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The relationship between high school students' psychological needs and human value perceptions

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Abstract

Some basic needs of individuals should be fulfilled in order to sustain his/her existence and improvement. The obligation of needs fulfillment, which is classified as physiologic and psychological needs, constitutes the fundamentals of individual behaviors. Moreover, values which appear as a criterion in an individual's opinion, attitude and behaviour also defines the things a person considers important and thus it shows, preferences, desired and undesired things. Values, which are directly related to feelings, opinions and behavior levels, are seen important in the relationship between psychological needs and values. The aim of this study is to determine the relationship level between human values (responsibility, friendship, peaceful, respect, tolerance and honesty) and psychological needs (relatedness, competence and autonomy). In this research survey method was used. 456 students, who attend several high schools and were chosen randomly, constituted the sample (47,8% male; 52,2% female). The human value perceptions of the students were measured by Human Values Scale. The psychological needs were measured by Basic Psychological Needs Scale which has relationship, efficiency and autonomy sub dimensions. The findings determined that there is a significant relationship between relatedness, competence and autonomy needs and human value perceptions.

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1. Introduction

Some basic needs of individuals should be fulfilled in order to sustain his/her existence and improvement. Early drive theories were concerned with physiological needs (e.g., hunger, thirst, sex, and sleep). Hull (1943), for example, proposed that organisms learned behaviors that were associated with drive reduction in order to optimize the restoration of psychological equilibrium. However, certain authors started to think more creatively about the nature of drives. For instance, Berlyne (1954) investigated the curiosity drive, and Angyal (1958) became interested in the exploratory drive.

Drive theories paved the way for the development of various conceptualizations of basic human needs. An important and most noteworthy characteristic of this evolution is that such theories grew to include, and eventually to focus predominantly, on psychological needs (Majstorovic, 2007). Psychological needs energize and direct behaviors intended to fulfill essential organismic necessities and foster growth and development (Deci & Ryan,

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2000a). Self-Determination Theory (Deci & Ryan, 1985a, 2002) represents a model of human motivation and personality that adopts an organismic conceptualization of human development in which needs are considered instrumental to psychological growth and behavioral self-regulation. According to Ryan (1995), psychological needs fuel self-integration, self-renewal, and self-expansion. This conceptual framework posits that humans inherit three basic psychological needs: autonomy, competence and relatedness. Chronologically, these needs were progressively integrated within Self-Determination Theory over a span of almost twenty years of research and theoretical work. The satisfaction of the needs for competence, autonomy and relatedness have been investigated as predictors of subjective well-being in different domains, such as work (Ryan & Deci, 2000a), education (Levesque, Zuehlke, Stanek & Ryan, 2004), social roles (Bettencourt & Sheldon, 2001), or as a function of daily fluctuations in needs fulfillment (Sheldon, Ryan & Reis, 1996).

Psychological needs are innate, whereas values are acquired and cognitively elaborated structures. Values are based on experiential and philosophical considerations and represent higher level aspirations that provide overarching life guidelines (Schwartz, 1992). Many authors proposed links between psychological needs and values, and have argued that values must, at least partially, originate from basic needs satisfaction (e.g., Kasser, 2002; Maslow, 1970; Schwartz, 1994). For instance, Schwartz (1992) stated that values represent an answer to 'universal requirements of human existence to which all individuals and societies must be responsive: needs of individuals as biological organisms, requisites of coordinated social interaction, and survival and welfare needs of groups'. Ryan and Deci (2000a) theorized that values represent avenues for needs satisfaction. Ryan (1995) proposed that values do not simply reflect psychological needs, but rather stem from the interaction of cultural inputs and basic needs. He further raised the question of the degree of congruency between cultural contents and human nature, indicating that incongruence between the two can negatively affect personal integration and well-being during development. However, the relationship between need satisfaction and value orientation has never been tested empirically. This is one of the goals of the present research. This research's other goal is to determine whether basic psychological needs fulfillment (autonomy, competence and relatedness) predict human values (responsibility, friendship, peaceful, respect, tolerance and honesty) or not.

2. Method

2.1. Participants

Participants in this study were 460 high school students from various high schools in Kayseri province. Random sampling method was used in sample choice. 220 (47,8%)of these 460 students were female and 240 (52,2%) students were male. Students' ages ranged from 14-17.

2.2. Procedure

The research was conducted in 2009-2010 educational period. The data collection process was undertaken by the researcher. The data gathering instruments were distributed to 460 students at different high schools in Kayseri. The forms belonging to 4 participants were eliminated after conduct due to insufficient information. Statistical analyses were performed on the data gathered from the remaining 456 participants.

2.3. Instruments

The Basic Psychological Needs Scale and the Human Values Scale were used in order to collect the necessary data for this study.

2.3.1. Basic Psychological Needs Scale (BPNS)

The Basic Psychological Needs Scale (BPNS) was administered as a measure of need fulfillment. This scale was created by Deci and Ryan (2000b) by adapting a measure used by Iardi, Leone, Kasser, and Ryan (1993). It was adapted to Turkish by Kesici, Üre, Bozgeyikli & Sünbül (2003). The BPNS consists of 21 items: 8 items measure relatedness, 7 items measure autonomy, and 6 items measure competence. The original scale uses a Likert response format ranging from 1 = *not at all true* to 7 = *very true*. The Turkish version of the scale uses a Likert response format ranging from 1 = *not at all true* to 5 = *very true*. For all three subscales, a higher score reflect need fulfillment. Appropriate items were coded reversely (Deci & Ryan, 2000b). Sample reverse-coded items from the scale include “I feel pressured in my life” (autonomy), “Often, I do not feel very competent” (competence), and “There are not many people that I am close to” (relatedness). In the present study, Cronbach’s alpha was .73 for the autonomy subscale, .64 for the competence subscale, and .72 for the relatedness subscale. Gagne (2003) reported reliability values comparable to what we found in the present study: $\alpha = .69$ for the Autonomy subscale, $\alpha = .71$ for the Competence subscale, and $\alpha = .86$ for the Relatedness subscale.

2.3.2. Human Values Scale (HVS)

In order to specify students’ human values, “Human Values Scale (HVS)” developed by Dilmaç (2007) for high school students were administered. The scale consists of 42 items in six subscales which are Responsibility, Friendship, Peaceful, Respect, Tolerance and Honesty. It is a five-point Likert scale (A: Never, B: Rarely, C: Sometimes, D: Frequently, E: Always) and could be administered individually or in groups. The items were scored as A: 1- B: 2- C: 3- D: 4- E: 5. Higher/lower scores indicated that individuals had higher/lower human values. In the present study, Cronbach’s alpha was .71 for the responsibility subscale, .71 for the friendship subscale, .67 for the peaceful subscale, .69 for the respect subscale, .73 for the tolerance subscale, and .69 for the honesty subscale. Dilmaç (2007) reported reliability values comparable to what we found in the present study: $\alpha = .73$ for the responsibility subscale, $\alpha = .69$ for the friendship subscale, $\alpha = .65$ for the peaceful subscale, $\alpha = .67$ for the respect subscale, $\alpha = .70$ for the tolerance subscale, and $\alpha = .69$ for the honesty subscale.

3. Findings

Table 1 presents the means, standard deviations, and the intercorrelations among for each of the variables in the study.

Table 1. Means, Standard Deviations, and Correlations for basic psychological needs and Human Values Measures

Subscale	M	SD	1	2	3	4	5	6	7	8	9
1. Autonomy	23.63	4.10	-								
2. Competence	20.02	3.54	.39*	-							
3. Relatedness	31.32	5.96	.30*	.26*	-						
4. Responsibility	25.90	4.01	.21*	.24*	.30*	-					
5. Friendship	27.87	5.63	.18*	.17*	.32*	.42*	-				
6. Peaceful	24.79	4.55	.16*	.20*	.097	.47*	.26*	-			
7. Respect	26.15	4.83	.15*	.27*	.22*	.58*	.33*	.64*	-		
8. Honesty	24.96	3.90	.014	.16*	.063	.46*	.24*	.55*	.56*	-	
9. Tolerance	22.21	4.15	.005	.056	.038	.41*	.23*	.44*	.41*	.52*	-

* $p < .05$

When Table 1 examined, it is observed that there are significant correlations between dimensions of psychological needs fulfilled and human values. While autonomy need fulfilled correlated positively with responsibility ($r = .21, p < .05$), friendships ($r = .18, p < .05$), peaceful ($r = .16, p < .05$) and respect ($r = .15, p < .05$). On the other hand no significant correlation was found between autonomy need fulfilled with honesty ($r = .014, p > .001$) and tolerance ($r = .005, p > .05$). Competence need fulfilled has positive correlations with responsibility ($r = .24, p < .05$), friendships ($r = .17, p < .05$), peaceful ($r = .20, p < .05$), respect ($r = .27, p < .05$) and honesty ($r = .16, p < .05$). It is also seen that there is no significant correlation with competence need fulfilled and tolerance ($r = .005, r > .05$). Finally, it was found that relatedness need fulfilled has a positive correlations with responsibility ($r = .30, p < .05$), friendships ($r = .32, p < .05$) and respect ($r = .22, p < .05$). On the other hand no significant correlation was found between relatedness need fulfilled with peaceful ($r = .097, p > .05$), honesty ($r = .014, p > .05$) and tolerance ($r = .005, p > .05$).

Multiple Linear Regression Results of Predictions of HVS sub dimensions autonomy, competence and relatedness need fulfilled were given in Table 2, Table 3, Table 4, Table 5, Table 6 and Table 7.

Table 2. The Results of Multiple Regression Analysis of Responsibility Sub Dimension Prediction

Subscale	B	Std.Er.	β	t
1. Autonomy	.07	.04	.08	1.623
2. Competence	.17	.05	.15	3.094*
3. Relatedness	.16	.03	.24	5.192*
$R = .358 \quad R^2 = .128 \quad F_{(3-452)} = 22.158 \quad p = .001 \quad * p < .05$				

According to multiple regression analysis results in Table 2 there is a significant relationship between variables BPNS (autonomy, competence and relatedness needs fulfilled) and HVS Responsibility sub dimension ($R = 0.358, R^2 = 0.128, p < .001$). The mentioned variables predict 12.8% of the total variance in responsibility sub dimension. According to standardized regression coefficient (β), the relative importance rank of predictive variables on HVS-responsibility sub dimension is relatedness, competence and autonomy needs fulfilled respectively. When t test results related the significance of regression coefficients are examined, competence and relatedness needs fulfilled variables are significantly predictive on responsibility sub dimension. Autonomy need fulfilled variable does not have important effect on responsibility sub dimension.

Table 3. The Results of Multiple Regression Analysis of Friendship Sub Dimension Prediction

Subscale	B	Std.Er.	β	t
1. Autonomy	.10	.06	.07	1.539
2. Competence	.10	.07	.06	1.306
3. Relatedness	.27	.04	.28	6.158*
$R = .347 \quad R^2 = .120 \quad F_{(3-452)} = 20.613 \quad p = .001 \quad * p < .05$				

According to multiple regression analysis results there is a significant relationship between variables BPNS (autonomy, competence and relatedness needs fulfilled) and HVS-Friendship sub dimension ($R = 0.347, R^2 = 0.120, p < .001$). The mentioned variables predict 12.0% of the total variance in friendship sub dimension. According to standardized regression coefficient (β), the relative importance rank of predictive variables on HVS-Friendship sub dimension is relatedness, autonomy and competence needs fulfilled respectively. When t test results related the significance of regression coefficients are examined, relatedness needs fulfilled variable is significantly predictive on responsibility sub dimension. Autonomy and competence need fulfilled variable does not have important effect on responsibility sub dimension.

Table 4. The Results of Multiple Regression Analysis of Peaceful Sub Dimension Prediction

Subscale	B	Std.Er.	β	t
1. Autonomy	.10	.05	.09	1.879
2. Competence	.20	.06	.16	3.223*
3. Relatedness	.01	.03	.02	.510
$R = .229 \quad R^2 = .052 \quad F_{(3-452)} = 8.305 \quad p = .001 \quad * p < .05$				

According to multiple regression analysis results there is a significant relationship between variables BPNS (autonomy, competence and relatedness needs fulfilled) and HVS-Peaceful sub dimension ($R=0.229$, $R^2=0.052$, $p<.001$). The mentioned variables predict 5,2% of the total variance in peaceful sub dimension. According to standardized regression coefficient (β), the relative importance rank of predictive variables on HVS-Peaceful sub dimension is relatedness, autonomy and competence needs fulfilled respectively. When t test results related the significance of regression coefficients are examined, competence needs fulfilled variable is significantly predictive on peaceful sub dimension. Autonomy and relatedness need fulfilled variable does not have important effect on peaceful sub dimension.

Table 5. The Results of Multiple Regression Analysis of Respect Sub Dimension Prediction

Subscale	B	Std.Er.	β	t
1. Autonomy	.02	.05	.02	.452
2. Competence	.30	.06	.22	4.490*
3. Relatedness	.12	.03	.15	3.317*
$R=.314$ $R^2=.099$ $F_{(3-452)}=16.536$ $p=.001$ $*p<.05$				

According to multiple regression analysis results there is a significant relationship between variables BPNS (autonomy, competence and relatedness needs fulfilled) and HVS- Respect sub dimension ($R=0.314$, $R^2=0.099$, $p<.001$). The mentioned variables predict 9,9% of the total variance in respect sub dimension. According to standardized regression coefficient (β), the relative importance rank of predictive variables on HVS-Respect sub dimension is competence, relatedness, and autonomy needs fulfilled respectively. When t test results related the significance of regression coefficients are examined, competence and relatedness needs fulfilled variables are significantly predictive on respect sub dimension. Autonomy need fulfilled variable does not have important effect on respect sub dimension.

Table 6. The Results of Multiple Regression Analysis of Honesty Sub Dimension Prediction

Subscale	B	Std.Er.	β	t
1. Autonomy	.06	.04	.06	1.308
2. Competence	.19	.05	.17	3.486*
3. Relatedness	.02	.03	.03	.741
$R=.174$ $R^2=.030$ $F_{(3-452)}=4.680$ $p=.003$ $*p<.05$				

According to multiple regression analysis results there is a significant relationship between variables BPNS (autonomy, competence and relatedness needs fulfilled) and HVS-Honesty sub dimension ($R=0.174$, $R^2=0.030$, $p<.001$). The mentioned variables predict 3.0% of the total variance in honesty sub dimension. According to standardized regression coefficient (β), the relative importance rank of predictive variables on HVS-Honesty sub dimension is competence, autonomy and relatedness needs fulfilled respectively. When t test results related the significance of regression coefficients are examined, competence needs fulfilled variable is significantly predictive on honesty sub dimension. Autonomy and relatedness need fulfilled variable does not have important effect on honesty sub dimension.

Table 7. The Results of Multiple Regression Analysis of Tolerance Sub Dimension Prediction

Subscale	B	Std.Er.	β	t
1. Autonomy	-.02	.05	.02	.510
2. Competence	.06	.06	.05	1.118
3. Relatedness	.02	.03	.03	.616
$R=.065$ $R^2=.004$ $F_{(3-452)}=.642$ $p=.588$				

According to multiple regression analysis results there is no significant relationship between variables BPNS (autonomy, competence and relatedness needs fulfilled) and HVS-Tolerance sub dimension ($R=0.065$, $R^2=0.004$,

$p > .001$).

4. Discussion

The association between the satisfaction of basic psychological needs and the development of personal values has been theorized about by humanistic authors for decades. Early works by Rogers (1964) and Maslow (1956) stated that basic psychological needs had to be fulfilled in order for an individual to evolve personalized, self-actualizing values. Testing for the presence of the alleged association between need satisfaction and values was one of the main goal of the present study. The results of this study indicated that there were positively and significantly relationships between three psychological needs (autonomy, competence and relatedness) and six human values perceptions (responsibility, friendship, peaceful, respect, tolerance and honesty) of high school students'. As proposed by humanistic authors (Deci & Ryan, 2000a; Maslow, 1970; Kasser, 2002; Rogers, 1964; Rokeach, 1973), psychological need satisfaction indeed covaried positively with the development of self-actualizing values. As for the association between needs satisfaction and human values, partial support was obtained.

In this study, the results of the regression analyses performed on responsibility and respect sub dimensions scores showed that competence and relatedness needs fulfillment were important predictors of the responsibility and respect sub dimensions. The results of the regression analyses performed on peaceful and honesty sub dimensions scores showed that competence need fulfillment was important predictors of the peaceful and honesty sub dimensions. Moreover the results of the regression analyses performed on friendship sub dimensions scores showed that relatedness need fulfillment was important predictors of the friendship value perceptions. In addition regression analyses scores on tolerance showed that basic psychological need were not important predictors of tolerance sub dimension.

These results further our understanding of the needs/value relationship by shedding light on its underlying psychological mechanisms. Psychological needs are constitutional, inborn strivings. Values are involved, acquired, cognitive structures. Clearly, intermediate processes are at play in the transformation from one end state to another. Specifically, according to Self-Determination Theory (Deci & Ryan, 1985,2002), satisfaction of the needs for autonomy, competence, and relatedness, is the central antecedent of personal integration. When these needs are gratified, the person's organismic inclination to assimilate, organize, and actualize his or her functioning is optimized (Ryan, 1995).

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