activity but even though they are aware, there are some frustrations related to participation to the programs. These are economic inability, nonexistence of infrastructures, the inadequacy of the social environment, family pressure, lack of time, health reasons, traumatophobia, the working hours which does not fit the schedules, means that people shun participating (Arslan et al, 2003; Bouchard et al, 1994; Humpel, Owen and Leslie, 2002; T ürkmen et al, 2015).

This study aims to search the participation of adults in physical activities to find out the reasons preventing adults from participation. The study aims to find out if there is correlation among the reasons including sex, education and income level as depending variables.

2. Method

This study has taken into consideration the situation at a given time frame and is descriptive. The information that has been found out and those given by the participants are limitative. Thus, different results might be yielded depending on the participant group profile.

This study was carried out in Adana city, Turkey with the participation of 283 (116 male, 167 woman) adults. The age range of the participants is 18 to 66 with an average age 31, 81 ±10, 12 years. (Male 35, 60 ± 11, 42; woman 25, 19 ± 8.18) The participation was on a voluntary basis.

The demographic characteristics, the physical condition to participate in physical activity and the reasons for not participating and the participants' views have been gathered using a 35-item questionnaire form prepared by the author. Before the questionnaire was to be filled in the author has given information about the study and the questions to the participants. They were asked to pose their questions to the researcher, if they were questions that they were not comfortable in finding the answers.

The data obtained from the information forms were analyzed with SPSS 15.0 statistical package program. The obtained information has been applied and arithmetical averages, standard deviation, and dispersion of frequency definitions have been used. In the evaluations of the categorical variables analysis the "chi-square" test has been utilized. The variables between the groups have been subjected the T test. The statistical value is $p<0.05$.

3. Results

Table 1. (BMI) Index of Participants (Age, Height, Weight) Value of Participants Body Mass Index

Variable	Sex	n	Mean	df	t	p
Age (year)	Man	116	35.60±11.42			
	Woman	167	29.19±8.18	5.49	280	.000
Height (cm)	Man	116	76.80±11.12			
	Woman	167	59.12±10.93	13.28	281	.000
Body Weight (kg)	Man	116	175.16±6.91			
	Woman	167	164.66±5.57	14.10	281	.000
BMI (kg/m^2)	Man	116	24.99±3.03			
	Woman	167	21.79±3.86	7.44	281	.000

The Body Mass Index (BMI) of the participants is shown in Table 1 below. As you may see in the Table 1below the average age of the participants has been determined as; 31.81 ±10.12 (man 35. 60 ± 11.42, woman 25.19 ± 8.18), the average weight is 66.36kg ± 14.04 (man; 78.60 kg ± 11.12 woman 59.12 kg ± 10.93) the average height 168.96cm ± 8.03 (man; 175.16 ± 6.91 woman; 164.66 m ± 5.57). The VKI averages are; 23.10 ± 3.87 (man; 24.99 ± 3.03 woman;

21.79 ± 3.86). The age, weight, height and BMI of the male participants are greater than those of the woman. For these differentiations the variables between sexes is very significant (p<.05).

The information about the education level of the participants in percentage and number is shown in Table 2 below. As you will see in the Table, 46 (16.3%) of the participants are primary and high school graduates, 189 (66.8%) have undergraduate and 48 (17%) have masters degrees. 26 of the male participants (22.4%) are holders of primary and high school diplomas; 75 (64.7%) undergraduate degrees and 15 (12.9%) masters. The educational profiles of the participant woman are as follows: 20 (12%) primary or high school diplomas, 114 (68.3%) undergraduate degrees, 33 (19.8%) master's degrees. The education level of the women participants is statistically higher than those of the male participants.

Table 2. Numbers and Percentages of the Educational Level of the Participants

Education Level	**Sex**						
	Man		**Women**				
	n	%	n	%	**X**	^{2}df	p
Primary School & High school	26	22.4%	20	12.0%			
Undergraduate Level	75	64.7%	114	68.3%			
Masters	15	12.9%	33	19.8%	6.60	2	.037*

*p <.05

With regards to the profession of the participants; 58 of them are teachers (20.5%), 116(41.0%) students, 46(16.3%) self-employed, 28 (9.9%) academicians, 31(7.4%) workers, 7 (2.5%) housewives and 7 (2.5%) doctors. Among the male participants; 28 (24.1%) are teachers, 32 (27.6) students, 32 (27.6) self-employed, 10 (8.6%) academicians, 11 (9.5%) workers and 3 (2.6%) doctors. Woman participants are 30 (18%) teachers, 84 (50.03%) students, 14 (8.4%) self-employed, 18 (10.8%) academicians, 10 (6.0%) employees, 7 (4.3%) (Doctors) and 7 (4.3%) housewives.

If we consider the income level of the participants in numbers and percentages; 71 (25.1%) persons are in the low income, 184 (65.0%) in the middle income and 28 (9.9%) in the high income range. Of those, the man, 38 (32.8) are in the low income, 61 (52.6%) in the middle income and 17 (14.7%) in the high income group. Considering the women, 33 (19.8%) are in the low income, 123 (73.7%) in the middle income, and 11 (6.6%) in the high income group.

Table-3 below shows the participation in physical activities in numbers and percentages. As we can see 156 (56.1%) of the participants are participating and 122 (43.9%) are not participating in physical activities. Of those participating man 69 (59.5%) declare participating and 47 (40.5%) not participating. Of the women participants 87 (53.75%) declare participating whilst 75 (43.3%) declare not.

Numbers of persons participating in physical activity depending on the sex and education levels are shown in Table-3. Participating in physical activity is showing better results depending on educational level groups. Here, there is a reasonable and meaningful differential between them (p < .01). Almost the majority (61.4%) of the people who have undergraduate degrees have declared participation in physical activity. If we look at this from the man/women perspective; the male participants show no statistical differentiation between the groups (p >.05). As for the female participant group, participation in a physical activity shows statistically significant difference (p<.05)

Table 3. Participating in Physical Activity Depending on Sex and Educational Level Shown in Numbers and Percentages

Sex	**Education**	**Conditions to participate in physical activity**				x^2	df	P
		No		**Yes**				
		n	%	n	%			
Men	Primary and secondary school	14	53.8%	12	46.2%			
	Undergraduate	29	38.7%	46	61.3%	3.21	2	.20
	Graduate	4	26.7%	11	73.3%			
Woman	Primary and secondary school	13	65.0%	7	35.0%			
	Undergraduate	44	38.6%	70	61.4%	10.94	2	.04*
	Graduate	22	66.7%	11	33.3%			
General	Primary and secondary school	27	58.7%	19	41.3%			
	Undergraduate	73	38.6%	116	61.4%	8.21	2	.01*
	Graduate	26	54.2%	22	45.8%			

Numbers and percentages depending on sex and income variables in participating in physical activity are shown in Table-4 below. If we consider the sex and the income level of the participants; it is clear that the participants with a high income have a considerable advantage (p<.01). 82.1% of the participants in higher income group have indicated that they participate in physical activities. If we look at the numbers related to sex, we can see that man belonging into higher income group, statistically show a higher ratio (p<.01). 94.5% of the men have indicated that, they participate into physical activities. On the contrary, among the female participants, there is no statistically significant difference (p>.05).

Table 4. Participating into Physical Activity, Numbers and Percentages Variation on Sex and Income Level

Sex	Income Level	Physical Activity status				X^2	df	p
		No		Yes				
		n	%	n	%			
Man	Low	19	50.0%	19	50.0%			
	Medium	27	44.3%	34	55.7%	10.234	2	.01**
	High	1	5.9%	16	94.1%			
Women	Low	14	42.4%	19	57.6%			
	Medium	61	49.6%	62	50.4%	1.102	2	.58
	High	4	36.4%	7	63.6%			
General	Low	33	46.5%	38	53.5%			
	Medium	88	47.8%	96	52.2%	8.98	2	.01**
	High	5	17.9%	23	82.1%			

The level of participation of persons taking part in the study, depending on their marital status is shown in Table-5. 60,6% of the unmarried participants have indicated that they participate in physical activity. The participation in physical activity depending on marital status shows statistically significant differentiation ($p<.01$). When looked upon on basis of sex, 74,0% of unmarried men have indicated that they participate in physical activity and depending their marital status participation in physical activity shows significant differentiation between the groups ($p<.01$).

Table 5. Numbers and Percentages of Participants Participating in Physical Activity Depending on Their Marital Status and Sex

Gender	Marital Status	Situation of Physical Activity				X^2	df	p
		No		Yes				
		n	%	n	%			
Man	Married	34	51.5%	32	48.5%			
	Unmarried	13	26.0%	37	74.0%	7.68	1	.01**
Women	Married	31	50.0%	31	50.0%			
	Unmarried	48	45.7%	57	54.3%	2.87	1	.35
General	Married	65	50.8%	63	49.2%			
	Unmarried	61	39.4%	94	60.6%	3.70	1	0.36

Table 6. Numbers and Percentages on Factors that Restrain Participants in Physical Activity

Factors that prevent participation in physical activity	**Yes**				**No**				**Sometimes**						
	Man		**Women**		**Man**		**Women**		**Men**		**Women**				
	n	%	n	%	n	%	n	%	n	%	n	%	X^2	df	P
Crowdedness of the physical activity centers	20	46.5%	41	51.9%	19	44.2%	30	38.0%	4	9.3%	8	10.1%	.44	2	.79
Not being able to find friends	28	65.1%	56	70.9%	11	25.6%	15	19.0%	4	9.3%	8	10.1%	.72	2	.69
Not being supported by family or friends	13	30.2%	18	22.8%	26	60.5%	58	73.4%	4	9.3%	3	3.8%	2.75	2	.25
The social surrounding not being appropriate for physical activity	12	27.9%	19	24.1%	27	62.8%	50	63.3%	4	9.3%	10	12.7%	.43	2	.80
Sports centers not providing the necessary facilities	9	20.9%	24	30.4%	27	62.8%	47	59.5%	7	16.3%	8	10.1%	1.82	2	.40
The employer not giving the necessary support and facilities	7	16.3%	9	11.4%	33	76.7%	63	79.7%	3	7.0%	7	8.9%	.65	2	.71
Not having enough information to participate in physical activity	12	27.9%	18	22.8%	26	60.5%	58	73.4%	5	11.6%	3	3.8%	3.57	2	.16
The eschewing from the social pressure	3	7.0%	3	3.8%	35	81.4%	74	93.7%	5	11.6%	2	2.5%	5.05	2	**.040***
Being afraid of injury	6	14.0%	8	10.1%	33	76.7%	65	82.3%	4	9.3%	6	7.6%	.56	2	.75
Not having time	15	34.9%	40	50.6%	18	41.9%	26	32.9%	10	23.3%	13	16.5%	2.83	2	.24
Unsuitable Meteorological and weather conditions	3	7.0%	15	19.0%	32	74.4%	52	65.8%	8	18.6%	12	15.2%	3.21	2	.20
Health reasons	4	9.3%	9	11.4%	35	81.4%	63	79.7%	4	9.3%	7	8.9%	.13	2	.93
Not to like physical activity	6	14.0%	6	7.6%	30	69.8%	69	87.3%	7	16.3%	4	5.1%	6.08	2	.048*
Economical reasons	8	18.6%	10	12.7%	31	72.1%	63	79.7%	4	9.3%	6	7.6%	.97	2	.61
Family responsibilities	6	14.0%	15	19.0%	32	74.4%	53	67.1%	5	11.6%	11	13.9%	.73	2	.69

The factors that prevent the participants to participate in physical activity are shown in numbers and percentages in

Table-6. 65% of the man who does not participate in physical activity talk about not being able to find friends, 46.5% indicates that the physical activity centers are crowded, 34.9% says that they do not have time, 30.2% claims that they have no support from the family environment, 27.9% indicates that they have not enough information and 27.9% says that the society they live in does not support participation in physical activity. 70.9% of the women indicate that they can't find any friends, 51.9% indicates that the places are too crowded, 50.9% say that they do not have enough time and 30.4% indicates the sport activity centers do not provide the necessary conditions for them to participate in physical activity. When the results hampering the participation in physical activity were concerned, it can be seen that the "pressure of the immediate social surroundings" and "not enjoying the physical activity" factors are found to be statistically significant. ($p<.05$) No correlation was found between the participation in a physical activity and the other reasons which are seen as an obstacle.

4. Discussion

This study has been carried out with 283 participants whom the average age is 31.81 ± 10.12 (Man 35.60 ±11.42; Women 25.19±8.18) who comes from different education and professional backgrounds. The average weight of the participants has been measured as 66.36, their height average as168.96 and their BMI average as 23.10 ± 8.87. In the total of the BMI variables the averages of male participants have been higher than the women. The statistical differentiation between the groups is ($p<.05$). The rate of the participation in the physical activity by the participants is 56.1%. In a study that has been made on physical education teacher's participation in the physical activity, the rate was found to be 20.8% (Arslan et al, 2003), while in another study carried out with university teachers and professors, the participation ratio was found as 4.3% (Arabacı and Çankaya, 2007)

In the present study, it has been found out that 59.1% of the man and 53.75% of the women participate in physical activity. Although the women's participation seems to be lower than the participation of the man, their BMI averages are also low. (Men 24.99±3.86; women 21.79±3.86) In another similar study on participation in physical activity, 21.2% of the men and 20.0% of the women indicated that they participate in physical activity. Although women's participation has been lower in the study, the BMI averages are found to be lower (Female 21.2% and male 25.3%) (Arabacı and Çankaya, 2007). One of the reasons found for the lower BMI in woman's participation in physical activity is that; on top of their normal daily obligations, they take more responsibilities in their daily life such as looking after their children, cleaning their houses, kitchen work, cooking which are all demanding in terms of physical effort.

The participation to sports between the participants has been found to be; for the males 59.5% and for the women 53.7%. Persons with undergraduates and graduate degrees have an average of 77.6% in participation. As the education level is higher the participation to physical activity increases and this has been determined in several other scientific studies where it has been underlined (Arslan et al, 2003; Arabacı and Çankaya, 2007; Arabacı, 2010, Bouchard Shephard and Stephens, 1994). People with primary and secondary school education participate at physical activity at 41.3% level whereas undergraduates participate at 61.4% and graduates at 45.8%. The differences in the groups has a statistical tendency to lean in favor of the education level ($p<.05$) and the highest participation ratio is found to be in graduates. Although graduates do have a better understanding of the benefits of physical activity, their participation percentage is lower due to their academic work. In our study we have determined that 59.4% of the graduates do not participate in physical activity because of lack of time and that seems to concur with the numbers produced by other studies. In a very close way the economic situation of individuals seems to have the same approach on participation in physical activity (Blair et al, 1984; Humpel, Owen and Leslie, 2002; PAHO, 2002). In our study we have found that the better the income, the more in participation to physical activity. Participating to physical activity shows an important correlation with the income of the participants. In the groups, statistically there is visible and understandable differentiation ($p<.05$). Participant with higher income at 82.1% indicates that they participate on physical activities. If you look at participation at the sexual level; the man show a statistical differentiation depending their income and singles out in the groups ($p<.05$). 94.1% of the participants with high income levels indicate that they participate in physical activity. When you compare the women groups, there is no singularly statistical differentiation between he income levels ($p>.05$). As the income level increases the participation in physical activity increases. As the participation percentage increases the physical and mental wellbeing of the person improves and to add to that the participation to physical activity is also seen as a social status symbol.

60.6% of the unmarried participants indicate that they do participate in physical activities and participation to physical activity in groups indicates that there is a statistical correlation and differentiation ($p.<0.5$). If we consider the sex, 74.0% of the unmarried male participants indicate that they participate in physical activity and the unmarried male participants it shows that statistically in the groups there is a considerable advantage for man in participating in physical activity ($p.<0.5$). In many studies the married person status affects negatively to the participation in physical activity (Arabacı and Çankaya, 2007; Humpel, Owen and Leslie, 2002; PAHO, 2002; WHO, 2005). If we look closely in to the studies we can see that married persons participate less in physical activity compared to unmarried persons. Marriage brings

social and economic responsibilities and we may say that if affects the percentages of participation.

If we consider the causes that prevent participation into physical activity depending on sex; we see that "pressure from the social environment" and "not liking the participating into physical activity" factors, the statistical differential is meaningful and shows a level of $p<.05$. The other reasons preventing participation does not show meaningful differentiation. If we analyze the literature we can see that in close societies "being afraid of the pressure from the social environment" is the primary reason for people not to participate in physical activity. In certain 3rd world countries, legal limitations forbid women's participation to physical activity (Daiman, 1995; Sfeir, 1985).

Man who does not participate in physical activity and who was part of our study indicates at 65% that they can't find friends, 46.5% indicates that the centers of physical activity are too crowded, 34.9% complain about not having enough time, 30.2% talk about not having family support, 27.9% ties it not to have been informed enough and 27.9% says that the environment they live in does not allow for participating in physical activity. 70.9% of the female participants indicate that they can't find friends, 51.9% complain that the centers are too crowded, 50.9% says they can't spare the time, 30.4% says that the sports centers do not give enough possibility for them to participate in physical activity. Once we start considering the work presented in the literature we find out that the results are similar to those we have found out in our study (Arslan et al, 2003; Bouchard, Shephard and Stephens, 1994 ; Humpel, Owen and Leslie, 2002), economical reasons, social environment, family reasons, finding a partner, climate conditions, the interest of family members in physical activity, lack of time, marital status, settings for physical activity, security reasons, health reasons etc., factors are to be seen as the most important reasons(Bauman, 2004; Bouchard, Shephard and Stephens, 1994; Owen et al., 2000; Sallis, Hovell and Hofstetter, 1992; Ståhl et al, 2001; Stokols,1996).

We can say that, participation to physical activity relates to factors which are both dependent and independent at the same time. It is observed that the number of people who are more knowledgeable about the importance of healthy living is getting larger and larger each year. It is also seen that for the same reason, more and more people are participating in physical activities.

Considering the benefits of involvement in physical activities in terms of its positive effects on our bodily and mental health, it would not be wrong to conclude that physical activities contribute at the same time to the well-being of the whole society. For this reason, the members of the society need to be informed about these benefits. There are several academic studies undertaken about participating in physical activity. The results obtained in these studies should be brought to the attention of the administration of the country and work towards making the participation in physical activity a priority. We believe that the social and individual benefits of involvement in physical activities will in turn positively contribute to economic well-fare by cutting the expenses resulting from health problems. This will in the long run be an added value to the country's economy.

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