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Examining Predictive Role of Psychological Need Satisfaction on Happiness in terms of Self-Determination Theory

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Abstract

This examination aimed to examine relationships between happiness and psychological need satisfaction and investigated whether psychological need satisfaction significantly predicts happiness. Participants were 192 Sakarya University students, between 17-45 age ranges (54.7% female, 44.3% male). Needs Satisfaction Scale and Oxford Happiness Questionnaire were used as measurement instruments. Multiple regression analysis indicated that happiness is significantly predicted by psychological need satisfaction among university students. Need for competence is the best predictor of happiness and need for autonomy and need for relatedness follow it, respectively. Findings show that predictor variables account for 54% of total variance of happiness. Happiness and psychological need satisfaction and its sub-dimensions. autonomy, competence and relatedness, are also significantly associated in a positive way (p<.01). Finally, psychological need satisfaction and happiness do not significantly differ in terms of gender. Consequently, these results suggest that increments of basic psychological need satisfactions for autonomy, competence and relatedness of university students contribute to happiness levels.

1. Introduction

A human being has physiological, sociological and psychological needs, and evolves as satisfying these needs. Throughout the historical process, human needs have always protected their current value and importance in the basic concepts of psychology. After the initial discussion about human needs, which started with McDougall in 1908 and continued with Freud, Murray and Hull, Maslow made the 'concept of need' popular and functional in the area of psychology (Özer, 2009; Türkdoğan, 2010; İlhan, 2009). Maslow's hierarchy of needs model in the 1970s and 1980s, however, has been found insufficient to verify the significant estimates in research about needs, and the model has started to lose popularity since that period. In recent years, both because the theory of Maslow left some situations unexplained, and because research about positive psychology has been gaining weight, new and different approaches to the needs model have been focused (Sheldon & Bettencourt, 2002). One of these, developed by Deci and Ryan (1985a, 2000), is the theory of basic needs. This falls within the theory of self-determination, and is known in widespread use as psychological need satisfaction. This research is also based on the theory of psychological needs, self-determination.

According to the theory of self-determination, there are three basic psychological needs, known as autonomy, competence and relatedness. The need for autonomy requires the individual to act in respect to their own feelings and choices, and behave like the initiator of their own actions (Gagne & Deci, 2005; Deci & Ryan, 1985a, 1985b; Deci & Ryan, 2000). In this context, the individual has the choice of their behavior and responsibility and stands behind their own behavior.. The need for competence requires the effort to succeed toward to changing tasks and the ability to attain the desired outcomes despite challenges. This need also includes the desire to influence the environment, and while individuals with this desire try to influence the environment and cope with environmental conditions, they want to feel competent at the same time (Baard, Deci & Ryan, 2004; Deci & Ryan, 1985a). Finally, the need for relatedness is defined as an individual's desire to be related to other people and the social environment. Need for relatedness also reflects a sense of belonging to the environment, and establishing close and meaningful relationships (Deci & Ryan, 2000; Baumeister & Leary, 1995; Kowal & Fortier, 1999; Reis, Sheldon, Gable, Roscoe & Ryan, 2000).

According to the theory of self-determination, the three needs of autonomy, competence, and relatedness, as well as guiding the human behavior, have an important role in protecting or enhancing mental health. In recent years, many studies have noted that psychological needs have a significant role in life satisfaction or level of happiness (Sheldon & Bettencourt, 2002; Vansteenkiste, Ryan & Deci, 2008), since these unsatisfied needs bring with them psychological dissatisfaction which causes physical and psychological distress (Ryan, Sheldon, Kasser & Deci, 1996; Morsünbül, 2012). On the other hand, satisfying these needs allows individuals to choose their own behaviors, to be functional by taking their own responsibility, to be active in reaching the predetermined goals, and to have a sense of belonging by reinforcing social relations, which eventually increases the individual's level of well-being and happiness (Deci & Ryan, 2008).

Research on happiness carried out by Diener (1984), defined as frequent positive feelings, infrequent negative feelings and high life satisfaction, demonstrated that happy individuals are more successful at interpersonal relationships, as well as feeling good and experiencing positive feelings (Diener & Seligman, 2002). In this manner, determination of how and on what level satisfaction of psychological needs influences happiness will contribute to studies aiming to promote happiness, and to protect and enhance psychological health. Although there are several studies about the relationship between psychological needs and happiness in the USA and other countries (e.g., Ryan & Deci 2000, 2001; Reis et al., 2000; Sheldon & Elliot, 1999; Sheldon, Ryan & Reis, 1996; Ryan, 2009) these studies are limited in Turkey. Determining the level of happiness affected by satisfaction of psychological needs in Turkish

culture will make a useful contribution to the existing literature. The study will also contribute to cultural and cross-cultural comparisons.

2. Method

This study was performed using relational screening models. The aim was to examine the relationship between happiness and satisfaction of psychological needs, and to ascertain at which level satisfaction of psychological needs predicts happiness. For the purpose of the study, happiness was treated as a predicted variable, and satisfaction of psychological needs was treated as a predictor variable.

2.1. Participants

Participants of the study are 192 university students continuing their education in academic year 2011-2012. When classified by gender, 105 of participants are female (54.7%), 85 of them are male (44.3%), and 2 subjects withheld their genders. Participants of the study are in the 17-45 age range, with the mean of 20.55 and standard deviation of 2.57.

2.2. Measures
2.2.1. Needs Satisfaction Scale (NSS)

Needs Satisfaction Scale (NSS) was developed by Deci and Ryan (1991) and adapted to Turkish by Bacanlı and Cihangir-Çankaya (2003). This Likert-type scale has 21 items and three sub-dimensions: autonomy, competence and relatedness. As a result of the psychometric evaluations at the time of Turkish adaptation of the scale, it was reported that the internal consistency coefficient is .71 for autonomy, .60 for competence and .74 for relatedness, and .83 for the whole scale. Validity of the three factor-structure of the scale was investigated by the "confirmatory factor analysis" method. After the analysis, consistency indexes of the derived model were reported as RMSEA: 0.07, GFI: 0.86, AGFI: 0.82, CFI: 0.82, NNFI: 0.80 and the three factor-structure was confirmed as in the original of the scale.

2.2.2. Oxford Happiness Questionnaire (OHQ)

This scale, which was developed to measure happiness by Hills and Argyle (2002), was adapted to Turkish by Doğan and Sapmaz (2012). Results from confirmatory factor analysis also show that one factor-structure of scale stays the same in Turkish university students sample as in the original. Criterion-related validity analysis indicates significant relationships between OHQ and other measurement instruments evaluating happiness and optimism. In reliability analysis, Cronbach Alpha coefficient for internal consistency of OHQ was found to be .91, and reliability coefficient assessed using split-half reliability was found to be .86. Composite reliability of scale was determined as .91.

2.3. Analysis

For the purpose of the study, to examine the relationships between happiness and satisfaction of psychological needs, Pearson Product-Moment Correlation Analysis was used. Multiple Regression Analysis was used in order to determine the prediction level of satisfaction of psychological needs to happiness. The study also includes the descriptive statistics such as mean and standard deviations. Statistical significance level in this study was p<.05 and data was analyzed using Statistical Package for the Social Sciences (SPSS) 15.0.

3. Results

In the results section, descriptive statistics of dependent (happiness) and independent (satisfaction of psychological needs) variables are first demonstrated. After that, correlational values between variables, and finally multiple regression analysis results are presented.

Table 1. Descriptive statistics of dependent and independent variables

Variables	Min	Max	X	Ss
Happiness	46.00	165.00	121.22	20.03
Need for Autonomy	12.00	35.00	26.01	4.79
Need for Competence	13.00	30.00	20.84	3.62
Need for Relatedness	20.00	40.00	31.00	4.30
Psychological Need Satisfaction (Total)	50.85	101.00	77.87	10.32

n=192

Table 1 shows the means and standard deviations of happiness and psychological need satisfaction sub-dimensions which are need for autonomy, need for competence and need for relatedness. Mean of happiness scores, measured by Oxford Happiness Questionnaire (OHQ), was found as =121.22 (Ss=20.03). When scores from the Need Satisfaction Scale were examined, it was found that need for autonomy mean score is =26.01 (Ss=4.79), need for competence mean score is =20.84 (Ss=3.62), need for relatedness mean score is =31.01 (Ss=4.30). Total mean scores of psychological need satisfaction is =77.87 (Ss=10.32). It can also be seen in Table 1 that the lowest score taken from OHQ is 46, the highest score is 165. For the psychological need satisfaction, the highest scores of the need for autonomy, competence and relatedness are 35, 30 and 40; on the contrary the lowest scores are 12, 13 and 20, respectively. When total mean scores from the Need Satisfaction Scale were examined, it was found that the lowest score was 50.85 and the highest score was 101.00.

Whether psychological need satisfaction and happiness differs in terms of gender or not was also examined. According to the results, there is no significant difference, in terms of gender, between the need for autonomy ($t_{(188)}$=1.031, p=.304), the need for competence ($t_{(188)}$= .325, p=.745), the need for relatedness ($t_{(188)}$=.167, p=.868) and total psychological need satisfaction ($t_{(188)}$=.660, p=.510). Similarly, there is not a significant difference between happiness ($t_{(188)}$=-.026, p=.980) scores in terms of gender.

Table 2. Correlation coefficients of happiness and psychological need satisfaction

	1	2	3	4	5
1. Happiness	1	.61**	.60**	.57**	.73**
2. Need for Autonomy		1	.50**	.54**	.87**
3. Need for Competence			1	.39**	.75**
4. Need for Relatedness				1	.81**
5.Psychological Need Satisfaction (Total)					1

**p< .01, n=192

It was found that there are positive significant relationships (p<.01) between happiness and psychological need satisfaction and its sub-dimensions which are the need for autonomy, the need for competence, and the need for relatedness (see Table 2). Similarly, there is a positive significant relationship (p<.01) between total scores of psychological need satisfaction and its sub-dimensions; autonomy, competence, relatedness. There are also positive significant relationships between each sub-dimension of psychological need satisfaction (autonomy-competence, autonomy-relatedness, relatedness-competence). Correlation coefficients of research variables are presented in detail (see Table 2).

Table 3. Multiple regression analysis of happiness prediction

	B	SEB	Beta	t	p
Need for Autonomy	1.21	.26	.29	4.58	.000*
Need for Competence	1.91	.32	.35	5.97	.000*
Need for Relatedness	1.28	.28	.28	4.60	.000*
R=0.74, R^2=0.54, F=73.64, p<.01					

*p< .01

Findings of Multiple Regression Analysis, conducted to assess how psychological need satisfaction sub-dimensions autonomy, competence, and relatedness predict happiness; can be seen in Table 3. According to the findings, psychological need satisfaction sub-dimensions significantly predict happiness of university students (R=0.79, R^2=0.54, F=73.64, p<.01). When the relationships between predictor variables (need for autonomy, competence, relatedness) and predicted variable happiness are examined one by one, it was found that the need for competence most significantly and positively predicts happiness (β = .35; p<.01). Following the need for competence, the need for autonomy (β = .29; p<.01) and the need for relatedness (β = .28; p<.01) predict happiness significantly and in a positive way, respectively. According the analysis results, all predictor variables account for 54% of the total variance of happiness.

4. Discussion and Conclusion

In the present study, the aim was to examine the relationships between psychological needs and happiness. Findings showed that there are significant and positive relationships between psychological needs and happiness. According to the theory of self-determination, it was concluded that three psychological needs, autonomy, competence and relatedness, significantly and positively predict happiness.

Findings of the study show congruence with literature on psychological needs and happiness. For instance, Sheldon and Niemiec (2006) found that satisfaction of each of the needs for autonomy, competence and relatedness significantly predicts subjective well-being and happiness (Sheldon and Niemiec, 2006). Another study by Reis et al. (2000), showed that level of perceived satisfaction of the psychological needs within the theory of self-determination significantly predicts the perceived subjective well-being during the day. Cihangir-Çankaya (2009) demonstrated, in their study with Turkish university students, that an individual's perceived autonomy support from their family and friends influences satisfaction of basic psychological needs; and satisfaction of basic psychological needs also positively influences subjective well-being (Cihangir-Çankaya, 2009). The findings of these research studies support the results of this present study. It was concluded that each of the needs for autonomy, competence and relatedness significantly predicts happiness in Turkish culture. According to the results of this study conducted with Turkish university students, on the other hand, it is interesting that the need for competence is the most significant predictor of happiness, and the need for autonomy and relatedness follow it, respectively. This is the reason why many studies (e.g. Ryan, Deci, Grolnick & LaGuardia, 2006; Gagne, Ryan & Bargmann 2003; Morsünbül, 2012) within the theory of self-determination emphasize the need for autonomy. Other studies also underline the importance of balance in satisfaction of psychological needs. For instance, in a study by Sheldon and Niemiec (2006), balance of need satisfaction, which means the satisfaction of the needs for autonomy, competence and relatedness in the same average levels, significantly predicts the subjective well-being and happiness as a fourth variable (Sheldon & Niemiec, 2006). In this study, it can be also said that balance of need satisfaction has an important mediating role on the level of happiness, when the prediction levels of each need are examined.

Results of another study, conducted by İlhan and Özbay (2010) to examine which level life goals and need satisfaction predict subjective well-being in Turkish culture, supports this idea. Findings of the study by İlhan and Özbay (2010) indicate that psychological need satisfaction is the most predictive variable of subjective well-being. In other words, as the satisfaction level of university students for basic psychological needs such as autonomy, competence and relatedness increases, subjective well-being levels also increase.

It is important to support the findings of this study with other studies conducted by similar and different subject groups, especially in Turkish culture. Furthermore, based on the findings, individual or group counseling programs aiming to increase happiness and include psychological needs one by one or together could be designed, and efficiency studies may have utility in literature. Similar studies with different age, education and socio-cultural sample groups and comparisons between these studies could also be carried out. Although satisfaction of psychological needs indicates happiness, subjective well-being and life satisfaction in many cultures, distinctive and changing influences of individual and cultural factors should always be taken into consideration (Deci & Ryan, 2008).

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