



Examining Relationships Among Well-being, Leisure Satisfaction, Life Satisfaction, and Happiness

Metin Argan^{1*}, Mehpare Tokay Argan² and Mehmet Tahir Dursun³

¹ Department of Sport Management, Sport Science Faculty, Anadolu University, Eskisehir, Turkey

² Department of Tourism Management and Hospitality, School of Applied Sciences, Bilecik Seyh Edebali University, Bilecik, Turkey

³ Department of Tourism Management and Hospitality, School of Applied Sciences, Bilecik Seyh Edebali University, Bilecik, Turkey

*Corresponding e-mail: margan@anadolu.edu.tr

ABSTRACT

Interaction between well-being and happiness has received an increasing interest worldwide due to its positive impact on people's lives. The aim of this study was to propose a theoretical model to examine the relationships among well-being, leisure satisfaction, life satisfaction and happiness. The results from a survey of 1230 respondent in Turkey indicate that there were significant relationships among national well-being, personal well-being, leisure satisfaction, life satisfaction and happiness. The results support the hypothesized relationships, suggesting that well-being as antecedents, directly affecting leisure, life satisfaction and indirectly affecting happiness. Consistent with previous empirical studies, the findings of this study suggest that leisure satisfaction and life satisfaction are the moderators of dimension of happiness, and significantly mediates the effect of national well-being on happiness.

Keywords: Well-being, Happiness, Leisure, Life satisfaction, Turkey

INTRODUCTION

Leisure is a crucial part of a balanced life and is often called as a need for well-being [1]. Well-being is predictive of a range of important life outcomes [2]. However, well-being is a critical premise and it fuels leisure satisfaction, life satisfaction, and happiness. Participating in leisure activities provides good benefits to increase the general quality of life of a person and his/her well-being [3]. The issues of well-being, satisfaction with life and leisure, and human happiness has been of considerable interest to researchers in psychology, sociology, health, and leisure. As human life continues to grow in importance, happiness as a resultant of psychological, physiologic, and social factors is likely to maintain its position. Moreover, in stress-based lives, well-being and its effect on life satisfaction and happiness is the key to living in better quality. The relationship between factors affecting happiness has become an important phenomenon and is gaining attention in different disciplines.

In recent years, there has been evidence of increasing concerns with the well-being, leisure satisfaction, life satisfaction and happiness among Turkish people. The concerns have been manifested in social, economic, health, cultural and recreational initiatives designed to improve the quality of life. Research concerned with relationships among well-being, satisfaction with life, leisure, and happiness has attracted scholarly attention [4,5]. The impact of well-being in leisure and recreation contexts has always been the result of multi-factors interacting with one another. Specifically, the role of well-being within human life identifies the life satisfaction and level of happiness.

There are several studies that have documented the well-being in different contexts [2,6,7]. Several studies highlight the role of well-being and satisfaction as factor that influence peoples' evaluation of happiness [4,5]. However, there has been little focus on examining a combination of relationships among four variables effect. In this study, researcher attempts to examine the relationships among national well-being, personal well-being, leisure satisfaction, life satisfaction, and happiness in a sample of Turkish population. Moreover, the studies related with the effect of well-

being on leisure, life satisfaction, and happiness is very limited. Thus, this research gap indicated possible opportunities for achieving a new and integrated approach. This study fills this gap by investigating how the interaction of personal and national well-being affects leisure satisfaction, life satisfaction, and happiness.

Relationship between National well-being and Personal well-being

The international well-being index (IWI) consists of two scales, the personal (PWI) and national (NWI) well-being indices [8]. As previous literature shows personal well-being and national well-being is interrelated. In a broader approach, people expectation has suggested to influence the evaluation of personal and national well-being. Several studies have reported the theoretical linkage between national well-being and individual well-being. Moreover, perception of a well-developed social welfare system [9], advanced health care system and stable economy and a secure future may be modified for greater well-being. Liang et al., [10] for instance, found that satisfaction with job, income, family, health, spiritual and friendship are positively associated with being happier in China and Japan. Additionally, Stevenson et al. [11] investigated the relationship between changes in subjective well-being and income over time within countries. They found economic growth associated with rising happiness [12].

Numerous studies have also found that people are more likely to be happy or satisfied when they are provided with reasonable economic, social and security conditions. Frey et al., [13] implies that in the context in which humanitarian conditions to live was high, offering economic, social, and health-related positive conditions increased both satisfaction with life and happiness. It may be estimated that in the developing countries, the situations of health, political conditions, economic indicators, and personal and national security may be dominant in terms of perception of personal well-being. Based on such considerations and findings, this study hypothesizes that:

Hypothesis 1 (H1): National well-being has a positive effect on personal well-being.

Relationship between Personal well-being and Leisure Satisfaction and Life Satisfaction

Personal and national well-being are very important factors for people because they may affect life satisfaction and happiness. Life satisfaction is generally conceptualized as individual's sense of satisfaction or dissatisfaction arising from the important areas of life [10]. According to Schimmack et al., [14] satisfaction with life has many potential determinants. The determinants include personality, social expectations, socio-economic factors, relationship with significant others (neighbors, parents, children), physical and psychological health, accommodation, employment, and problem with authority. Moreover, life satisfaction is related to one of the important component of well-being [5]. Regarding the well-being related factors, the subjects of health situation, socio-economic status, and recreational activity participation are known indicators of life satisfaction [10]. According to Cho et al., [9] there is no doubt that life satisfaction may be a very important indicator in determining the well-being. Moreover, life satisfaction may be a very important indicator in determining the well-being of middle and old aged individuals [9].

Regarding relationship between well-being and life satisfaction, the total perception of personal well-being and national well-being is related to satisfaction with life that people receive from personal and societal experiences. National and personal well-being have a strong influence on life satisfaction because people perception result in uncertainty about future outcomes. Poulsen et al., highlights that a broad range of physical, economic, psychological, and social dimensions contribute to participation patterns and life satisfaction [15]. According to Diener et al., [5] positive affect, negative affect and life satisfaction are the main dimension of subjective well-being. In addition, according to Godbey leisure may utilize a feeling of subjective well-being [16]. Moreover, Lin et al., [17] indicates that participation to leisure activities or events can improve life satisfaction and subjective well-being. More precisely, satisfying the basic leisure needs is associated with subjective well-being [6]. Additionally, numerous empirical studies have identified a positive correlation between participation in leisure activities and subjective well-being [17]. Furthermore, participation in serious leisure activities may increase one's personal well-being level and life satisfaction as well [18].

There is significant relationship between leisure satisfaction and life satisfaction. Thus, greater the satisfaction with such domains as personal health, work, family, and leisure, the greater the satisfaction with life in general [19]. Numerous empirical studies have identified positive correlation between participation in leisure activities and subjective well-being [17,20]. Several studies have identified positive correlations between the enjoyment of leisure and well-being for young adults, over stressed workers and in the later life [21]. The link between the well-being and both life satisfaction and leisure satisfaction has been highlighted in leisure and health literature. For instance, Brown et al., [22] indicated that recreational activities may be important for physical and mental well-being. Russel [23] also

pointed out that leisure satisfaction relates to well-being, quality of life, and life satisfaction. More recently several studies have identified relationships among well-being, life satisfaction, leisure satisfaction and happiness [4,5,21]. A few of current papers have empirically investigated the relationship between satisfaction with a leisure activity such as travel, life satisfaction and well-being [24,25]. Since, well-being is characterized as dependent variable of happiness, the life satisfaction and leisure satisfaction may act as median variables. In support of this Poulsen et al., [15] and Cho et al., [9] estimates that there is a significant correlation between well-being and both life satisfaction and leisure satisfaction. Therefore, the following hypothesis are proposed:

Hypothesis 2 (H2): Personal well-being has a positive effect on leisure satisfaction.

Hypothesis 3 (H3): Personal well-being has a positive effect on life satisfaction.

Relationship between Happiness and Leisure Satisfaction and Life Satisfaction

The issue of happiness elements has received much attention in psychology, recreation, leisure and so on. Happiness is a state of mind or feeling characterized by pleasure or satisfaction [12]. The effort to be happy in the society is an important goal for many people [12]. Happiness is generally seen as the life satisfaction level and a summary of a person's life overall as it determines the quality of a person's life [26]. Previous research has demonstrated that the human happiness can be positively influenced by satisfaction derived from living. Liang et al., [10] for instance, found that leisure, income, health, and spiritual satisfaction were positively associated with being happier. As mentioned, leisure research also asserts the positive link between life satisfaction and happiness [12]. Additionally, Hills et al., [21] found a significant correlation between enjoyment and frequency of activity participant. Physical and social activities strongly associated with the leisure satisfaction, allow individuals to generate a good mood that provides life meaning to their own personal world. This is consistent with the theories in life satisfaction. Concerning the quality of life, happiness is generally evaluated because of well-being, life satisfaction and leisure satisfaction.

There has been research on the relationships between happiness and life satisfaction. Cloninger et al., [27] for example, suggested that happiness arises from combination of absence of negative emotion and presence of positive emotion, life satisfaction and social engagement. The happiness achieved in a recreational activity plays a vital role in a person's life satisfaction level [28]. Previous research in recreation area has suggested that leisure experience can play a significant role in enhancing both quality of life and happiness perception [19]. Happiness may also be an important predictor of satisfaction with life, leisure satisfaction, national well-being, and personal well-being. As noted earlier, leisure satisfaction is positively associates with quality of life, which is often expressed as happiness [10]. A study of college students conducted by Lu et al., identified positive correlation between leisure involvement and both satisfaction and well-being [29]. Moreover, satisfaction obtained from leisure activities increases one's life satisfaction [30]. People are likely to be happier with satisfactory well-being. This is because the likelihood of life satisfaction is maximal. It may be claimed that satisfaction with life and leisure may be stronger predictors of overall happiness. Based on that we hypothesize that:

Hypothesis 4 (H4): Leisure satisfaction has a positive effect on happiness.

Hypothesis 5 (H5): Life satisfaction has a positive effect on happiness.

Based on literature review and above discussion, five research hypotheses were developed. The research model described in Figure 1 shows the relationships among variables.

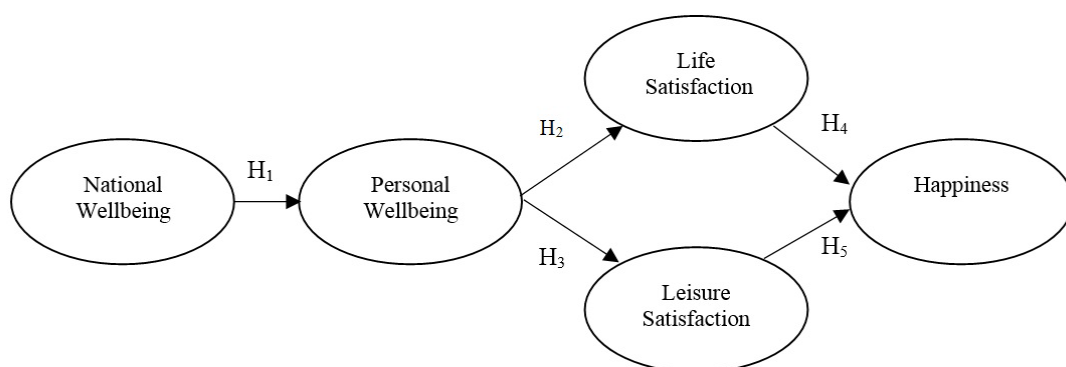


Figure 1 Conceptual model presenting relationship between well-being and happiness

METHODS

Measures

A survey instrument for the empirical study of the relationships among well-being, leisure satisfaction, life satisfaction, and happiness was developed on the basis of previous research and discussions. The survey instrument contains various scales related to well-being, leisure satisfaction, life satisfaction, and happiness. Items measuring well-being were obtained from International Well-being Index (IWI). The index of IWI consists of two subscales: Personal well-being index (PWI) and National well-being index (NWI). The scale of IWI consists of fourteen items retrieved from study of Davey et al., [31]. The items of IWI were answered on a 7-point end-defined Likert scale, anchored from completely dissatisfied (1) to completely satisfied (7), with higher scores indicating strong tendency for satisfaction. One of the most widely scales used to assess life satisfaction is the satisfaction with life scale (SWLS) [4]. The psychometric properties of the SWLS have been examined in different populations; the scale is reliable, has a high internal consistency [32]. The five items measuring life satisfaction had a Cronbach's alpha of 0.87 [4] this value indicates acceptable internal consistency. The construct of leisure satisfaction consist of a five-item scale was adapted from Neal et al., [19]. Finally, the construct of happiness was measured with the five-item scale suggested by Bailey et al., [33]. The items in constructs of life satisfaction, leisure satisfaction and happiness were measured on a 5-point, Likert type scale anchored from 1 (strongly disagree) to 5 (strongly agree).

Sample

The present study uses a relational research design to examine the relationship among well-being, leisure satisfaction, life satisfaction, and happiness. The participants in this research are individuals living in Eskisehir of the Central Anatolia Region, Turkey. Due to the limited time and financial sources, a convenience sampling method was adopted. Sample group was carried out on a voluntary basis to participate in the research. Prior to data collection procedure, potential voluntary participants were informed about general purpose and possible contributions of the study. Then, the potential participants were asked whether they wanted to participate in research. After participants agreed to take part in the study, questionnaires were given to people to fill them. There were no payments to participants who volunteer for research. A self-administered method was applied to participants of this study. One questionnaire lasted around 15 minutes. The questionnaires survey was administered by 20 students in marketing research class at Anadolu University in Turkey. A total of 1750 questionnaire were distributed, 1230 of which were completely answered, resulting in a return rate of about 70%.

RESULTS

Characteristics of Sample and Leisure Participation

The demographic characteristics of the sample are described in Table 1, there were 55% male and 45% were female.

Table 1 Demographic characteristics of respondents (N=1230)

Variables	Frequency	%
Gender		
Male	676	55
Female	554	45
Age		
18-25 years	377	30.6
26-35 years	323	26.3
36-45 years	247	20.1
46-55 years	184	15
≥ 56 years	99	8
Education Level		
Primary school or less	75	6.1
Secondary school	109	8.9
High school	293	23.8
Undergraduate or graduate	650	52.8
Post Graduate	103	8.4

Household Income		
≤ US\$ 412	325	26.4
US\$ 413- 824	375	30.5
US\$ 825-1236	279	22.7
US\$ 1237-1648	103	8.4
≥ US\$ 1649	148	12
Occupation		
Student	249	20.2
Homemaker	98	8
Tradesman	75	6.1
Public Official	163	13.3
Worker	172	14
Manager	78	6.3
Retired	118	9.6
Self-employed	68	5.5
Other	209	17

Approximately, one third of respondents 30.6% were between 18 and 25 years, the other groups were 26-35 years (26.3%) and 36-45 years (20.1%). Under-graduate or graduate participants make up more than half of the sample (53%), with high and secondary schools composing about 24% and 9%, respectively. Regarding the household monthly income of respondent, more than 30% earned 413-824 USD. In terms of occupation status, about 20% of the participants were university students, 17% of them were other occupations, and 14% of them were workers.

Measurement Models

The confirmatory factor analysis (CFA) was conducted to evaluate two measurement models about well-being, life satisfaction, leisure satisfaction and happiness, using LISREL version 8.80 program [34]. The adequacy of the measurement models was evaluated on the criteria of model fit, reliability, convergent validity, and discriminant validity. Four items of personal well-being dimensions were removed due to the low factor loadings or multi-factorial loading. Finally, the 10 items selected in the exploratory analysis were used to build a CFA model with two latent variables. Table 2 shows the results of CFA for first estimation model concerning well-being. For the well-being model, the chi-square is significant ($\chi^2=85.30$, $df=34$, $p<0.01$).

Table 2 Well-being factors and their values

Constructs	Std. loadings	CR	AVE	Construct reliability
Personal well-being	-	0.84	0.57	0.77
Your standard of living?	0.73	-	-	-
What you are achieving in life?	0.8	-	-	-
Feeling part of your community?	0.75	-	-	-
Your future security?	0.75	-	-	-
National well-being	-	0.93	0.7	0.92
Economic situation in Turkey	0.86	-	-	-
The state of the natural environment in Turkey	0.83	-	-	-
Social condition in Turkey	0.88	-	-	-
Government in Turkey	0.89	-	-	-
Business in Turkey	0.82	-	-	-
National security in Turkey	0.74	-	-	-

$\chi^2=85.30$, $df=34$, ($p=0.000$), $\chi^2/df=2,50$, $RMSEA=0.063$, $GFI=0.96$, $AGFI=0.93$, $NFI=0.98$, $NNFI=0.98$, $CFI=0.99$, $IFI=0.99$, $SRMR=0.052$

Because chi-square value is sensitive in large sample, the researchers mostly refer to additional fit indices. For this reason, the goodness-of fit of the model was assessed with the normed fit index (NFI), the non-normed fit index (NNFI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), standardized root mean square residual (SRMR). Hu et al.,

[35] suggested 0.95 cut-off point for CFI and 0.09 for SRMR. According to Chiu et al., [36] AGFI and NNFI should exceed 0.8, 0.9, respectively. Additionally, according to Browne et al., [37] RMSEA values higher than 0.10 indicate poor fit, values of 0.08 or less represent enough fit, and values of less than 0.06 indicate good fit.

The fit indices produced through the CFA indicated that the model provided adequate fit for the proposed well-being factors. In the measurement model for well-being factors, the χ^2/df , RMSEA, SRMR, were well below the acceptable levels. It may be seen from Table 2, the ratio of χ^2/df was 2.5, indicating satisfactory level, as suggested by Bagozzi, et al., [38]. Additionally, RMSEA (0.063) and SRMR (0.052) were within acceptable levels. CFI (0.99), IFI (0.99), GFI (0.96) and NNFI (0.98) were all above the acceptable levels.

Additionally, other scales used in the proposed model for this study are leisure satisfaction, life satisfaction and happiness. Table 3 presents CFA results on the items and dimension of happiness, life satisfaction and leisure satisfaction. One item (I am content with what I have in life) of happiness dimension was removed due to the low factor loadings.

Table 3 Factors related to happiness, life satisfaction and leisure satisfaction

Constructs	Std. loadings	CR	AVE	Construct reliability
Happiness	-	0.78	0.54	0.65
My friends would describe me as a happy person	0.68	-	-	-
Compared with those I know, I'd consider myself a happy person	0.76	-	-	-
It doesn't take much to make me upset or angry	0.76	-	-	-
Life Satisfaction	-	0.89	0.61	0.86
In most ways my life is close to my ideal	0.77	-	-	-
The condition of my life is excellent	0.81	-	-	-
I am satisfied with my life	0.74	-	-	-
So far, I have gotten the important things I want in life	0.8	-	-	-
If I could live my life over, I would change almost nothing	0.77	-	-	-
Leisure Satisfaction	-	0.9	0.64	0.88
I find something that will make me happy in my leisure time	0.76	-	-	-
I have been feeling very good about the way I spent my leisure time after work	0.83	-	-	-
Leisure time after work is very important to me	0.84	-	-	-
I usually spend my free time quality.	0.79	-	-	-
I am the kind of person who knows how to enjoy leisure time anytime and anywhere	0.78	-	-	-

$\chi^2=117.84$, $df=62$, ($p=0.000$), $\chi^2/df=1.90$, RMSEA=0.048, GFI=0.96, AGFI=0.93, NFI=0.97, NNFI=0.98, CFI=0.99, IFI=0.99, SRMR=0.036

As seen in Table 3, the ratio of the χ^2 value to degree of freedom ($\chi^2/df = 1.90$) was less than the cut-off 3, as recommended by Bagozzi et al., [38]. Furthermore, the values of GFI (0.96), AGFI (0.93), NFI (0.97), NNFI (0.98), IFI (0.99) and CFI (0.99) were well greater than the recommended value of 0.90 or 0.95. In addition to all these, RMSEA (0.048) and SRMR (0.036) were well less than cutoff point 0.08, as suggested by Hair et al., [39].

Validity and Reliability

There are two criteria applied in the analysis of convergent validity: (1) the average variance extracted (AVE) must be greater 0.5; and (2) the composite reliability must be greater than 0.7 [40]. All values were higher than the cut-off point, and therefore indicative of good convergent validity. Additionally, in order to assess convergent validity of the factors, factor loadings were analyzed. As suggested by Meehl [41] and Chin [42] most of the loadings should be, in CFA models, 0.60 or above, indicating that each measure is accounting for a consistent portion of the variance of the underlying latent variable. In addition, the indicator loadings for the items exceeded 0.60, which satisfied the convergent validity criterion established by Anderson et al., [43]. Table 2 and Table 3 show the loadings (between 0.68 and 0.89) for each factor. The current study results indicate a satisfactory convergent validity for all constructs, with AVE and composite reliability. To assess nomological validity, the relationships among constructs is supposed to be theoretically related [44]. There are well-grounded theoretical reasons to expect a positive relationship among personal well-being, national well-being, leisure satisfaction, life satisfaction and happiness. Furthermore, there is

a growing body of literature supporting these relationships [4,5,17,20,21]. To test nomological validity of current study's scale, well-known scales of IWI [31], SWLS [4], leisure satisfaction and happiness scale were used [19,33]. The scale related well-being, leisure satisfaction, and life satisfaction, and happiness are particularly pertinent because they are reliable and valid. Table 2 and Table 3 summarize the analytical results of the CFA. The dimensions of scales had Cronbach's alpha value ranging from 0.65 to 0.92, which indicate sufficient reliability. Regarding the reliability of each result, the four of five dimensions had a Cronbach's alpha ≥ 0.77 , which fulfilled the criterion established by Nunnally [45]. Furthermore, the items measuring each constructs of well-being, leisure satisfaction, life satisfaction and happiness had a composite reliability (CR) ≥ 0.78 , and an average variance extracted (AVE) ≥ 0.54 ; thus, these values satisfied the criteria established by Bagozzi and Yi [38].

Structural Model

Structural equation modeling was used to assess the theoretical model. More precisely, the hypothesized model specifying the structural relationship among well-being, satisfaction with life and leisure and happiness fit the data well. The χ^2 is significant ($p < 0.01$), which is usually the case for large sample sizes. All the other statistics are within the acceptance ranges, indicating a good of fit to the data. The results for sample indicated that the model fit the data well.

The path coefficient estimates (standardized beta and t values) of the model is summarized concisely in Figure 2.

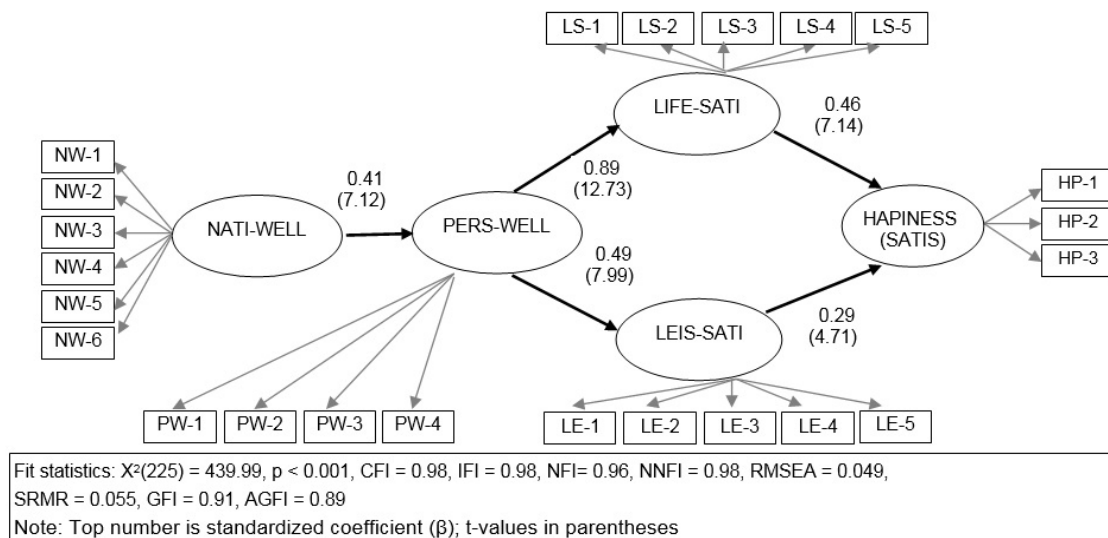


Figure 2 Structural equation model among dimensions

The fit indices ($\chi^2=439.99$, $df=225$, $\chi^2/df=1.95$, CFI=0.98, IFI=0.98, NFI=0.96, NNFI=0.98, RMSEA=0.049, SRMR=0.055, GFI=0.91, AGFI=0.89) supported the appropriateness of the structural model. All structural path estimates were significant. The path analysis supports that all five hypotheses were accepted. In other words, there were significant relationship among constructs of well-being, satisfaction with life and leisure and happiness. The strongest relationship was between personal well-being and life satisfaction ($\beta=0.89$, $t=12.73$). Moreover, the relationship between life satisfaction and happiness was significant and was medium sized ($\beta=0.46$, $t=7.14$). The poorest relationship in structural model was between leisure satisfaction and happiness ($\beta=0.29$, $t=4.71$). Overall, the structural model was supported in terms of fit indices.

DISCUSSION

The aim of this study was to examine the structural relationships among well-being, leisure satisfaction, life satisfaction and happiness, and how the perceived personal well-being, life satisfaction and leisure satisfaction moderates self-reporting happiness in general population in Turkey. The satisfaction with life and leisure play a major role in perception of personal happiness. This may be because individual with good conditions perceive the contribution of results of the benefits created by leisure and life. The findings of this study support the proposition that national well-being affect personal well-being. Similarly, personal well-being has important effects on both satisfaction of life and

leisure. Consequently, dimensions associated with life satisfaction and leisure satisfaction mediates the emergence of happiness.

The findings also supported the notion that national and personal well-being can be considered as a variable that mediates both life satisfaction and leisure satisfaction. Based on the notion of interaction between variables, the results of this study indicate that the phenomenon of well-being has a significant effect on life satisfaction and leisure satisfaction. The study supplements previous relationship among well-being and life satisfaction literature by indicating that positive personal and national well-being is positively related to life satisfaction. In terms of measuring relationship between national well-being and individual well-being, Diener concludes that satisfaction with life correlates with subjective well-being, individual characteristics, and overall health [4]. The interactions derived by Yiengprugsavwan *et al.*, [7] are based upon cause and effect relations between national indicators of happiness and perceptions of people who are exposed to these social indicators [13]. This general approach of determining personal well-being is essential in terms of deductive approach.

In addition to relationship between well-being and life satisfaction, the present study confirms research on leisure satisfaction. Consistent with predictions, being satisfy after leisure activities is significant and positively related to life happiness. Somewhat more expected was the finding that satisfaction with recreational activities was moderately positively correlated with happiness. Thus, the results are consistent with previous research that found that there is a significant correlation between enjoyment and frequency of participant [21]. The results of this study provide insight into the predictors of life satisfaction, leisure satisfaction and happiness in a Turkish sample. Previous well-being, life satisfaction and leisure satisfaction literature suggests that positive well-being perception by individuals may lead people to enhance satisfaction level with life [4,7,46]. Based on the results, it can be concluded that national and personal well-being is an important issue in satisfaction and happiness-related fields. It is not surprising to find that happiness is associated with levels of subjective well-being, and both satisfaction with life and leisure.

Happiness in life is a critical element in this stress-filled world that most individuals want in their lives in hopes of improving their life satisfaction and subjective well-being. Leisure and pleasure-based approach is a fundamental part of days as important part of modern life. Instant and experiential life-seeking behavior arise as a fundamental objective of the development of any society. Naturally, personal happiness that individuals look for in their lives may also depend on several macro variables, such as economic [12], social indicators, terrorism, democracy, and security [13].

The interplay of well-being, activities, happiness, and life satisfaction has been extensively studied in the leisure literature, but few studies have examined the effects of all variables simultaneously. The results of this study suggest that the individuals satisfied with national prosperity is significantly happier than the people in worse conditions. Unlike other research, this study provides initial support for that national and personal well-being are antecedent variables for both satisfied with life and satisfaction and happiness. Another key finding examined limitedly in prior research is that leisure and life satisfaction are mediators of happiness. This finding provides important evidence that the relationship between well-being and happiness is apparently indirect. As a result, the current study introduces a new perspective that leisure satisfaction or recreational activities have an important role on life satisfaction and happiness. Namely, results suggest that well-being is initial variable in terms of life and leisure satisfaction. With this aspect of the study, the result is a first attempt at understanding the relationships among many dimensions related to life, leisure, well-being, and happiness. Finally, the main findings offer several contributions and extend knowledge in relation to sources of happiness, particularly regarding interaction among these variables, as well as addressing the gap in research regarding the cause-effect relationships.

CONCLUSION

Overall, the study results also have significant managerial implications. The results show that life satisfaction has greater effects on happiness. Similarly, association between leisure satisfaction and happiness was significant but weak. Additionally, the satisfaction with life and leisure plays a significant role in moderating processes between well-being and happiness. Two practical insights can be drawn from this research. First, it is important for individuals in the society that satisfy the recreational needs and life expectancy. Finally, happiness and life satisfaction can be maximized by focusing on national well-being issues, for example through increasing democracy, security, life expectations, and decreasing risks related to health, security, and so on.

LIMITATIONS AND FUTURE STUDIES

As with any scientific research, the present study suffers from some limitations. Although the number of samples consisting of many people in solely one city, it cannot be considered representative of the Turkish population. Furthermore, this study used a convenience sample of people representing one city in Turkey. Thus, studies conducted with samples from different cities will be able to give more chance for generalizable results. Additionally, this research was conducted in a developing country. The future research may compare the situations in developed, developing and undeveloped countries. Moreover, future research should also examine various aspects of well-being and happiness including those related to the leisure involvement, engagement with socio-cultural activities and life quality.

DECLARATIONS

Acknowledgement

The authors would like to thank surveyors for their help regarding questionnaire.

Funding

This paper received a support of research incentive projects (Pr. N: 1705S347) from Anadolu University Scientific Research Projects.

Conflict of Interest

The authors have disclosed no conflict of interest, financial or otherwise.

REFERENCES

- [1] Sonnentag, Sabine. "Work, recovery activities, and individual well-being: A diary study." *Journal of Occupational Health Psychology*, Vol. 6, No. 3, 2001, p. 196.
- [2] Gale, Catharine R., et al. "Neuroticism and Extraversion in youth predict mental well-being and life satisfaction 40 years later." *Journal of Research in Personality*, Vol. 47, No. 6, 2013, pp. 687-97.
- [3] Lee, Eun-Young, et al. "Preferred leisure type, value orientations, and psychological well-being among East Asian youth." *Leisure Sciences*, Vol. 39, No. 4, 2017, pp. 355-75.
- [4] Diener, Ed. "Subjective well-being." *Psychological Bulletin*, Vol. 95, No. 3, 1984, p. 542.
- [5] Diener, Ed, et al. "Subjective well-being: Three decades of progress." *Psychological Bulletin*, Vol. 125, No. 2, 1999, p. 276.
- [6] Reinboth, Michael, and Joan L. Duda. "Perceived motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal perspective." *Psychology of Sport and Exercise*, Vol. 7, No. 3, 2006, pp. 269-286.
- [7] Yiengprugsawan, Vasoontara, et al. "Personal well-being index in a national cohort of 87,134 Thai adults." *Social Indicators Research*, Vol. 98, No. 2, 2010, pp. 201-15.
- [8] Forjaz, Maria Joao, et al. "Measurement properties of the Community well-being Index in older adults." *Quality of Life Research*, Vol. 20, No. 5, 2011, pp. 733-43.
- [9] Cho, Joonmo, and Ayoung Lee. "Life satisfaction of the aged in the retirement process: A comparative study of South Korea with Germany and Switzerland." *Applied Research in Quality of Life*, Vol. 9, No. 2, 2014, pp. 179-95.
- [10] Liang, Jiayin, Takashi Yamashita, and J. Scott Brown. "Leisure satisfaction and quality of life in China, Japan, and South Korea: A comparative study using AsiaBarometer 2006." *Journal of Happiness Studies*, Vol. 14, No. 3, 2013, pp. 753-69.
- [11] Stevenson, Betsey, and Justin Wolfers. "Economic growth and subjective well-being: reassessing the Easterlin paradox." *National Bureau of Economic Research*, 2008.
- [12] Lin, Jin-Ding, Pei-Ying Lin, and Chia-Ling Wu. "well-being perception of institutional caregivers working for people with disabilities: Use of Subjective Happiness Scale and Satisfaction with Life Scale analyses." *Research in Developmental Disabilities*, Vol. 31, No. 5, 2010, pp. 1083-90.

- [13] Frey, Bruno S., and Alois Stutzer. "Happiness, economy and institutions." *The Economic Journal*, Vol. 110, No. 466, 2000, pp. 918-38.
- [14] Schimmack, Ulrich, Ed Diener, and Shigehiro Oishi. "Life-satisfaction is a momentary judgment and a stable personality characteristic: The use of chronically accessible and stable sources." *Journal of Personality*, Vol. 70, No. 3, 2002, pp. 345-84.
- [15] Poulsen, Anne A., et al. "Loneliness and life satisfaction of boys with developmental coordination disorder: the impact of leisure participation and perceived freedom in leisure." *Human Movement Science*, Vol. 27, No. 2, 2008, pp. 325-43.
- [16] Godbey, Geoffrey. "Leisure in your life. An exploration". *Venture Publishing Inc.*, 1985.
- [17] Lin, Hsiu-Ching, Kuan-Yu Chen, and Kuei-Pin Kuo. "Relationship between leisure involvement and subjective well-being: moderating effect of spousal support." *South African Journal for Research in Sport, Physical Education and Recreation*, Vol. 36, No. 1, 2014, pp. 131-46.
- [18] Newman, David B., Louis Tay, and Ed Diener. "Leisure and subjective well-being: A model of psychological mechanisms as mediating factors." *Journal of Happiness Studies*, Vol. 15, No. 3, 2014, pp. 555-78.
- [19] Neal, Janet D., M. Joseph Sirgy, and Muzaffer Uysal. "The role of satisfaction with leisure travel/tourism services and experience in satisfaction with leisure life and overall life." *Journal of Business Research*, Vol. 44, No. 3, 1999, pp. 153-63.
- [20] Okun, Morris A., Robert W. Olding, and Catherine M. Cohn. "A meta-analysis of subjective well-being interventions among elders." *Psychological Bulletin*, Vol. 108, No. 2, 1990, p. 257.
- [21] Hills, Peter, Michael Argyle, and Rachel Reeves. "Individual differences in leisure satisfactions: An investigation of four theories of leisure motivation." *Personality and Individual Differences*, Vol. 28, No. 4, 2000, pp. 763-79.
- [22] Brown, Barbara A., and B. Gail Frankel. "Activity through the years: Leisure, leisure satisfaction, and life satisfaction." *Sociology of Sport Journal*, Vol. 10, No. 1, 1993, pp. 1-17.
- [23] Russell, Ruth V. "The importance of recreation satisfaction and activity participation to the life satisfaction of age-segregated retirees." *Journal of Leisure Research*, Vol. 19, No. 4, 1987, pp. 273-83.
- [24] De Vos, Jonas, et al. "Travel and subjective well-being: a focus on findings, methods and future research needs." *Transport Reviews*, Vol. 33, No. 4, 2013, pp. 421-42.
- [25] Ettema, Dick, et al. "The road to happiness? Measuring satisfaction of Dutch car drivers with their travel using the satisfaction with travel scale (STS)." *90th Annual Meeting of the 32 Transportation Research Board, USA*, 2010.
- [26] Hofmann, Wilhelm, et al. "Yes, but are they happy? Effects of trait self-control on affective well-being and life satisfaction." *Journal of Personality*, Vol. 82, No. 4, 2014, pp. 265-77.
- [27] Cloninger, C. Robert, and Ada H. Zohar. "Personality and the perception of health and happiness." *Journal of Affective Disorders*, Vol. 128, No. 1, 2011, pp. 24-32.
- [28] Naseem, Khalida. "Job Stress, Happiness and Life Satisfaction: The Moderating Role of Emotional Intelligence Empirical Study in Telecommunication Sector Pakistan." *Journal of Social Sciences*, Vol. 4, No. 1, 2018, pp. 7-14.
- [29] Lu, Luo, and Chia-Hsin Hu. "Personality, leisure experiences and happiness." *Journal of Happiness Studies*, Vol. 6, No. 3, 2005, pp. 325-42.
- [30] Deng, Shichang, and Jun Gao. "The Mediating Roles of Work-Family Conflict and Facilitation in the Relations Between Leisure Experience and Job/Life Satisfaction Among Employees in Shanghai Banking Industry." *Journal of Happiness Studies*, Vol. 18, No. 6, 2017, pp. 1641-57.
- [31] Davey, Gareth, and Ricardo Rato. "Subjective well-being in China: A review." *Journal of Happiness Studies*, Vol. 13, No. 2, 2012, pp. 333-46.
- [32] Lucas-Carrasco, Ramona, and Luis Salvador-Carulla. "Life satisfaction in persons with intellectual disabilities." *Research in Developmental Disabilities*, Vol. 33, No. 4, 2012, pp. 1103-09.
- [33] Bailey, Andrew W., and Irene K. Fernando. "Routine and project-based leisure, happiness, and meaning in life." *Journal of Leisure Research*, Vol. 44, No. 2, 2012, pp. 139-54.

-
- [34] Jöreskog, K. G., and D. Sörbom. "LISREL 8.7 for Windows (Computer Software). Scientific Software International." *Inc., Lincolnwood, IL*, 2006.
- [35] Hu, Li-tze, and Peter M. Bentler. "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives." *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6, No. 1, 1999, pp. 1-55.
- [36] Chiu, Chao-Min, and Eric TG Wang. "Understanding Web-based learning continuance intention: The role of subjective task value." *Information & Management*, Vol. 45, No. 3, 2008, pp. 194-01.
- [37] Browne, Michael W., and Robert Cudeck. "Alternative ways of assessing model fit." *Sage Focus Editions*, Vol. 154, 1993, pp. 136-36.
- [38] Bagozzi, Richard P., and Youjae Yi. "On the evaluation of structural equation models." *Journal of the Academy of Marketing Science*, Vol. 16, No. 1, 1988, pp. 74-94.
- [39] Hair, Joseph F., et al. "Multivariate data analysis." Upper Saddle River, NJ: Prentice hall, 1998.
- [40] Fornell, Claes, and David F. Larcker. "Evaluating structural equation models with unobservable variables and measurement error." *Journal of Marketing Research*, Vol. 1981, pp. 39-50.
- [41] Meehl, Paul E. "Why summaries of research on psychological theories are often uninterpretable." *Psychological Reports*, Vol. 66, No. 1, 1990, pp. 195-44.
- [42] Chin, Wynne W. "Commentary: Issues and opinion on structural equation modeling." *MIS Quarterly*, Vol. 20, 1998, pp. 7-16.
- [43] Anderson, James C., and David W. Gerbing. "Structural equation modeling in practice: A review and recommended two-step approach." *Psychological Bulletin*, Vol. 103, No. 3, 1988, p. 411.
- [44] Churchill, Gilbert A. "Marketing Research". Fort Worth: The Dryden Press, 1995.
- [45] Nunnally, Jum C., and Ira H. Bernstein. "Psychometric theory.", 1978.
- [46] Diener, Ed. "Subjective well-being: The science of happiness and a proposal for a national index." *American Psychologist*, Vol. 55, No. 1, 2000, p. 34.