



Science, Movement and Health, Vol. XVIII, ISSUE 2 Supplement, 2018  
September 2018, 18 (2 supplement): 452-457  
Original article

## EXAMINATION OF FRIEND RELATED AUTONOMY IN THE PARTICIPATION OF PHYSICAL EDUCATION TEACHER CANDIDATES IN THE EXERCISE

TEKKURŞUN DEMİR GÖNÜL<sup>1</sup>, CİCİOĞLU HALİL İBRAHİM<sup>1</sup>, İLHAN EKREM LEVENT<sup>1</sup>, HAZAR ZEKIHA<sup>2</sup>

### Abstract

**Objectives:** The aim of this research is to examine, according to different variables, the autonomy that physical education teacher candidates perceive from friends in terms of the participation in the exercise.

**Methods of research:** Survey method out of quantitative research models was used in the research. A total of 183 (70 female, 113 male) students attending Gazi University Faculty of Sports Science, Physical Education and Sports Department in the 1st, 2nd, 3rd and 4th class participated in the research. In order to collect data in the research, Personal Information Form and "The Scale of Perceived Autonomy Support for Exercise" of Müftüler (2016) were used. In the analysis of the data; frequency, arithmetic mean, standard deviation, t-test, Pearson Correlation test, one-way analysis of variance (ANOVA) and Post-Hoc test statistics (Tukey HSD) were benefited.

**Results:** According to the Pearson Moment Correlation analysis, a statistically significant relationship was found between the Perceived Autonomy Support Resulting from Friends in the Exercise and age variance. Participants' perceived autonomy support resulting from friends in the exercise does not differ statistically according to the variables of gender, class level, situation of playing individual or team sports. It was determined that there was a negatively significant relationship between the age of participants and their perceived autonomy support resulting from friends in exercise at a high level.

**Conclusions:** In addition that there were no significant differences according to gender in the research, it was seen that male and female participants perceived similar autonomy support. It was seen that there was no significant relationship between the class level of participants and their perceived autonomy support resulting from friends. It appeared that the perceived autonomy support resulting from friends in exercise did not significantly differ according to the variables of situation of playing individual or team sports.

**Key Words:** autonomy, perceived autonomy from friends, physical education

### Introduction

Exercise involves regular and repetitive body movements. In addition to sports activities, exercise is considered physical activity including play and various activities performed during the day. Exercise is one of the most important activities that ensure healthy individuals, especially physical health, from mental, emotional and social aspects (Tekkursun Demir et al.).

Autonomy is based on the Theory of Self-Determination. Designed around the concept of social support, the self-determination theory (1985) was developed by Deci and Ryan. The aim of the Self-Determination Theory is to explain motivation and behavior based on individual differences between motivational orientations, contextual influences, and interpersonal perceptions (Hagger and Chatzisarantis, 2008).

The need for autonomy is defined as the fact that

the individual accepts his/her own behavior as it is and that he/she takes decisions by himself/herself (Deci and Ryan, 1987). In other words, autonomy is the intrinsic focus of the individual and the capacity of conscious motivation (Müftüoğlu, 2016).

Autonomy is that an individual can take decisions in the direction of his own interests, desires, goals, and has the motivation to act on his own will. In addition to their internal motivation, environmental conditions and the support of other individuals are also important for the individual to exhibit autonomous movements. At this point, the autonomy support, which is perceived from other individuals and environments, has a great importance.

Autonomy support provided from the environment supports the individual's internal motivation, enables him to demonstrate all his or her potential and helps him reach his interests and desires (Andersen, 2000). Autonomy support means

<sup>1</sup> Faculty of Sport Sciences, Gazi University, Ankara, TURKEY.

<sup>2</sup> Niğde Ömer Halisdemir University, Department of Physical Education and Sports, Niğde, TURKEY

CORRESPONDENCE AND REPRINT REQUESTS: TEKKURSUN DEMİR Gonul. gonultekkursun@hotmail.com

interpersonal support that enables individuals to identify, develop and improve the sources of internal motivation, such as the need for autonomy, goals, interests and values (Reeve and Jang, 2006). Perceived autonomy support is defined as the level of perception of the behaviors of the autonomous support of the individuals who support the autonomy (Deci and Ryan, 1987).

In foreign literature, there are many studies related to self-determination theory. The applicability of the self-determination theory was proved by some scientific evidence for the optimal functionality in a variety of contexts such as work environment (e.g., Deci, Ryan, Gagné, Leone, Usunov and Kornazheva, 2001), parenting (e.g., Assor, Roth, and Deci, 2004), education (e.g., Deci, Vallerand, Pelletier and Ryan, 1991) and health care (e.g., Williams and Deci, 1998). Furthermore, the field of physical was tested in application on the framework of self-determination theory, as well: physical education (e.g., Standage, Duda, ve Ntoumanis, 2003; Hagger, Chatzisarantis, Barkoukis, Wang, and Baranowski, 2005), sport (e.g., Reinboth and Duda, 2006), and exercise (e.g., Hagger and Chatzisarantis, 2008). However, studies on autonomy perceived by a friend based on the theory of self-determination in our country are rare (Müftüoğlu, 2016).

In the research, it was aimed to examine the autonomy perceptions of university students perceived during participation to the exercise and

originated from their friends in terms of demographic information.

### Methods

This section includes information on the method of research, the model used in the research, the study group, the data collection tool, and the process of the data collection.

### Research Model

Quantitative research model method was used in the research. Quantitative research is a type of research, through which phenomena and events can be observed, measured and numerically expressed by objectifying them (Cohen and Manion, 2007; Bird, 2009). The aim of quantitative research is to objectively measure the social behaviors of individuals through similar means such as tests and questionnaires and to explain them numerically (Bergman, 2009). Survey method was used in the research, which is used widely in social sciences, carried out on large groups, in which the opinions and attitudes of individuals in the group about a case or event are taken, facts and events are tried to be described (Tanrıöğen, 2009).

### Study Group

The study group consists of university students who are studying in 1st, 2nd, 3rd and 4th class in the department of Physical Education and Sports in the Faculty of Sports Sciences of Gazi University, in the fall semester of 2016-2017 academic year.

**Table 1.** Distribution of Participants according to Grade Level and Gender

Participants	Grade Levels				Total
	1 <sup>st</sup> Grade	2 <sup>nd</sup> Grade	3 <sup>rd</sup> Grade	4 <sup>th</sup> Grade	
Female	23	11	11	25	70
Male	25	29	28	31	113
	48	40	39	56	183

Table 1 contains the information on the grade level and gender of the physical education and sports teacher candidates participating in the present study. Accordingly, a total of 183 students participated in the study, 35 female, 25 male from 1st grade; 11 female, 29 male from 2nd grade; 11 female, 28 male from 3rd grade and 25 female, 31 male from 4th grade.

### Data Collection Tool

In the research, "personal information form" and "Scale of Autonomy Support Perceived from Friends in Exercise" were used as data collection tool.

Personal Information Form: This form, developed by the researchers, is designed to collect information

about the teacher candidates voluntarily participating in the research.

Scale of Autonomy Support Perceived from Friends in Exercise: Developed by the Muftis (2016), the scale, which aims to measure the participants' autonomy perceived in the participations of the participants in the exercise, is one dimensional and consists of 12 items in total. The scale is evaluated on

a seven-point Likert scale from "I completely disagree (1)" to "completely agree (7)". The total score that can be obtained from the scale ranges from 12 to 84. The high score received from the scale indicates a high perceived autonomy support in the exercise.

### Analysis of Data

Before the data were subjected to any analysis, it was determined whether they provided the preconditions for the parametric tests. In this context, prior to the analysis, the normal distribution of the data and the results of Levene (equality of variance) test were examined (Büyüköztürk, 2008). Frequency, arithmetic mean, standard deviation; t-test, one-way

analysis of variance (ANOVA) and Pearson Correlation test were used as a statistical method for the analysis of the data after the suitability of the data to parametric tests was determined. These statistical analyzes were performed through the SPSS 23 statistical package program.

### Results

**Table 2.** Correlation Results According to Age Variable

Variable	N	r	p
Age Variable	183	-,210**	,005

As shown in Table 2, Pearson Moment Correlation analysis was performed to determine the relationship between the total scores of the teacher candidates from the "Scale of Autonomy Support

Perceived from Friends in Exercise" and the age variable. As a result of the analysis, there was a statistically significant and negative relationship between the scores ( $r=-,210, p<0,05$ ).

**Table 3.** Independent Group t Test Results to Determine Whether It Changes According to Gender Variable

Variable	Sub-groups	N	$\bar{x}$	Sd	df	t	p
Gender	Female	70	54,81	15,05	181	,994	,314
	Male	113	52,43	16,15			

\*  $p > .05$

In Table 3, the total scores of physical education and sports teacher candidates from the Scale of Autonomy Support Perceived from Friends in Exercise were examined with t test to determine whether the scores showed a significant difference according to gender. According to this, the autonomy

support which the physical education and sport teacher candidates perceive from their friends does not show a significant difference according to the gender variable ( $t_{181}=,994; p>0,05$ ).

**Table 4.** ANOVA Test Results to Determine Whether It Changes According to Grade Variable

Grade	N	$\bar{x}$	Source of variance	Sum of squares	Sd(df)	Averages of squares	F	p
1st Grade	48	52,70	Intergroup	127,428	3	42,476	,169	,917
2nd Grade	40	54,82						
3rd Grade	39	53,46	In-group	44985,884	179	251,318		
4th Grade	56	52,75						

\*  $p > .05$

According to Table 4, as a result of ANOVA, it was determined that the total scores of participants from "Scale of Autonomy Support Perceived from

Friends in Exercise" did not show a statistically significant difference according to their grade levels ( $F_{3,179}=,169; p>0,05$ ).

**Table 5.** Independent Group t Test Results to Determine Whether It Changes According to Individual or Team Sports

Variable	N	$\bar{x}$	Sd	df	t	p
----------	---	-----------	----	----	---	---

<b>Individual Sports</b>	78	54,76	14,75	181	1,05	,293
<b>Team Sports</b>	105	52,28	16,42			

\*  $p > .05$

In Table 5, the total scores of physical education and sports teacher candidates from the "Scale of Autonomy Support Perceived from Friends in Exercise" were examined with t test to determine whether the scores showed a significant difference according to branch. According to this, the autonomy support which the physical education and sport teacher candidates perceive from their friends does not show a significant difference according to the branch variable ( $t_{181}; 1,05; p > 0.05$ ).

### Discussion

It was aimed to examine the autonomy of physical education teacher candidates in terms of different variables by revealing their autonomy perceived from their friends during the participation in the exercise. In this context, a total of 183 (70 female, 113 male) students attending the 1st, 2nd, 3rd and 4th classes participated in the research.

In the light of findings, a statistically significant and negative relationship was found between their total score from the "Scale of Autonomy Support Perceived from Friends in Exercise" and the age variable. In this context, it can be said that as the age of the participants increases, the need for autonomy support decreases. As the individuals get older, as well as to mature and gain the experience, they are expected to have acquired the habits of exercises for body beauty, weight control and healthy living. For this reason, we can say that the need for peer support decreases. In the literature, there was no research on done for the relationship between age variable and autonomy support perceived from friends in exercise.

It was determined that their total score from "Scale of Autonomy Support Perceived from Friends in Exercise" did not show any significant difference according to gender variable. There are parallel results in the literature in relation to research findings. In the research titled "Autonomy Support, Basic Needs Satisfaction, Motivation Regulation, and Well-Being Among Elite Levels" by Kamarova (2010) on professional dancers, it was found that autonomy support did not differ significantly gender.

In the literature, it was found that adolescent females are influenced by external motives (appearance and weight) as well as friend autonomy in participating in exercise (Ingledew and Sullivan, 2002; Dowson, McInerney, and Nelson, 2006; Bettie et al., 2001; Markland and Vansteenkiste, 2007;

Cash, Novy, and Grant, 1994; Deci, Vallerand, Pelletier, and Ryan, 1991), and this situation strengthens the autonomy of participation in the exercise.

It was determined in the other findings of the research that their total score from the "Scale of Autonomy Support Perceived from Friends in Exercise" did not show any significant difference according to grade variable. Accordingly, this may be due to the fact that the physical education teacher candidates have integrated their lives with exercise. With regard to the departments of the participants, it is inevitable that the levels of participation in exercise are at similar levels at all grades because of the applied courses and the exercises that have become a habit. Whereas there are no researches related to the grade level, there are studies from different countries on the participants. In the research of Hagger et al (2007), it was determined that autonomy support perceived from the friends was higher for Estonian participants than for British and Hungarian colleagues.

There was no significant difference between the total scores of physical education teacher candidates obtained from the "Scale of Autonomy Support Perceived from Friends in Exercise" and their sports branches. In the literature, no research was found on the relationship between sport branch variable and autonomy support perceived from friends in exercise. In the direction of all these findings, the deduction, which is that the autonomy support of the individuals perceived from the peers (friends) influenced positively the participation of young people in physical activity, their performance, their satisfaction for the participation in the sports and their basic psychological needs, can be made based on the literature (Hagger and Chatzisarantis, 2007, Deci and Ryan, 2000, Deci and Ryan, 2008). However, there is research in the literature that physical activity is an element that promotes autonomy, physical and psychological well-being among adolescents (Vansteenkiste, Simons, Soenens, and Lens, 2004; Reinboth and Duda, 2006).

### Acknowledgments

I thank all students for participating in this study.

## References

- Andersen S, 2000, Fundamental human needs: Making social cognition relevant. *Psychological Inquiry*, 11(4), 269-276.
- Büyüköztürk Ş, 2008, *Sosyal Bilimler için Veri Analizi El Kitabı* (9th ed.). Ankara: Pegem Akademi.
- Assor A, Roth, G. and Deci, E. L., 2004, The emotional costs of parents' conditional regard: A self-determination theory analysis. *Journal of Personality*, 72, 47-88.
- Bergman, M., 2009, Peirce's philosophy of communication: The rhetorical underpinnings of the theory of signs. Bloomsbury Publishing.
- Bettle, N, Bettle O, Neumärker U, Neumärker K.J. 2001, Body image and self-esteem in adolescent ballet dancers. *Perceptual and Motor Skills*, 93(1), 297-309.
- Cash, T. F., Novy, P. L., and Grant, J. R., 1994, Why do women exercise Factor analysis and further validation of The Reasons for Exercise Inventory. *Perceptual and Motor Skills*, 78, 539-544.
- Cohen, L., Manion, L. and Morrison, K., 2007, *Research methods in education*. NY, Routledge.
- Deci, E. L., and Ryan, R. M., 1985, Intrinsic motivation and self-determination in human behavior. New York: Plenum Press.
- Deci, E.L. and Ryan, R.M., 1987, The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53(6), 1024-1037.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G. ve Ryan, R. M., 1991, Motivation and education: the self-determination perspective. *Educational Psychologist*, 26(3&4), 325-346.
- Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., and Kornazheva, B. P., 2001, Need satisfaction, motivation, and well-being in work organizations of a former Eastern Bloc country. *Personality and Social Psychology Bulletin*, 27, 930-942.
- Deci, E. L. and Ryan, R. M., 2000, The "what" and "why" of goal pursuits: Human need and selfdetermination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L. and Ryan, R. M., 2008, Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology*, 49(1), 14-23.
- Dowson, M., McInerney, D. M., and Nelson, G. F. 2006, An investigation of the effects of school ontext and sex differences on students' motivational goal orientations. *Educational Psychology*, 26, 781-811.
- Hagger M. and Chatzisarantis N., 2008,, Self-determination theory and the psychology of exercise. *Int Rev Sport Exerc Psychol*. 1:79–103.
- Hagger, M. S., Chatzisarantis, N. L. D., Barkoukis, V., Wang, C.K. J., and Baranowski J., 2005, Perceived Autonomy Support in Physical Education and Leisure-Time Physical Activity: A cross-cultural valuation of the Trans-Contextual Model. *Journal of Educational Psychology*, 97, 376-390.
- Hagger M., Nikos L.D. Chatzisarantis, Vello Heinc, Maret Pihuc, Istvan Soo's and Istvan Karsaie, 2007, The perceived autonomy support scale for exercise settings (PASSES): Development, validity, and cross-cultural invariance in young people, *Psychology of Sport and Exercise* 8, 632–653.
- Hagger, M. S., and Chatzisarantis, N. L. D. 2007, Advances in self-determination theory research in sport and exercise (Editorial). *Psychology of Sport and Exercise*, 8, 597-599
- Kamarova, S., 2010, *Autonomy Support, Basic Needs Satisfaction, Motivation Regulation, And Well-Being Among Elite Level Ballet Dancers In Russian Speaking Countries*, Master Thesis, University of Jyväskylä.
- Kuş, D., 2009, İlköğretim programlarının, örtük programın ve okul dışı etmenlerin değerleri kazandırma etkililiğinin 8. sınıf ilköğretim öğrencilerinin ve öğretmenlerinin görüşlerine göre incelenmesi. Yayınlanmamış Yüksek Lisans Tezi. Yıldız Teknik Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Markland, D., and Vansteenkiste, M., 2007, Self-Determination theory and motivational interviewing In Hagger, M.S. and Chatzisarantis, N.L.D (Eds.), *Intrinsic Motivation and Self-Determination in exercise and Sport*. (pp. 87-99) Champaign, IL: Human Kinetics.
- Müftüler, M., 2016, Egzersizde Algılanan Özerklik Desteği Ölçeği: Türkçe geçerlik ve güvenilirlik çalışması. *International Journal of Human Sciences*, 13(1), 2158-2169. doi:10.14687/ijhs.v13i1.3653
- Reeve, J., 2002, Self-determination theory applied to educational settings. Edward L. Deci ve Richard M. Ryan (Ed.) *Handbook of self-determination research içinde*, (183-203). Rochester, NY: The University of Rochester Press.
- Reinboth, M, and Duda, J. L., 2006, Percieved motivational climate, need satisfaction and indices of well-being in team sports: A longitudinal





- perspective. *Psychology of Sport and Exercise*, 7, 269-286.
- Standage, M, Duda, J. L., and Pensgaard, A. M., 2005, The effect of competitive outcome and task-involving, ego-involving, and cooperative structures on the psychological well-being of individuals engaged in a co-operation task: A self-determined approached. *Motivation and Emotion*, 29 (1) 41-68.
- Tanrıöğen, A., 2009, *Bilimsel Araştırma Yöntemleri*. Ankara: Anı Yayıncılık. Yüksek Öğretim Kurulu., 2007, *Öğretmen yetiştirme ve eğitim fakülteleri (1982-2007)*. Ankara.
- Tekkurşun Demir, G., Hazar, Z and Cicioğlu, H.İ., 2018, Egzersiz Bağımlılığı Ölçeği (EBÖ): Geçerlik ve Güvenirlilik Çalışması, *Kastamonu Education Journal*,
- Ingledeu D.K. , Sullivan G., 2002, Effects of body mass and body image on exercise motives in adolescence. *Psychology of Sport and Exercise* 3, 323–338.
- Vansteenkiste, M., Simons, J., Soenens, B., and Lens, W., 2004, How to become a persevering exerciser? Providing a clear future intrinsic goal in an autonomy supportive way. *Journal of Sport & Exercise Psychology*, 26, 232-249.
- Williams, G. C., and Deci, E.L., 1998, The importance of supporting autonomy in medical education. *Annals of Internal Medicine*, 129, 303-308.