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Determination of Active Life Constraints in Adults

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Abstract

The “Active Life Constraints Scale” (ALCS) (Heath, 2009) total 5010 participants selected by simple random sampling method. In the original version, there are 21 items and 7 subscales, and it is in four-point likert type; however, in the Turkish adaptation, it is seen after confirmatory factor analysis that the scale has 7 subscales and 20 items. As a result of the confirmatory factor analysis conducted to test the reliability of the scale, the cronbach alpha value of the 20-item scale was found 0.819. For the subscales, the reliability scores were found as follows: lack of time 0.981, social effect 0.921, lack of energy 0.854, lack of will 0.773, fear of injury 0.862, lack of skill 0.875 and lack of resources 0.816. Independent variables were evaluated using MANOVA analysis which revealed that the main effect of the variable “age” is significant in all subscales of ALCS, the main effect of the variable “gender” is significant in “social effect”, “lack of will” and “lack of skill” subscales, the main effect of the variable “body mass index” is significant only in “lack of energy” subscale. It is determined that 45-54 years of age group has the highest scores from the subscales “lack of time”, “lack of energy” and “lack of will” of ALCS in terms of age variable. When gender variable is considered, it is determined that both women and men have high scores from “lack of energy” subscale. When body mass index variable is considered, overweight participants have the high scores from “lack of energy” subscale. Finally, it could be suggested that the most important factors that constrain adults from an active life are “lack of energy”, “lack of time” and “lack of will”

Introduction:

In the recent years, the importance of physical activity has been frequently emphasized to remind that the elderly are a productive part of the society, to reduce the disabilities, injuries and illnesses to minimum and to help them maintain an independent life (Soyuer *et al.*, 2012). Old age is a nature process of life, and every living creature will experience this period. Going through this process physically active as much as possible is thought to increase the quality of life of individuals (Rejeski *et al.*, 2002).

Physical activity includes activities that are carried out as a part of daily life. Physical activity is also defined as an alterable behavioral risk factor related to quality of life and health in elderly population. Aging generally combines with a decreased level of physical activity and physical

fitness; consequently, aging aggravatedly causes a lesser amount of physical activity and a greater amount of decreased physical fitness cycle (Meijer *et al.*, 1999). Physical activity is defined as the body movements produced by skeletal muscles resulting in burning off calories. Since burning calories is related to energy consumption, it helps decrease the body weight, and thank to that, illnesses such as obesity, diabetes and coronary artery diseases can be prevented (Erbs *et al.*, 2010).

Although none of the physical activity types can stop the biological aging process, there are evidences showing that regular exercise can minimize the physiological effects of a sedentary life style, and limit the development and improvement of chronic diseases and injuries; and increase the active life expectancy. Furthermore, there are studies

revealing the psychological and cognitive benefits of regular exercise participation for elderly population in the literature (Chodzko-Zajko *et al.*, 2009).

In the study conducted by Lear *et al.* (2016), the results obtained from the individuals who constitute both the wealthy and poor parts of the society, being physically active both expand the life-span and decreases the risk of disease. Kara *et al.* (2018) also concluded in their study that participation in regular physical activities has a significant effect on their existing potential to use social communication. The American College of Sports Medicine and American Heart Association suggest that scientific evidences show a regular and intermediate level physical activity provide with significant benefits for health. In the light of results, National Physical Activity Committee developed a guideline, and recommended that each American adult should do intermediate level physical activity at least 150 minutes or more every week (Fleg *et al.*, 2005).

According to Turkish Nutrition and Health Research, while the rate of the ones who have never done exercise before is respectively 41.4% and 44.6% for 12-14 years of age and 15-18 years of age males, it is determined that this rate increases respectively to 69.5% for 19-30 years of age, 73.2% for 31-50 years of age and 83.7% for 75+ years of age. In terms of females, the rate of the ones who have never done exercise increases with age, and it is observed that the rate is 69.8% for 12-14 years of age, 72.5% for 5-18 years of age, 76.6% for 19-30 years of age and 88.0% for 75+ years of age. According to Risk Factors for Chronic Diseases Research, 87% of women and 77% of men across the country do not do physical activity sufficiently. In another study with 65+ individual; on the other hand, it is determined that only 30% of the participants go walking (Demirel *et al.*, 2014).

When the literature is reviewed, it is understood that sedentary lifestyle is a public health problem due to its adverse effects on health (DiSantis *et al.*, 2013; Schembre *et al.*, 2015; Spartano *et al.*, 2019). The obtained actual data show that 23% of the adults across the world do not meet the global physical activity recommendations. Therefore, physical inactivity is defined as the biggest public health problem and a pandemic of 21st century (Koz, 2018). Inactive lifestyle is on the top of the problems for a modern community that does their daily shopping online on their personal computer or smart phones.

Although technological improvements make life easier in a sense, in the long term the number of inactive individuals increase and this affects health adversely. Physical inactivity which is one of the common risk factors of chronic diseases appears in the fourth rank (6% of the deaths in the entire world) in the ranking for the risk factors causing death (Demirel *et al.*, 2014). Although the benefits of doing physical activity on a regular basis is well known, it is determined in a study conducted in 15 European country

that participation in regular physical activity which is recommended is less than 50% (Rütten & Abu-Omar, 2004). In order to gain the benefits from physical activities, being active should become a part of daily routine. Physical activities, which are regular, in a designated duration and frequency and continues throughout the life, improves and enhances both individual and public health. It is reported that individuals who lead an inactive lifestyle should start physical activities for short durations and should improve gradually (Chou *et al.*, 2012). Several physical and environmental factors may restrain individuals from participating in physical activities (Paterson *et al.*, 2007).

Families and friends may behave as good or bad models, or they can accompany individuals during physical activity. Especially physical environment can pose an obstacle for individuals in physical activity participation or during physical activity. Environment where people live can be deprived of transportation to the areas to do physical activity (Peeters & Mets, 1996). A successful aging process can be affected by several factors which are caused by physical, functional, psychological and social health as a multiple and multicausal situation (Phelan *et al.*, 2004). It is reported that regular physical activity has a positive effect on one of the quality of life areas in adults (Rejeski *et al.*, 2002). The results of the research on this issue reveals that attending to physical activities such as recreational activities in leisure have some benefits; however, it is also determined that attending to only special exercises will lead to better physical functions (Penedo & Dahn, 2005; Lubans *et al.*, 2016).

It is known that physical activity can prevent premature death, cardiovascular diseases and some cancer types. The half of the all physical regression that combines with aging can be prevented if the physical activity can be maintained in a desired level (Camarri *et al.*, 2006). Despite the increasing evidences about benefits of the exercise, the rate of people who do regular exercise in their 65 or later years is less than 40%, and the majority of elderly population is too sedentary to obtain these benefits (Watson *et al.*, 2016).

It can be seen that physical activity plays an important role among the factors that affect the mobility and quality of life of the elderly population. Unfortunately, the studies testing the potential benefits of physical activity and its relationship with quality of life, and multivariate problems related to proceeding of aging in different terms are scarce in number. In the light of the actual studies in the literature, it is revealed that adults lead an inactive life in general. The aim of this study is to determine the constraints related to living an active life in terms of adult population.

Materials and Methods:

In the current study, scanning method which determines the opinions or features such as skills, interests, or attitudes of a study group (Büyüköztrük *et al.*, 2017) was used. A total

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of 721 individuals residing in Manisa and Izmir who were selected by simple random sampling method participated for the confirmatory factor analysis for the scale; on the other hand-, for the scanning model application, 2588 females (57%) and 2155 males (43%) in total 5010 individuals whose age range is between 45 (n=333 6.6%) and 86 (n=13 0.3%) voluntarily participated.

Data Collection: in the study, “Constraints Related to Being Active Questionnaire” developed by Heath (2009) and translated into Turkish language by Isintas Arik (2018) was used as a data collection tool. The measuring tool was evaluated in terms of language comprehensibility by a pilot study on 30 participants, and as a result, the title of the scale was decided as “Active Life Constraints Scale”. The original scale which has 21 items and 7 subscales, formed with 0-3 points in four-point likert type was brought into use of Turkish samples. In the study, it was seen that the scale consisted of 20 items and 7 subscales (15th item was excluded) as a result of the confirmatory factor analysis. Since the corrected item-total correlation (-0.369) was affected negatively in reliability analysis, when 15th item was excluded, the reliability increased. The scale was given to the participants by hand. Voluntary participation principle was also considered. In the instructions, detailed information about how to fill in the form was given. In the current study, Constraints Related to Being Active Questionnaire has been used for the first time on adults; therefore, reliability analysis (Cronbach Alpha), content validity (27% low-high group analysis) and Confirmatory Factor Analysis (CFA) were conducted. Exploratory Factor Analysis (EFA) had been developed by Cengiz et.al. before, and the subscales had been determined, the translation had been completed and applied on a young sample; therefore, EFA was not conducted. Only Cronbach Alpha, item analysis and CFA were conducted to determine the reliability and validity for 45+ adults. The analysis showing that the use of the scale on Turkish adult samples between 45-86 is convenient is presented below.

Table*1: Subscale and Overall Scale Reliability Analysis of Constraints Related to Being Active Questionnaire

n=721	a	b	c	d	e	f	g	h
α	.981	.921	.854	.773	.862	.875	.816	.760
Number	2	3	3	3	3	3	3	20

a-LackofTime;b-SocialEffect;c-LackofEnergy; d-LackofWill; e-FearofInjury;f-LackofSkill;g-AccessToResources; h-TotalItem

In table-1, the Cronbach Alpha reliability analysis for CRBAQ is presented. As a result of the reliability analysis, it can be seen that each subscale and overall items are $\alpha > 0.70$. As per the result, it is determined that CRBAQ is a reliable measurement tool for the Turkish adults between 45-86.

In table 2, the comparison of low-high score groups of 27% for Constraints Related to Being Active Questionnaire is presented. When the 27% low and 27% high item means

which are formed according to the overall item scores of the scale are examined, the 27% low score mean (1.72 ± 1.047) of 15th item was found higher than 27% high score mean ($.80 \pm .709$). When the remaining 20 items' 27% low score and 27% high score differences were compared, a significant difference was determined. Hereunder, the remaining 20 items show distinctiveness between the 27% low score and 27% high scores.

Table 2: Comparison of L-H Score Groups (Low / High) of 27% for Constraints Related to Being Active Questionnaire

Sport		n	x	s	sd	t	p
Item 1	L %27	1352	1.36	1.004	2324.633	-35.797	.000
	H %27	1352	2.53	.655			
Item 2	L %27	1352	1.1598	.98000	2388.751	-37.514	.000
	H %27	1352	2.3713	.67063			
Item 3	L %27	1351	1.6188	.98533	2358.413	-25.777	.000
	H %27	1352	2.4504	.66010			
Item 4	L %27	1352	1.5688	1.02724	2423.922	-24.780	.000
	H %27	1352	2.4149	.72198			
Item 5	L %27	1352	1.5348	1.00641	2534.292	-26.096	.000
	H %27	1352	2.4357	.77355			
Item 6	L %27	1352	1.2515	1.01305	2462.830	-30.915	.000
	H %27	1352	2.3033	.73390			
Item 7	L %27	1352	1.2204	1.00933	2536.930	-32.018	.000
	H %27	1352	2.3299	.77759			
Item 8	L %27	1352	1.3720	.99884	2329.215	-35.288	.000
	H %27	1352	2.5178	.65385			
Item 9	L %27	1352	1.0318	1.03943	2375.529	-37.842	.000
	H %27	1352	2.3240	.70428			
Item 10	L %27	1352	1.5377	1.01655	2241.170	-28.212	.000
	H %27	1352	2.4527	.62336			
Item 11	L %27	1352	1.5244	.99339	2457.366	-23.270	.000
	H %27	1352	2.2996	.71656			
Item 12	L %27	1352	1.3698	.99484	2507.566	-25.070	.000
	H %27	1352	2.2182	.74738			
Item 13	L %27	1352	1.2152	.99233	2502.917	-32.826	.000
	H %27	1352	2.3217	.74261			
Item 14	L %27	1352	1.2049	1.02459	2528.453	-29.540	.000
	H %27	1352	2.2411	.78352			
Item 15	L %27	1352	1.7241	1.04739	2375.266	26.571	.000
	H %27	1352	.8099	.70953			
Item 16	L %27	1352	1.1893	.97925	2350.640	-37.694	.000
	H %27	1352	2.3950	.65130			
Item 17	L %27	1352	1.5584	.99346	2257.726	-30.840	.000
	H %27	1352	2.5392	.61677			
Item 18	L %27	1352	1.5666	.97489	2522.016	-23.449	.000
	H %27	1352	2.3476	.74140			
Item 19	L %27	1352	1.4379	.97670	2518.472	-25.916	.000
	H %27	1352	2.3018	.74053			
Item 20	L %27	1352	1.2382	.98595	2529.009	-31.722	.000
	H %27	1352	2.3092	.75434			
Item 21	L %27	1351	1.2413	1.00271	2575.484	-28.269	.000
	H %27	1352	2.2286	.80173

Table-3: ModelDataFitValuesofALCS

RMSEA	NFI	NNFI	CFI	IFI	GFI	SRMR
.043	.95	.97	.97	.97	.95	.033

Several fit indices are used in order to determine the competence of the model tested through confirmatory factor analysis. Since the fit indices have strengths and weaknesses between each other in evaluating the goodness between theoretical model and real data, it is suggested that various fit indices be used in order to reveal the goodness of the model. It is seen that the most frequently used ones among them are Chi-Square Goodness, Goodness of Fit Index (GFI), Adjusted Goodness of Fit Indexes (AG-FI), Comparative Fit Index (CFI), Normed Fit Index (NFI), Root Mean Square Residuals (RMR or RMS) and Root Mean Square Error of Approximation (RMSEA).

Table 4: Confirmatory Factor Analysis Results for Model Fit Index Values of ALCS

Fit Indices	Acceptable fit	Perfect Fit	Obtained Values
NFI	=.90 and over	=.95 and over	.95
NNFI	=.90 and over	=.95 and over	.97
IFI	=.90 and over	=.95 and over	.97
CFI	=.90 and over	=.97 and over	.97
GFI	=.85 and over	=.90 and over	.95
AGFI	=.85 and over	=.90 and over	.94
RMR	=.50 and <.50	=.80 and <.80	.032
RMSEA	=.50 and <.50	=.80 and <.80	.043
χ^2/sd	Less than =3		342.44/149=2.29

The confirmatory factor analysis results for ALCS conducted with 721 adults is presented in the Table 2. The χ^2/sd rates which are accepted as overall model fit remained in complete fit values with 342.44/149=2.29. Moreover, Root Mean Square Error of Approximation (RMSEA) value is 0.043, and Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Goodness of Fit Index (GFI) displayed perfect fit indices. The scale which is obtained as a result of confirmatory factor analysis consists of 20 items and 7 subscales, and the Cronbach Alpha value of the scale is .819. Therefore, the results show that the measurement tool can be used as a reliable and valid tool in the adult population with its subscale and total scores.

Data analysis: on the obtained data, SPSS 21 & LISREL 8.54 package programs were used. In the evaluation of the scale data, Confirmatory Factor Analysis (CFA), Descriptive statistics, Cronbach Alpha Coefficient, Skewness & Kurtosis, Levene (homogeneity) and MANOVA were used.

Results:

For 7 subscales, the Cronbach Alpha internal consistency coefficients range between .981 (lack of time) and .773 (lack of will). The total score of the scale is .819. Considering this result, it can be said that the measurement tool is reliable for measuring. Furthermore, it is determined that the first factor to constraint the active life is "lack of

energy" (mean=206) followed respectively by "lack of time" (mean=1.99), "lack of will" (mean=1.96), "fear of injury" (mean=1.89), "social effect" and "lack of skill" sharing the same mean (mean=1.79) and "access to resources" (mean=1.72).

Table 4: Distribution of Scale Scores

	#	N	Mean	Sd	Skewness	Kurtosis	Min.	Max	Alpha
ALCS	20								.819
LT	2	5010	1.99	.962	-.663	-.611	.00	3.00	.981
SE	3	5010	1.79	.930	-.606	-1.064	.00	3.00	.921
LE	3	5010	2.06	.798	-.895	-.340	.00	3.00	.854
LW	3	5010	1.96	.784	-.789	-.523	.00	3.00	.773
FI	3	5010	1.89	.850	-.634	-.962	.00	3.00	.862
LS	3	5010	1.79	.889	-.413	-.909	.00	3.00	.875
AR	3	5010	1.72	.874	-.377	-1.209	.00	3.00	.816

ALKS-Active Life Constraints Scale; LT-Lack of Time; SE-Social Effect; LE-Lack of Energy; LW-Lack of Will; FI-Fear of Injury; LS-Lack of Skill; Ar-Access of resources

Overall scale alpha coefficient is higher than 0,70 proves the reliability of the scale; however, the subscale score should be higher than .40. That the N is more than 200 shows that it is in the confidence interval when alpha coefficients are considered (Çokluk *et.al.*, 2012).

As MANOVA results displays, "gender" variable has a significant main effect on the subscales of Active Life Constraints Scale [$\lambda=0.959$, $F_{(21, 14357)}=10.071$; $p<.001$; $\lambda^2_p=0.14$; power=1]. In order to understand which dependent variable contributes to the multiple variable significance, ANOVA analysis were evaluated separately. Significant differences occurred in all subscales in terms of gender.

Table-6: Distribution of scale scores according to age groups

45-54	55-64	65-74	75<								
M	SD	M	SD	M	SD	M	SD	$F_{(3,3006)}$	p	η^2	Power
Lack of Time											
2.16	0.87	1.94	1.02	1.93	0.95	1.80	1.07	28.927	0.000	0.017	1.000
Social Effect											
1.90	0.89	1.65	0.98	1.78	0.93	1.88	0.90	20.513	0.000	0.012	1.000
Lack of Energy											
2.10	0.79	2.09	0.79	1.96	0.81	2.08	0.81	9.144	0.000	0.005	0.997
Lack of Will											
2.02	0.76	1.94	0.82	1.93	0.77	1.92	0.82	5.307	0.001	0.003	0.933
Fear of Injury											
1.93	0.84	1.86	0.85	1.91	0.84	1.84	0.91	2.718	0.043	0.002	0.663
Lack of Skill											
1.89	0.85	1.74	0.90	1.76	0.94	1.75	0.85	9.919	0.000	0.006	0.998
Access of resources											
1.81	0.84	1.71	0.88	1.66	0.91	1.65	0.85	10.244	0.000	0.006	0.999

When the distribution of scale score means are considered in terms of age groups, "lack of time" has the highest score in 45-54 age group adults (mean=2.156), and "lack of energy" has the highest scores in 55-64 age group (mean=2.088), 65-74 age group (mean=1.959) and 75+ age group (mean=2.084). It is seen that the highest score for lack of time is in 45-54 age group, and as the age increases, the scores of this subscale decreases. When the distribution

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of subscale score of Lack of Time are considered in terms of age groups, MANOVA results show that all the age groups, except for 55-64 age group and 65-74 age group ($p \geq 0.05$), have a significant correlation between them ($p \leq 0.05$).

When the distribution of subscale score of Social Effect are considered in terms of age groups, it is determined that all the age groups, except for 45-54 and 75+ age group ($p \geq 0.05$), have a significant correlation ($p \leq 0.05$).

When the distribution of subscale score of Lack of Energy are considered in terms of age groups, it is determined that there is a significant correlation between 65-74 age group and 45-54 age group, and between 55-64 age group and 75+ age group ($p \leq 0.05$); however, no significant correlation was found between other groups.

When the distribution of subscale score of Lack of Will are considered in terms of age groups, it is determined that there is a significant correlation between 45-54 age group and 55-64 age group and between 65-74 and 75+ age group ($p \leq 0.05$); nevertheless, no significant correlation was found between other groups.

When the distribution of subscale score of Fear of Injury are considered in terms of age groups, it is determined that no significant correlation was found between the subscales.

When the distribution of subscale score of Lack of Skill are considered in terms of age groups, it is determined that there is a significant correlation between 45-54 age group and 55-64 age group and between 65-74 age group and 75+ age group ($p \leq 0.05$); however, no significant correlation was found between other groups.

When the distribution of subscale score of Access to Resources are considered in terms of age groups, it is determined that there is no significant correlation between 55-64 age group and 65-74 age group and between 65-74 age group and 75+ age group ($p \leq 0.05$); however, there is a significant correlation between other age groups ($p \geq 0.05$).

Table 7: Distribution of scale scores according to gender

Measure	Female=2855		Male=2155		$F_{(3,5006)}$	p	η^2	Power
	M	SD	M	SD				
LT	2.00	0.95	2.00	0.98	0.306	0.580	0.000	0.086
SE	1.82	0.92	1.77	0.94	4.05	0.044	0.001	0.521
LE	2.05	0.81	2.07	0.78	1.26	0.261	0.000	0.202
LW	1.94	0.79	2.00	0.78	6.30	0.012	0.001	0.709
FI	1.90	0.84	1.88	0.86	0.41	0.519	0.000	0.099
LS	1.77	0.90	1.83	0.87	5.34	0.021	0.001	0.637
AR	1.71	0.89	1.75	0.86	2.16	0.142	0.000	0.312

LT-Lack of Time; SE-Social Effect; LE-Lack of Energy; LW-Lack of Will; FI-Fear of Injury; LS-Lack of Skill; AR-Access of resources

As a result of the data analysis, when the distribution of subscale scores according to gender are examined, there is a significant correlation between gender in the “social effect”, “lack of will” and “lack of skill” subscales ($p \leq 0.05$).

When the scale mean score distributions are examined in terms of body mass index groups, the lack of energy mean of the individuals with normal weights

($M=2.01 \pm 0.81$) is found significantly lower than both the overweight ($M=2.08 \pm 0.79$) and obese ($M=2.07 \pm 0.80$) groups' mean scores. On the other hand, no significant difference was found in other subscales.

Table 8: Distribution of Scale Scores According to Body Mass Index

	Normal (Nor); Over Weight (OWt); Obese									
	Nor=1302		OWt=2780		Obese=928		$F_{(3,5006)}$	p	η^2	Power
	M	SD	M	SD	M	SD				
LT	1.99	0.93	2.02	0.96	1.94	1.02	2.397	0.091	0.001	0.486
SE	1.83	0.92	1.80	0.93	1.76	0.93	1.701	0.183	0.001	0.360
LE	2.01	0.81	2.08	0.79	2.07	0.80	4.037	0.018	0.002	0.722
LW	1.95	0.78	1.98	0.79	1.95	0.79	1.070	0.343	0.000	0.239
FI	1.89	0.85	1.89	0.85	1.90	0.84	0.054	0.947	0.000	0.058
LS	1.78	0.91	1.80	0.89	1.82	0.85	0.775	0.461	0.000	0.183
AR	1.70	0.90	1.74	0.87	1.72	0.86	0.538	0.558	0.000	0.148

LT-Lack of Time; SE-Social Effect; LE-Lack of Energy; LW-Lack of Will; FI-Fear of Injury; LS-Lack of Skill; AR-Access of resources

Discussion:

The literature related to the findings of the study which aims to determine the constraints to active life of adults and to compare these in terms of certain demographic variables (gender, age, BMI) is reviewed in this section. According to the study results, the variable “age” has a significant main effect on the subscales of Active Life Constraints Scale. When the scores of “lack of time” subscale is considered, it is determined that there is a significant correlation between all subscales except for 55-64 age group and 65-74 age group. This situation stems from the fact that 45-54 age group is in the active work life at that period of their lives; therefore, their scores for “lack of time” is understandably high whereas the scores of 55-64 age group and the other age groups gradually decreases since these adults are generally in either the newly retired population or in the period that covers the later parts of retirement. Gray *et al.* (2018) conducted a qualitative research on adults who are 50 years of age and above about their perception of exercise constraints. The study revealed that time constraints are a big problem among seniors since they have other businesses to attend to such as taking care of grandchildren. The situation in Turkish population of adults and seniors are indeed similar. It can be observed in daily life that the working class lacks time because of their heavy load of work and the retired population are busy with taking care of their grandchildren. It is also essential to point out that when doing exercise is not habitual, it is hard to make time for physical activities and turn it into a habit. According to Parra *et al.* (2019), the adults find it difficult to make time for exercise and report time commitment as a constraint. Similarly, “lack of energy” subscale scores also decreased; however, the lowest value was obtained in 65-74 age group. However, the other age groups are mostly among work force; therefore, it is sometimes hard for the working class to find energy to do exercise due to their work schedule.

Also, in the literature, there are qualitative studies with adults who reported fatigue as a constraint (Gray *et al.*, 2018; Vader *et al.*, 2019) which generally causes lack of energy resulting in avoiding exercise. McPhail *et al.* (2014) also found out in their study with people with musculoskeletal disorders that the participants whose mean age was 53 found it difficult to do exercise because they lacked the energy to do so. With aging process comes the perceived fatigue. The elderly finds it difficult to do what they could do many years ago because they feel tired and their muscles do not function as they used to function.

This is a very common theme in almost every culture. It is also found out that “social effect” and “lack of will” subscale scores decreased as the ages of the participants increased. This might be caused by the fact that the effect of social life decreases with old age and the individuals become more in control of their wills. In the literature, there are many studies suggesting that the physical activity levels of men are higher than women (Ölçücü *et al.*, 2015; Polat & Simsek, 2015). In the current study, it is determined that there is a significant correlation between genders in the subscales “social effect”, “lack of will” and “lack of skill” of Active Life Constraints Scale. These results can be evaluated as gender is a determining factor for constraints that are brought forward in terms of participation in physical activity and maintaining a more active life. Another finding of the current study is that “body mass index” has a significant main effect on the subscales of Active Life Constraints Scale. The means of “lack of energy” subscales of the individuals in normal weight group is significantly lower than both overweight and obese participants. In other subscales, no statistically significant difference was found. In the literature, no correlation between the level of physical activity and BMI was found in many studies (Savci *et al.*, 2006; Hallal & Ark, 2003; Raustorp *et al.*, 2004). Physical activity is important in terms of prevention of weight-gain; however, it is not effective in decreasing body weight alone. Physical activity is only one of the factors that are included in the body weight control programs. In addition to that, physical activity has a health protective effect thanks to metabolic adaptations without a change in the body weight (Raustorp *et al.*, 2004). Therefore, it is natural to find studies showing no correlation between the level of physical activity and BMI. However, in the current study, it is determined that the BMIs of the participants put forward “lack of energy” as a constraint to active life. Considering these results, it can be said that as the BMIs of participants increase, their levels of energy that is needed for an active life decrease, and they perceive this situation as a constraint.

As a result, it can be said that according to gender variable, “social effect”, “lack of will” and “lack of skill” are the constraints to active life whereas according to body mass index, the most important factor for normal, overweight

and obese participants is “lack of energy” as a constraint to active life.

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