Does Gender Affect Subjective Well-Being? The Case of Turkey[†]

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Abstract

Significant differences in social and economic resources exist between genders in the world as well as in Turkey. These differences have definite potential to affect life satisfaction, a specific aspect of subjective well-being. Measuring and analyzing the impact of gender differences in subjective well-being are very significant for societies in defining efficient and effective policies to reduce social inequalities and to dampen the gap in the quality of life between genders. Hence, the purpose of this study is to estimate the effect of gender difference on subjective well-being between men and women in Turkey, using panel ordered probit models, and provide policy suggestions to increase the quality of life and reduce the differences in subjective well-being between genders. Findings suggest that significant differences in subjective well-being exist in Turkey and marital status, college education, social rights, government transparency are significant variables affecting subjective well-being. Dissemination of college education, better social rights, increasing government transparency appears likely to increase the level of social well-being in Turkey.

Keywords: Subjective well-being, gender, Turkey

JEL Codes: C21, D63, I30

1. Introduction

In the recent years the literature on subjective well-being (SWB) has increased rapidly. Along with developing and changing living conditions, the level of (SWB) for people also changes. Subjective well-being, life satisfaction and happiness are generally considered within the same concept in the literature. The term subjective well-being can be represented as the individual's answer to the questions of "how happy you are?" or "how much he or she is satisfied in his or her life?" Joshi (2010) indicates that a high level of SWB produces some good results such as working more efficiently and creatively, having better immune systems and living longer, becoming more successful, etc. In general, various environmental, social and economic factors can be cited as the reasons affecting subjective well-being and the level of individual life satisfaction.

Life satisfaction can differ by gender since significant differences of social capital and financial resources exist between genders. Individual endowment inequalities are in favor of men. However, the literature so far has generally neglected the effect of the gender differences in subjective well-being. One may attribute this to the fact that men and women are happy in different circumstances. As Batz and Tay (2018) illustrate, gender difference in SWB is a long-standing research interest and the literature on gender differences in SWB has produced mixed results. Some studies (e.g., Tay et al. (2014), Pinquart and Sörensen (2001) and Inglehart (2002)) have found significant gender differences in SWB, while some other studies (e.g., Clemente and Sauer (1976) and Zuckerman et al. (2017)) have reported no significant differences between men and women in the level of SWB. Social life, family life, work conditions, cultural differences and social environment clearly affect the scores of subjective well-being. Hence, the analysis and measurement of gender differences in SWB are very significant for societies in defining efficient and effective policies to reduce social inequalities and to improve the quality of life for both genders

The purpose of this study is to estimate gender differences in subjective well-being and investigate what kind of variables affect the level of SWB for men and women in Turkey. In the next section we present the related literature. Then, section three discusses the data and methodology. Section four presents the findings of the analysis. Finally, the last section will conclude by drawing some policy recommendation which hopefully will open a new window for policymakers.

2. Related Literature

Researchers that investigate whether women and men have different levels of SWB provide some mixed results. Batz and Tay (2018), discussed the gender discrimination approach in the literature by compiling the results of studies on this subject. They suggest that the literature lead inconsistent findings by conflating the three components of SWB (*Life Satisfaction, Positive and Negative Effect*) and propose that the effects on the components of SWB should be analyzed separately in order to avoid some potential problems. Batz and Tay (2018) conclude that complexities occur while proving gender differences in SWB just because some studies have found a significant difference and some have not. Stevenson and Wolfers (2009) examine the trend of "happiness" in the United States between years 1972 and 2006. They demonstrate that women are less happy than men in both absolute and relative measurements. The authors also report that well-being is flat for men, but it is declining for women in the time period examined.

Winkelmann (2005) uses a panel ordered probit model to demonstrate interdependence within the family in terms of well-being for the period of 1984-1997. His contribution is mainly methodological, employing the maximum likelihood method for parameter estimates. The author conclude that long term well-being among the family members is highly correlated. The study also illustrate that the well-being correlations among siblings are higher than those of among spouses.

Chang (2011) approach the topic by examining the relationship between genders' preferences, behavior and subjective well-being. He specifically focuses on women's role in family, political stance and labor market status, considering the gender identity model described by Akerlof and Kranton (2000). The study examines whether gains or losses in gender identity cause any increase or decrease in SWB. The estimation process is carried out with two-stage model for identity and happiness equations respectively. The author first estimates the gender identity and uses the fitted values in the second equation to estimate the effect of gender identity on happiness. The results suggest that the ideal gender role women choose has a significant effect on their happiness.

Tesch-Römer, Motel-Klingebiel and Tomasik (2008) examine the gender inequality in SWB and test the relationship between societal gender inequality and size of the gender difference in SWB, considering different societies. Results show that the size of gender

differences change according to cultural attitudes regarding gender differences in different societies. Pinquart and Sörensen (2001), study the gender differences in well-being with meta-analysis for individuals over the age of 55. Focusing on gender differences in life satisfaction, the authors find that older women have lower life satisfaction than older men.

Inglehart (2002) research on SWB shows that the level of happiness depends on the age groups both for women and men. The results indicate that women have higher levels of happiness than men for younger groups. For middle aged groups there is no significant gender difference in the level of happiness, and for the older groups, men have higher levels of happiness than women.

3. Data and Method

3.1. Data and variables

The data used in this study include three independent *Income and Living Conditions Survey* conducted by the Turkish Statistical Institute (TurkStat) in the years 2014, 2015 and 2016. The income and living conditions surveys are conducted as random sampling in each year. The dependent variable is the ranking of self-declared life satisfaction of men and women separately (very satisfactory =1, satisfactory =2, moderate=3, unsatisfactory=4, very unsatisfactory=5). In this study the dependent variable is reorganized in three categories (1= very satisfactory, satisfactory, 2= moderate, 3= unsatisfactory, very unsatisfactory). The scope of the analysis is limited to household heads. The total number of observations utilized is 12018. The share of female and male household heads in Turkey is 33% and 67% respectively.

Some issues such as socio-economic factors, family types, biological factors and individual differences in lifestyle can be counted as sources of gender differences in SWB. Women and men can have different social expectations, and hence, could be inclined to have different gender roles in their social lives. Age, household size, income and educational level are some of the important determinants in SWB studies. The economic conditions, receiving social welfare benefits through marital status or disability, implementation of social rights etc. in the country may also have significant effects on SWB. Therefore, some variables such as social and economic expectations, some interaction variables (shown in Table 1) and hobbies are also included as independent variables in the study, in addition to age, income, education and household size. The description of variables used in the study are given in Table1.

Table 1. The definition of variables

Dependent Variable	Definition
Life Satisfaction of household head	1. Very satisfactory, satisfactory
	2. Moderate
	3. Very unsatisfactory, very unsatisfactory
Independent Variables	
Age	Household head's age
Age(sq)	Household head's age square
Gender	Equals 1 if household head is male, zero otherwise
Hsize	Household size
Income1	Equals 1 if income is between 0-1692 TL, zero otherwise (reference) for 2014 Equals 1 if income is between 0-1814 TL, zero otherwise (reference) for 2015 Equals 1 if income is between 0-1953 TL, zero otherwise (reference) for 2016
Income2	Equals 1 if income is between 1693-3471 TL, zero otherwise for 2014 Equals 1 if income is between 1815-3721 TL, zero otherwise for 2015 Equals 1 if income is between 1954-4005 TL, zero otherwise for 2016
Income3	Equals 1 if income is higher than 3472 TL, zero otherwise for 2014 Equals 1 if income is higher than 3721 TL, zero otherwise for 2015 Equals 1 if income is higher than 4006 TL, zero otherwise for 2016
Marital	Equals 1 if individual is married, zero otherwise
Widowed/divorced	Equals 1 if individual is widowed /divorced, zero otherwise (reference)
Widowed/divorced*age	
Widowed/divorced*gender	
Single	Equals 1 if individual is single, zero otherwise(reference)
Single*gender	
Single*age	
Education0	Equals 1 if individual's education level is below primary school or primary school, zero otherwise (reference)
Education1	Equals 1 if individual education level is secondary school, zero otherwise
Education2	Equals 1 if individual education level is high school, zero otherwise
Education3	Equals 1 if individual education level is university, zero otherwise
Disabled*Age	The age of disable person (interaction variable)
Retired*Age	The age of retired person (interaction variable)

Table 1. The definition of variables, continue

Independent Variables	
CountryEconomyEx	Equals 1 if individual thinks that the economic situation of the country will change positively in next 5 years, zero otherwise
SocialRigthsEx	Equals 1 if individual thinks that the country will change positively in terms of social rights and freedoms in the next 5 years, zero otherwise
GovTransparencyEx	Equals 1 if individual thinks that the country will change positively in terms of management transparency in next 5 years, zero otherwise
RespectFamilyLife	Equals 1 if individual thinks that a proper family life comes first in order to be respected in society, zero otherwise
RespectMoney	Equals 1 if individual thinks that money (or financial situation) comes first in order to be respected in society, zero otherwise
IntSport	Equals 1 if individual is interested in sport, zero otherwise
IntCulture	Equals 1 if individual is interested in culture, art and literature, zero otherwise
IntNature	Equals 1 if individual is interested in nature, zero otherwise
IntPolitics	Equals 1 if individual is interested in politics, zero otherwise
IntReligion	Equals 1 if individual is religious, zero otherwise
PovertyProb	Equals 1 if individual thinks that the poverty is the most important problem of the country, zero otherwise

3.2. Method

The dependent variable in the study is an ordinal variable, therefore, we use an ordered probit model. Considering the latent variable y_{it}^{*} and the observed variable y_{it},

$$y_{it}^{*} = x_{it}\beta + \mu_i + \varepsilon_{it}, \quad \varepsilon_{it} \text{ is } IIDN(0,\sigma^2) \quad y_{it} = k \Leftrightarrow \tau_{k-1} < y_{it}^{*} \leq \tau_k$$

Where $i=1, 2, N$ individuals, $t=2014, 2015, 2016$, μ_i is individual effect. Letting $\Phi(.)$ denote the cumulative distribution function. The probability of a single observation for the dependent variable can be written as

$$P(y_{it}^{*} = k \mid \tau, x_{it}, \mu_i) = P(\tau_{k-1} < x_{it}\beta + \mu_i + \varepsilon_{it} \leq \tau_k) = P(\tau_{k-1} - x_{it}\beta - \mu_i) < \varepsilon_{it} \leq P(\tau_k - x_{it}\beta - \mu_i)$$

$$= P(\tau_k - x_{it}\beta - \mu_i) - P(\tau_{k-1} - x_{it}\beta - \mu_i) = \Phi(\tau_k - x_{it}\beta - \mu_i) - \Phi(\tau_{k-1} - x_{it}\beta - \mu_i)$$

Before estimating models for SWB, we run a pooled ordered probit model to test the differences in SWB by gender using the likelihood ratio test. The result is summarized in Table 2. The unconstrained model includes a constant, gender and the variables that interact with gender which are gender*widowed/divorced, gender*single and gender*age. The null

hypothesis that all slope coefficients are simultaneously equal to zero is rejected at %1 significance level. So, it is clear that the level of SWB changes by gender in Turkey.

Table 2. Testing the gender difference

Hypotheses	$LogL_R$	$LogL_{UR}$	LR	$\chi^2_{(4,0.01)}$
H_0: All slope parameters equal to zero	-11530.634	-11578.234	95.2	13.28
H_1: At least one is nonzero				

$LogL_R$, $LogL_{UR}$ and LR are restricted and unrestricted models of Log Likelihood and likelihood ratio test respectively.

4. The Results

The summary statistics for household life satisfaction and the descriptive statistics of variables for female and male household heads are reported in Table 3 and Table 4 below, respectively. The number of observations for female household heads is 3968, and it is 8051 for male household heads. The mean ages of female and male household heads and the corresponding household sizes are 49.08, 48.70 and 2.89, 2.75, correspondingly.

Table 3. Household life satisfaction in Turkey

The level of life satisfaction	Overall %	Women %	Men %
Very satisfactory, satisfactory	54.03	51.68	55.18
Moderate	33.00	33.20	32.92
Very unsatisfactory, unsatisfactory	12.97	15.12	11.90
Total	100.00	100.00	100.00

According to the Table 3, 54.03% of the all respondents are very satisfied or satisfied, 33% are neither satisfied nor unsatisfied and 12.97% are very unsatisfied or unsatisfied with their lives in Turkey. Similarly, 51.68% of the female household heads are very satisfied or satisfied, while 33.2% female respondents are neither satisfied nor unsatisfied, and 15.12% are very unsatisfied or unsatisfied with their lives in Turkey. The summary statistics for male household heads are similar to those of overall life satisfaction ratios for Turkey and provided in the last column of Table 3. The ratios in the table indicate that **male household heads tend to be mildly better satisfied with their lives than female household heads.**

Because the most variables in Table 4 are dummy variables, they indicate the ratio of female and male household heads in a particular category. For example, 28% of the female household heads is in income2 category while 11% is in income3 category. Hence, 61% of the female household heads are in the self-reported lowest income category (income1). These ratios

are similar for the male household heads with slightly higher ratio for the lowest income category at 64%. Overall, male household heads appear to be better educated than female household heads with only 7% being in the lowest base educational category (Education0 in Table 1). The same ratio for female household heads stands at 28%, four times the ratio of their male counterparts.

Table 4. The descriptive statistics of variables

	Female household head		Male household head	
Variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
Age(sq)	2408.85	1781.70	2371.69	1547.11
Hsize	2.89	1.66	2.75	1.62
Income2	0.28	0.45	0.26	0.44
Income3	0.11	0.32	0.10	0.30
Education1	0.35	0.48	0.42	0.50
Education2	0.24	0.43	0.32	0.47
Education3	0.13	0.34	0.19	0.39
Marital	0.55	0.61	0.55	0.23
Widowed/divorced	0.37	0.48	0.14	0.20
Single	0.08	0.27	0.31	0.18
Wid*Age	23.11	31.25	26.55	12.91
Sing*age	22.94	22.97	44.34	19.77
Disabled*Age	13.06	34.84	41.44	49.26
Retired*Age	10.78	26.66	32.41	39.35
CountryEconomyEx	0.37	0.48	0.53	0.50
SocialRigthsEx	0.35	0.48	0.51	0.50
GovTransparencyEx	0.34	0.48	0.51	0.50
IntNature	0.40	0.49	0.40	0.49
IntCulture	0.20	0.40	0.25	0.43
IntPolitics	0.16	0.37	0.28	0.45
IntSport	0.29	0.45	0.43	0.50
IntReligion	0.54	0.50	0.49	0.50
RespectFamilyLife	0.56	0.50	0.60	0.49
RespectMoney	0.08	0.27	0.06	0.25
PovertyProb	0.12	0.32	0.11	0.32

The ratio of married household heads is the same for both genders, but the ratios of divorced/widowed females and single males are multiples of their gender counterparts. A larger fraction of male household heads is optimistic about the economy, social rights and government transparency and interested in culture, politics, sport and family life than female household

heads. A larger fraction of female household heads, on the other hand, appears to be interested in religion more than their male counterparts.

Table 5: Parameter estimates by gender from panel ordered probit model

Independent variables	Female household head		Male household head	
	Coefficient	Z	Coefficient	Z
Age	0.042***	4.72	0.062***	8.49
Age(sq)	-0.0004***	-4.52	-0.0005***	-8.06
Hsize	0.015	1.18	0.0002	0.02
Income2	-0.010	-0.23	-0.035	-1.04
Income3	-0.036	-0.58	-0.071	-1.48
Education1	0.083	1.52	0.0006	0.01
Education2	0.071	1.12	0.009	0.14
Education3	-0.148*	-1.83	-0.324***	-4.56
Marital	0.581***	3.04	0.058	0.31
Widowed/divorced	0.114***	5.65	0.112***	4.21
Wid*Age	-0.008	-1.44	-0.019***	-2.65
Sing*Age	0.004	0.87	-0.013**	-2.34
Disabled*Age	-0.002***	-3.26	-0.001***	-3.1
Retired*Age	0.0008	0.88	-0.002***	-4.31
CountryEconomyEx	-0.014	-0.2	-0.256***	-6.3
SocialRigthsEx	-0.090	-1.23	-0.143***	-3.24
GovTransparencyEx	-0.187***	-2.76	-0.136***	-3.18
IntNature	-0.072*	-1.67	0.0135	0.45
IntCulture	0.041	0.78	0.0389	1.14
IntPolitics	0.048	0.88	-0.0147	-0.45
IntSport	-0.038	-0.84	-0.070**	-2.39
IntReligion	-0.058	-1.44	-0.106***	-3.74
RespectFamilyLife	-0.104**	-2.48	-0.016	-0.51
RespectMoney	0.133*	1.77	0.284***	4.96
PovertyProb	0.180***	3.08	0.056	1.3
LogL	-3743.33		-5862.55	
		Std. Error		Std. Error
Cut1	0.879***	0.22	1.138***	0.18
Cut2	1.93***	0.23	2.289***	0.18
*** , ** and * denote the significance levels at 1%, 5% and 10% respectively.				

The estimated coefficients and Z values from the panel ordered probit model for female and male household head are given in Table 5. Some of the coefficients notable, the coefficients for income, education dummies other than college education, culture and for some of the interaction variables are not statistically different from zero at conventional significance levels. The effect of household head's age on the probability of SWB for both women and men are U-

shaped, a finding consistent with the previous empirical literature. The effects of university education on SWB are negative and significant both for female and male household heads, but insignificant for other educational categories.

Table 6. Marginal effects for women in Turkey

Independent variables	Very satisfied or satisfied		Moderate		Very unsatisfied or unsatisfied	
	M.E.	Z	M.E.	Z	M.E.	Z
Age	-0.017***	-4.72	0.008***	4.59	0.009***	4.75
Age(sq)	0.0002***	4.53	-0.0001***	-4.41	-0.0001***	-4.55
Hsize	-0.006	-1.18	0.003	1.18	0.003	1.18
Income2	0.004	0.23	-0.002	-0.23	-0.002	-0.23
Income3	0.014	0.58	-0.007	-0.57	-0.008	-0.59
Education1	-0.033	-1.52	0.015	1.54	0.018	1.5
Education2	-0.028	-1.12	0.013	1.14	0.016	1.1
Education3	0.059*	1.84	-0.028*	-1.74	-0.030*	-1.94
Marital	-0.224***	-3.28	0.065***	9.37	0.159**	2.55
Widowed/divorced	-0.429***	-6.39	0.144***	11.1	0.285***	5.06
Wid*Age	0.003	1.44	-0.001	-1.44	-0.002	-1.43
Sing*Age	-0.002	-0.87	0.001	0.87	0.001	0.87
Disabled*Age	0.001***	3.26	-0.0004***	-3.24	-0.0005***	-3.26
Retired*Age	-0.0003	-0.88	0.0002	0.88	0.0002	0.88
CountryEconomyEx	0.005	0.2	-0.002	-0.2	-0.003	-0.2
SocialRightsEx	0.036	1.23	-0.017	-1.21	-0.019	-1.25
GovTransparencyEx	0.075***	2.77	-0.035***	-2.67	-0.039**	-2.85
IntNature	0.029*	1.67	-0.013*	-1.65	-0.016*	-1.68
IntCulture	-0.017	-0.78	0.007	0.79	0.009	0.77
IntPolitics	-0.019	-0.88	0.009	0.9	0.011	0.87
IntSport	0.015	0.84	-0.007	-0.83	-0.008	-0.85
IntReligion	0.023	1.44	-0.011	-1.44	-0.013	-1.44
RespectFamilyLife	0.042**	2.48	-0.019**	-2.5	-0.023**	-2.46
RespectMoney	-0.053*	-1.78	0.022*	1.93	0.031*	1.67
PovertyProb	-0.072***	-3.1	0.030***	3.43	0.042***	2.88
*** , ** and * denote the significance levels at 1%, 5% and 10% respectively.						

A troubling result reported in Table 5 is that the estimated parameters of income levels are not statistically significant for both gender equations, implying income does not affect SWB. This is unexpected and might be reflecting measurement problems in the surveys regarding the income data as most respondents appears to be concentrated in lowest self-reported income category. Finally, Table 5 also reveals that the marital status coefficient is positive for both gender household heads, but significant only for females. However, the estimated coefficients of widowed/divorced variable are positive and statistically significant for both gender equations, indicating an increased likelihood of being in the unsatisfied/very unsatisfied category of SWB both for female and male household heads.

Marginal effects obtained from the female household head equation are given in Table 6. The age has a U-shaped effect on SWB for female household heads in the very satisfied or satisfied category. In other words, as age increases its effect on SWB first decreases, and then increases. However, the effect of age has the inverse U shape for the other categories. If the female household head is a college graduate, the likelihood of being in the satisfied category increases by 5.9% and the likelihood of being in the moderate and unsatisfied category decreases by 2.8% and 3% respectively. Further, being married decreases the probability of being in the top category of SWB by 22.4% and increases the likelihood of being in the second and third categories by 6.5% and 15.9%. **Hence, marriage decreases the probability of life satisfaction for female household heads drastically.**

A similar result is reported for widowed/divorced female household heads but only with a much larger magnitude. **The probability of a widowed/divorced female household head being satisfied decreases by 42.9%** while the probability of being in the middle and unsatisfied group increases by 14.4% and 28.5% correspondingly. If a female household head is disabled, the probability of her being in the satisfied category increases with age, but with an un-meaningful size. Government transparency expectation increases the probability of a female household head being in the satisfied category by 7.5% and decreases the likelihood of being in the middle and unsatisfied groups by 3.5% and 3.9% in that order. Similarly, if a female household head is interested in nature and considers family life to be important, the probability of her being in the satisfied group increases modestly by 2.9% and 4.2% respectively. On the other hand, if the female household head considers money and poverty problems to be important, the probability of her being in the satisfied group decreases by 5.3% and 7.2% in the order given. All other marginal effects are not significant, and hence not interpreted here.

Marginal effects obtained from the male household head equation are given in Table 7. The age has a U-shaped effect on SWB for the male household heads in the very satisfied or satisfied category. In other words, as age increases its effect on SWB first decreases, and then increases. However, the effect of age has the inverse U shape for the other categories. If a male household head is a college graduate, the likelihood of him being in the higher life satisfaction category increases by 12.5%, more than twice the magnitude of his female counterpart, and the likelihood of him being in the middle and lower life satisfaction categories decreases by 7.5%

and 4.9% respectively. Further, being married is not statistically significant for all categories of SWB for male household heads.

Table 7. Marginal effects for men in Turkey

Independent variables	Very satisfied or satisfied		Moderate		Very unsatisfied or unsatisfied	
	M.E.	Z	M.E.	Z	M.E.	Z
Age	-0.025***	-8.49	0.014***	8.33	0.011***	8.38
Age(sq)	0.0002***	8.06	-0.0001***	-7.9	-0.0001***	-7.99
Hsize	-0.0001	-0.02	0.0001	0.02	0.00004	0.02
Income2	0.014	1.05	-0.008	-1.04	-0.006	-1.05
Income3	0.028	1.49	-0.016	-1.45	-0.012	-1.53
Education1	-0.0003	-0.01	0.0001	0.01	0.0001	0.01
Education2	-0.004	-0.14	0.002	0.14	0.002	0.14
Education3	0.125***	4.72	-0.075***	-4.4	-0.049***	-5.23
Public	0.044***	2.95	-0.024***	-2.96	-0.019***	-2.94
Marital	-0.023	-0.31	0.013	0.31	0.010	0.3
Widowed/divorced	-0.398***	-5.66	0.076**	2.48	0.322***	3.2
Wid*Age	0.007***	2.65	-0.004***	-2.65	-0.003***	-2.65
Sing*age	0.005**	2.34	-0.003**	-2.34	-0.002**	-2.34
Disabled*Age	0.004***	3.1	-0.002***	-3.09	-0.002***	-3.1
Retired*Age	0.001***	4.31	-0.0004***	-4.3	-0.0003***	-4.28
CountryEconomyEx	0.101***	6.33	-0.056***	-6.35	-0.045***	-6.18
SocialRightsEx	0.057***	3.25	-0.032***	-3.24	-0.025***	-3.23
GovTransparencyEx	0.054***	3.19	-0.03***	-3.19	-0.024***	-3.16
IntNature	-0.005	-0.45	0.003	0.45	0.002	0.45
IntCulture	-0.0156	-1.13	0.009	1.14	0.007	1.12
IntPolitics	0.006	0.45	-0.003	-0.45	-0.003	-0.45
IntSport	0.028**	2.39	-0.016**	-2.38	-0.012**	-2.4
IntReligion	0.042***	3.74	-0.024***	-3.73	-0.018***	-3.73
RespectFamilyLife	0.007	0.51	-0.004	-0.51	-0.003	-0.51
RespectMoney	-0.113***	-4.99	0.056***	5.84	0.058***	4.32
PovertyProb	-0.022	-1.29	0.012	1.32	0.010	1.26
*** ** and * denote the significance levels at 1%, 5% and 10% respectively.*						

Further, **the probability of a widowed/divorced male household head being in the satisfied group decreases by 39.8%** while the probability of being in the middle and unsatisfied groups increases by 7.6% and 32.2% correspondingly. The results in the table also reveals that the probability of a widowed, single, disabled and retired male household head

being in the satisfied category increases marginally with age. But these effects are rather very small.

If the expectations about the economy, social rights and government transparency are positive, a male household head's being in the satisfied category will increase by 10.1%, 5.7% and 5.4% respectively. Interest in sport and religion increases the male household head's being in the satisfied category by 2.8% and 4.2% as well. On the other hand, if the male household head considers money to be important, the probability of his being in the satisfied group decreases by 11.3%.

5. Conclusion

The main objective of this study is to investigate whether gender affects SWB in Turkey. The data used are from Income and Living Conditions Survey by Turkstat for the years of 2014, 2015 and 2016. To start with, we pooled the data and tested whether SWB differ with respect to gender in Turkey via the likelihood ratio test. Once we established there exists gender difference in SWB in Turkey, we proceed with the panel ordered probit model separately for each gender.

The results suggest that age has a U-shaped effect on SWB for both female and male household heads in the very satisfied or satisfied category. In other words, as age increases its effect on SWB first decreases, and then increases with a negative overall effect within the reasonable life expectancy. Hence, we conclude that being in the top SWB category decreases at a decreasing rate with age. On the other hand, the effect of age has the inverse U shape for the other categories for female and male household heads, indicating an increasing probability of being in the particular lower category of SWB at a decreasing rate. **If the female and male household heads are college graduates, the likelihood of them being in the higher life satisfaction category increases, and the likelihood of being in the middle and lower life satisfaction category decreases. But the magnitudes are significantly larger for male household heads than female household heads.**

Marriage decreases the probability of higher life satisfaction for female household heads drastically. But, being married is not statistically significant for male household heads. The effect of being widowed/divorced decreases the probability of higher life satisfaction both for female and male household heads by roughly 43% and 40% separately. These numbers represent the largest single magnitudes on SWB for both genders. **If female and male**

household heads are disabled, the probability of being in the satisfied category increases marginally with age. But the effects are very small for both genders, particularly for women. Furthermore, older retired men, older widowed or divorced men and older single men are likely to have marginally higher level of SWB. Results, on the other hand, indicate no change in the level of SWB for retired, widowed or single women as they get older. This result bears some similarities with Pinquart and Sörensen (2001) who concluded that men over the age of 55 have higher levels of life satisfaction. Finally, results suggest that expecting positive changes in economic situation, social rights and government transparency increase the possibility of higher level of life satisfaction for men, but for women only the government transparency increases higher life satisfaction probability. Hence, diffusion of college education, better social rights, increasing government transparency are likely to increase the level of SWB across genders in Turkey.

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