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Investigation of the Basic Psychological Needs of Physical Education and Sports School Students According to Several Variables

Abstract

This study aims to investigate the levels of basic psychological needs in students of the faculty of sports sciences according to the self-determination theory in terms of several variables. In the study, the clustering method was used. This study is descriptive and inferential. The study was conducted with 1114 participants from six different faculties of sports sciences during the 2015-2016 education period. In the study, the criterion of voluntary participation was adopted. As the data collection tool, the demographic information form, which was developed by the researcher, and the Basic Psychological Needs scale were used. The collected data were evaluated by SPSS 21.0 statistics software in a computer environment. It was determined that there were significant differences in terms of the department, exercising, family attitude, and residence variables of the participating university students in the study while no significant difference was observed in terms of the gender variable. Several demographic variables of the university students influence their levels of satisfaction in meeting their basic psychological needs.

Keyword: basic psychological need, physical education, sports.

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INTRODUCTION

People require various needs from the moment they are born until the moment of their biological deaths. These needs can be physiological or psychological. Maslow stated that people have several needs that come from their birth and shape various behaviors (Maslow, 1970). Many theorists evaluated the concept of needs, which is based on Maslow's hierarchy of needs, and novel perspectives were put forward on the subject. Several theories stated that individuals' needs existed since birth while other theories stated that they were gained later. Darley (1991) defined needs as the states of insufficiencies that resulted from individuals' biological (physiological) or psychological requirements (Darley, 1991). Hull emphasized that the whole motivation of individuals' needs consisted of their biological imbalances or needs and this need resulted from biological requirements that emerge in organisms in the urge theory (Hull, 1943). Deci and Ryan emphasized that needs came from birth while triggering the organisms at deficient states and having a quality that enables the continuation of liveliness (Deci and Ryan, 2000). Murray stated that needs are both biological and psychological while our needs constitute a force that directs our perceptions and behaviors and it was a state of stress where the needs of individuals should be met (Murray, 1938). Briefly, it is possible to define the concept of basic needs as necessities, needs and requirements, and state that it represents a deficiency and insufficiency. In this study, we attempted to focus on the theory of self-determination, which is one of the theories related to needs. Essentially, self-determination is the individuals' experience of the feeling of free choice in initiating and regulating their behaviors. The self-determination theory is based on the focus of understanding the development process of individuals in groups and understanding the psychological needs of individuals (Deci et al., 1989). In the self-determination theory, Ryan and Deci stated that the psychological needs that cannot be met can result in mental disorders while Kasser and Ryan emphasized that these needs are required for the maintenance of life, development, and health (Kasser and Ryan, 1999). The self-determination theory was investigated in terms of three aspects as competence, relatedness, and autonomy. These three needs are briefly defined as the following. The need for autonomy is defined as making one's own decisions about the subjects related to the individual while the need for competence is defined as using skills and developing them in addition to the need for relatedness, which is defined as connecting with other people and feeling socially valuable (Deci and Ryan, 2000). It is possible to state that meeting these needs can result in the subjective well-being of individuals and ensure positive development in individuals' behaviors. Positive development in positive affect, negative affect, and life satisfaction aspects of individuals whose basic psychological needs are met will enable individuals to be better and happier. Namely, when individuals experience relatively high levels of positive feelings, low levels of negative feelings and have high levels of life satisfaction, these emerge as happiness in individuals and enable subjective well-being (Özdemir, 2012). Based on meeting the basic psychological needs of individuals, stated that individuals' states of well-being can develop and improve their motivation (Deci and Ryan, 1996). It is also possible to state that when the needs of individuals are not met, negative feelings such as anxiety, sadness, and hostility can emerge (Deci and Ryan, 2000).

This study was conducted to reveal the individuals' levels of meeting their needs, which belong to them and which are shaped by their environment, in their mental world.

METHOD

Study Design

This study was conducted as a descriptive study in the cluster model. Cluster analysis presents summative information to researchers by grouping ungrouped data according to their similarities (Kalaycı, 2010).

Population and Sample

The population of the study consisted of the cities of Kahramanmaraş, Malatya, Kayseri, Kırşehir, Hayat, and Elazığ. The sample of the study included 1114 university students (633 males and 481 females), who studied at 1st, 2nd, 3rd and 4th grades in the departments of physical education and sports, and coaching education at Mustafa Kemal University, Kahramanmaraş Sütçü İmam University, Fırat University, İnönü University, Erciyes University, and Ahi Evran University.

Data Collection

The demographic information form, which was developed by the researcher, and the Basic Psychological Needs Scale were conducted with the university students in the sample group according to the aims of the study. The demographic information form covered five variables (gender, department, place of residence, family attitude, the status of active exercise). The basic psychological needs scale, which was developed by Deci and Ryan (2000), was adapted into Turkish by Üre, Kesici, Bozgeyikli, and Sünbül (2003). The scale covers three subscales where the scores of individuals in each item of a subscale are summed, obtaining scale scores for the 3 subscales for each individual. These three subscales are autonomy, competence, and relatedness, respectively. The items of these subscales are distributed as the following.

Need for Competence: Items 3, 5, 10, 13, 15 and 19; Need for Autonomy: Items 1, 4, 8, 11, 14, 17 and 20; Need for Relatedness: 2, 6, 7, 9, 12, 16, 18 and 21 (Deci and Ryan, 2000).

Data Analysis

The data in the study were analyzed by Package for the Social Sciences (SPSS) 21.0 software. In the data analysis, descriptive information (count, percentage, mean and standard deviation) was evaluated first. To determine whether the data collected from the basic psychological needs scale and the demographic variables had a normal distribution, the Kolmogorov-Smirnov test was conducted. As a result of this test, it was observed that the data did not demonstrate a normal distribution. Therefore, the Mann-Whitney U test (MWU) was conducted for comparisons with two samples while the Kruskal-Wallis H test (KHW) was conducted for comparisons with more than two samples. In the study, the level of statistical significance was regarded as $p < 0.05$.

FINDINGS

Table 1. Results of the Analysis According to the Variable of Gender

| | Gender | N | Mean | SD | Z* | p |
|----------------------|--------|-----|--------|-----------|--------|-------|
| Need for Relatedness | Male | 633 | 562.08 | 355796.00 | -.547 | 0.584 |
| | Female | 481 | 551.47 | 265259.00 | | |
| Need for Autonomy | Male | 633 | 571.32 | 361646.00 | -1.653 | 0.098 |
| | Female | 481 | 539.31 | 259409.00 | | |
| Need for Competence | Male | 633 | 559.00 | 353849.00 | -.180 | 0.857 |
| | Female | 481 | 555.52 | 267206.00 | | |

p>0.05; *Mann Whitney U

According to Table 1, there is no significant difference in the mean scores of relatedness, autonomy, and competence subscales in terms of the gender variable of university students (p>0.05).

Table 2. Results of the Analysis According to the Variable of Department

| | Department | N | Mean | SD | Z | p |
|----------------------|------------|-----|--------|-----------|--------|--------|
| Need for Relatedness | PEST** | 542 | 528.00 | 286177.50 | -2.990 | 0.003* |
| | CE*** | 572 | 585.45 | 334877.50 | | |
| Need for Autonomy | PEST | 542 | 528.44 | 286417.00 | -2.949 | 0.003* |
| | CE | 572 | 585.03 | 334638.00 | | |
| Need for Competence | PEST | 542 | 525.01 | 284555.00 | -3.299 | 0.001* |
| | CE | 572 | 588.29 | 336500.00 | | |

p<0.05; *Mann Whitney U, **Physical Education and Sports Teaching Department, *** Coaching Education Department

According to Table 2, it was determined that there were statistically significant differences in the mean relatedness, autonomy, and competence subscale scores of university students from physical education and sports, and coaching education departments in terms of the variable of the department (p<0.05). This difference is in favor of the students in the coaching education department. In other words, the needs for relatedness, autonomy, and competence in students of the coaching education department were met at higher levels.

Table 3. Results of the Analysis According to the Variable of the Status of Exercising

| | Do you exercise? | N | Mean | SD | Z | p |
|----------------------|------------------|-----|--------|-----------|--------|--------|
| Need for Relatedness | Yes | 610 | 563.67 | 343837.00 | -.706 | 0.480 |
| | No | 504 | 550.04 | 277218.00 | | |
| Need for Autonomy | Yes | 610 | 580.47 | 354089.50 | -2.635 | 0.008* |
| | No | 504 | 529.69 | 266965.50 | | |
| Need for Competence | Yes | 610 | 579.70 | 353615.50 | -2.547 | 0.011* |
| | No | 504 | 530.63 | 267439.50 | | |

p>0.05; *Mann Whitney U

According to Table 3, it was observed there was no statistically significant difference in the mean scores of the need for relatedness subscale between the university students who exercised and those who did not exercise. However, it was revealed that there were statistically significant differences in mean scores for the level of meeting autonomy and competence needs (p<0.05). This difference is in favor of university students who exercised. In other words, the university students who exercised satisfied their autonomy and competence needs at higher levels.

Table 4. Results of the Analysis According to the Variable of Family Attitude

| | Family Attitude | N | Mean | x ² | SD | p | Group Difference |
|----------------------|----------------------------|-----|--------|----------------|----|--------|------------------|
| Need for Autonomy | Democratic ¹ | 368 | 544.52 | 7.687 | 3 | 0.053 | |
| | Authoritarian ² | 195 | 512.66 | | | | |
| | Protective ³ | 496 | 582.66 | | | | |
| | Indifferent ⁴ | 55 | 576.35 | | | | |
| Need for Competence | Democratic ¹ | 368 | 529.87 | 14.884 | 3 | 0.002* | 1,2<3 |
| | Authoritarian ² | 195 | 509.00 | | | | |
| | Protective ³ | 496 | 597.27 | | | | |
| | Indifferent ⁴ | 55 | 555.69 | | | | |
| Need for Relatedness | Democratic ¹ | 368 | 561.55 | 3.913 | 3 | 0.271 | |
| | Authoritarian ² | 195 | 517.39 | | | | |
| | Protective ³ | 496 | 567.61 | | | | |
| | Indifferent ⁴ | 55 | 581.48 | | | | |

p<0.05; *Kruskal Wallis

According to Table 4, it was determined that there was no statistically significant difference in the comparison of meeting autonomy and relatedness needs according to the variable of democratic, authoritarian, protective, and indifferent family attitudes of the students. However, there was a statistically significant difference in family attitude in terms of meeting the students' need for competence ($p < 0.05$). This difference was in favor of protective families. In other words, individuals in families that exhibit protective attitudes satisfied the need for competence at higher levels compared to democratic and authoritarian families.

Table 4. Results of the Analysis According to the Variable of the Place of Residence

| | Place of Residence | N | Mean | χ^2 | SD | p | Group Difference |
|----------------------|----------------------------|-----|--------|----------|----|--------|------------------|
| Need for Autonomy | City Center ¹ | 702 | 568.84 | 3.980 | 2 | 0.137 | |
| | County Center ² | 283 | 524.72 | | | | |
| | Village-Town ³ | 129 | 567.71 | | | | |
| Need for Competence | City Center ¹ | 702 | 573.01 | 6.643 | 2 | 0.036* | 2<1 |
| | County Center ² | 283 | 515.34 | | | | |
| | Village-Town ³ | 129 | 565.55 | | | | |
| Need for Relatedness | City Center ¹ | 702 | 566.06 | 4.692 | 2 | 0.096 | |
| | County Center ² | 283 | 523.44 | | | | |
| | Village-Town ³ | 129 | 585.66 | | | | |

$p < 0.05$; *Kruskal Wallis

According to Table 5, it was determined that there was no statistically significant difference in the levels of satisfying autonomy and relatedness needs of the students in terms of their places of residence, city centers, county centers, and villages-towns. However, the students' places of residence constituted a significant difference in terms of satisfying their needs for competence ($p < 0.05$). This difference was in favor of individuals who resided in city centers. In other words, the competence needs of individuals who resided in city centers were satisfied at higher levels.

DISCUSSION

In this section, the results related to gender, place of residence, family attitude, the status of exercising and department variables, which were believed to influence the satisfaction levels of basic psychological needs of students of physical education and sports and coaching education departments, were compared with other results of the students and evaluations were presented.

In terms of satisfying the needs for autonomy, relatedness, and competence in university students, it was observed that the variable of gender did not constitute a significant difference. According to this result, within the scope of satisfying the need for autonomy, gender did not have a significant effect on students in the processes of regulating and managing their behaviors and making decisions on their own. In terms of meeting the need for relatedness, gender did not create a significant effect on the processes of connecting with people and feeling socially valuable. In satisfying the needs for competence, it can be stated that gender did not constitute a significant difference while individuals used the skills they possessed and developed these skills. In a study conducted with foreign and Turkish university students, Halmatov reported that gender did not have any effect on either increasing or decreasing the needs for autonomy, relatedness, and competence (Halmatov, 2007). Sarı et al. reported that they did not observe any significant difference between males and females in terms of basic psychological needs (Sarı et al., 2011). Another study reported that the basic psychological needs of the students in the faculty of education did not differ

according to gender (Gündoğdu and Yavuzer, 2012). However, Waters et al. observed that the satisfaction levels of males in terms of basic psychological needs were higher compared to females (Waters et al., 1990). Çankaya reported that gender did not create any significant differences in terms of meeting needs for autonomy and competence while emphasizing that the need for relatedness constituted a significant difference in favor of females (Çankaya, 2005). In a study conducted by Çelikkaleli and Gündoğdu, it was stated that the needs for autonomy and relatedness created a significant difference in favor of females (Çelikkaleli and Gündoğdu, 2005). Kashdan et al. reported that the needs for autonomy and relatedness in females were higher compared to males (Kashdan et al., 2009). In a study conducted with 587 university students, Gezer reported that there were significant differences between the levels of satisfying the needs for autonomy, relatedness, and competence of males and females while this difference was in favor of female university students (Gezer, 2018). Finally, several studies reported that there was no significant difference in the levels of satisfying basic psychological needs in terms of gender while other studies stated that females had higher levels of satisfying needs for autonomy and relatedness. According to these results, the conditions that determine the level of satisfying the needs of autonomy, competence, and relatedness in males and females can be related to the environment where individuals live. This is because it is an indisputable fact that people, social beings, depend on the society where they live in terms of mental satisfaction. It can also be stated that this dependence provides positive satisfaction in meeting needs while they can create a negative mental satisfaction process.

In the evaluation of the students of physical education and sports teaching and coaching education departments, it was determined that there were statistically significant differences in the levels of satisfying the needs for autonomy, relatedness, and competence in terms of the variable of the department. In this difference, it was observed that the students in the coaching education department had higher levels of satisfying their needs for autonomy, relatedness, and competence. In other words, the higher levels of satisfying needs for autonomy in university students of the department of coaching education have a significant effect on their processes of regulating and managing their behaviors and making decisions on their own. In terms of meeting their needs for relatedness, it was determined that the university students in the department of coaching education had higher levels of satisfaction in their processes of connecting with people and feeling socially valuable. In terms of meeting needs for competence, it was observed that the students in the coaching education department had higher levels of positive motivation in the process of using the skills they possessed and developing these skills. It is believed that the difference between these two different departments was related to the students' admission criteria to sports sciences. This is because one of the preconditions for the students in the department of coaching education covers criteria such as being a licensed athlete, having an athlete's CV, etc. It is believed that exercising has a significant effect on meeting basic psychological needs in individuals. This belief was based on the fact that the university students who answered "yes" to the question of "do you exercise" had higher levels of satisfying the needs for autonomy and competence compared to those who did not exercise.

In the evaluation of university students who exercised and who did not exercise, significant differences were determined in the levels of satisfying the needs for autonomy and competence. This difference indicated that the university students who exercised had higher levels of satisfying their needs for competence and autonomy. In the levels of meeting the needs for relatedness, no significant difference was observed. According to these results,

it was observed that the university students who exercised could take more responsibility in regulating and managing their behaviors and taking decisions on their own depending on the level of satisfying their needs for autonomy. In terms of meeting needs for competence, it was observed that the university students who exercised had higher levels of internal stimulus during the process of using their skills and developing them. Nevertheless, in the study, it is possible to state that exercising or not exercising was not a significant factor in the process of connecting with people and feeling socially valuable in terms of meeting the need for relatedness. Mehdi conducted a study on psychological attitudes of looking for help, their psychological needs and psychological adaptation of athletes by statistically comparisons according to sports branches and reported that the levels of satisfying needs for autonomy and competence in students who practiced team sports and combat sports were higher compared to athletes who practiced team sports only. In terms of meeting the need for establishing relationships, it was reported that practicing team or combat sports were not important (Mehdi, 2014). In a study conducted with university students who practiced team and individual sports, Gezer reported that there were significant differences in the levels of meeting the needs for autonomy, competence, and relatedness, stating that this difference occurred at higher levels in individuals who practiced team sports (Gezer, 2018). Finally, it was found out that exercising was a significant tool in individuals' process of satisfaction of their needs.

In the study, it was observed that the attitudes of the university students' families played significant roles in terms of meeting their needs for competence. This state was observed at higher levels in terms of meeting the needs for competence in university students whose family had protective attitudes and it was determined that the individuals in these families were more motivated in terms of using their needs and developing them. In families with authoritarian and democratic attitudes, it was observed that the individuals had lower levels of satisfying their needs for competence while the individuals in these families were observed to be weak in terms of using their skills and developing them. In the evaluation of the levels of satisfying the needs for autonomy and relatedness in university students, it was determined that the attitudes of families did not have notable effects.

In terms of the place of residence, it was determined that there were significant differences in levels of meeting the need for competence while it was also observed that the place of residence was not important in terms of meeting the autonomy and relatedness needs of the students. According to these results, it can be stated that the university students who resided in city centers were more motivated in terms of using their skills and developing them compared to those who resided in county centers.

SUGGESTIONS

Opportunities to participate in sports activities should be created to support individuals in satisfying their needs for autonomy and competence. In terms of meeting the needs of individuals, especially needs for competence, the ministry of family and social policies and local governments responsible for families should provide educational support to emphasize the importance of protective attitudes of families and the higher levels of satisfying the need for the competence of individuals in these families. Additionally, in terms of meeting the need for competence, opportunities for individuals to explore their abilities, to use them, and to develop them should be provided for individuals residing in county centers and village-towns.

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