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Investigating the Psychological Resilience of Students in Sports Sciences Faculty

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Abstract: The aim of this research is to examine the psychological resilience levels of students studying in the Faculty of Sports Sciences according to some variables. The sample of the study consisted of Sports Sciences Faculty students of Duzce University, and the population consisted of 200 students from the Sports Sciences Faculty selected through a convenience sampling method. An eight-item personal information form developed by the researcher for demographic characteristics and “Short form of resilience scale” to determine resilience levels of participants were used. According to data obtained, while resilience levels, grades, gender, branch, department, age, and income variables of participants did not show a significant difference ($p>0,05$), it showed a significant difference according to sports age and place of living variables ($p<0,05$). Besides it was determined that resilience scores of male participants were higher than females, and team athletes had higher scores than individual athletes, lower classes had higher scores than upper classes, sports management students had higher scores than coaching and physical education and sports teaching students, and students who had younger age had higher scores than students who had older age. As a result of research, it was determined that resilience could be differed by class, sports age, residence variables. Also, it was revealed that sports age affects resilience negatively.

Keywords: *Psychological resilience, sports sciences, university, students.*

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Introduction

Psychological resilience is the ability of the individual to adapt to serious stress factors such as a threat, trauma, familial distress or tragedy, significant health problems, financial problems, and workplace problems, the ability to successfully overcome disasters or change (Basim & Cetin, 2011; Gungormus, et al., 2015; Oz & Bahadir-Yilmaz, 2009). Psychological resilience also allows evaluating social resources such as family and friends, social competencies such as communication skills, extroversion, flexibility in interpersonal relations, ability to establish close relationships, and personal resources such as self-confidence and hope at the same time (Friborg, et al., 2003). Psychological resilience has become a concept emphasized by recognizing its importance in the field of sports psychology, and in this context, it has been thought that not only physical capacity is sufficient for success, but psychological resilience is an important phenomenon (Sahin & Guclu, 2018). Among the reasons for the failures in sports, the psychological competence of athletes is not given importance (Erdogan, et al., 2014; Sahin & Guclu, 2018). Besides, throughout university life, young people continue to struggle to develop identity and independence developmentally. They try to cope with the troubles that university life brings with them and go through adulthood by experiencing a very rapid change in their relationships. Those who have the opportunity to win the university experience anxiety about winning the university, as well as being separated from the family, a new environment and friendship environment, fear of being alone, financial difficulties, home life, and keeping up with this life, career choice and business life. While young people struggle with these problems, they are exposed to various stress sources and distress (Gungormus, et al., 2015).

When the literature is examined, it comes to the forefront that psychological resilience is an important feature that every individual should have. It is known today that sportive success is achieved not only by physical abilities but also by the effects of psychological factors. Successful regulation of emotional states is important to enhance performance in

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all areas of human life. More specifically, an inherent aspect of modern life is the need for people to meet the demands of competitive environments and to perform well under pressure. In other words, most people need to perform under pressure at some stage in their life. (Gorgulu, et al., 2018) Also, considering the person's communication with others, relationships in family and friend environment, identity, and independence in university life, how remarkable the psychological resilience is for individuals are explained in the related literature. Therefore, many studies have been conducted to examine the psychological resilience of athletes (Atan & Unver, 2019; Erdogan, et al., 2014; Erim & Kucuk, 2017; Karademir & Acak, 2019; Sahin & Guclu, 2018; Sarli, 2019). In many of the studies on athletes, the variable of sports age was not used. While variables such as place of residence and department are used in studies conducted outside the sports environment, these variables are seldom used in studies on athletes. We think that examining the factors affecting the level of psychological resilience, such as education, personal-social competencies, and sporting success, will contribute to the relevant literature.

In this study, we aimed to examine the psychological resilience levels of university students who study sports in terms of various variables. Based on this aim, the hypotheses of the research are listed as follows:

H₁: The first hypothesis is, "There are significant gender differences in terms of psychological resilience."

H₂: The second hypothesis is, "There are significant differences between branches in terms of psychological resilience."

H₃: The third hypothesis is, "There are significant differences between the grades in terms of psychological resilience."

H₄: The fourth hypothesis is, "There are significant differences between departments in terms of psychological resilience."

H₅: The fifth hypothesis is, "There are significant differences between age groups in terms of psychological resilience."

H₆: The sixth hypothesis is, "There are significant differences between sport age groups in terms of psychological resilience."

H₇: The seventh hypothesis is, "There are significant differences between incomes in terms of psychological resilience."

H₈: The eighth hypothesis is, "There are significant differences between the places of residences in terms of psychological resilience."

Methodology

Research Model:

The survey model, which is quantitative, was chosen for the model of the study.

Research Group:

The population of the research was students who study at the Faculty of Sports Sciences at Duzce University in the 2019-2020 academic year, and the sample was convenience sampling chosen 200 students who voluntarily participated in the research. Scale application study was carried out by the researchers in the classroom.

Data Collection Instrument: An 8-question personal information form prepared by the researchers was used to determine some demographic characteristics of the participants. "Short Psychological Resilience Scale" was used to determine psychological resilience levels. Short Psychological Resilience Scale is a scale consisting of 6 items and one dimension. The scale has a 5-point Likert type rating with the words "1-I strongly disagree and" 5-I strongly agree ". The scale was developed by Smith et al. (2008) and adapted into Turkish by Akin et al. (2014). Confirmatory factor analysis showed that the scale consisting of six items had good fit ($\chi^2 = 6.44$, $SD = 5$, $RMSEA = .031$, $CFI = .99$, $GFI = .99$, $SRMR = .028$). The internal consistency coefficient was found to be 0.66.

Analyzing of Data

The data were analyzed using the SPSS 17 program. Frequency, percentage, minimum, maximum, average, and standard deviation values were used in the analysis of the data. Shapiro Wilk-W test and Skewness-Kurtosis values were evaluated for normal distribution; t-test and ANOVA tests were used since the data showed normal distribution, and the Tukey test was used for Post-Hoc tests. The significance level was determined as $p < 0.05$.

Findings / Results

In this part of the study, frequency, percentage distributions, means, and standard deviation values of the participants were presented.

Table 1. Demographical features of the participants

Variables		N	%
Gender	Female	79	39,5
	Male	121	60,5
Grade	Fresher	50	25,0
	Sophomore	20	10,0
	Third-year	75	37,5
	Final year	55	27,5
Department	Coaching Education	72	36,0
	Physical Education and Sports Teaching	86	43,0
	Sport Management	42	21,0
Age Groups	18 years and under	25	12,5
	Between 19 and 22 years	136	68,0
	Between 23 and 26 years	33	16,5
	Between 27 and 29 years	1	,5
	30 years and above	5	2,5
Sport Age	Five years and under	39	19,5
	Between 6-10 years	119	59,5
	Between 11-15 years	25	12,5
	16 years and above	17	8,50
Branch type	Team	104	52,0
	Individual	96	48,0
Income	0-1000 TL	117	58,5
	Between 1001-1500 TL	34	17,0
	Between 1501-2000 TL	17	8,5
	Between 2001-3000 TL	19	9,5
	Between 3001-4000 TL	7	3,5
	Between 4001-5000 TL	4	2,0
The place of living	5001 TL and more	2	1,0
	Province	140	70,0
	County	42	21,0
	Village	18	9,0
Total		200	100%

It is seen that 32.8% of the participants are women, and 61.2% are men. 33.5% of the participants are freshers, 10.4% are sophomores, 31.9% are the third year, and 24.3% are final year students. 45% of the participants reported studying in the coaching department, 38.2% in the teaching department, and 16.8% in the management department. 12.8% of the participants under the age of 18, 70.5% between the ages of 19-22, 13.5%, between the ages of 23-26, 0.4% between the ages of 27-29 and 2.8% is over 30 years old. When the sports age groups are examined, 20.6% of the participants have done sports for five years and below, 60.2% between 6-10 years, 11.2% between 11-15 years, and 8% have done sports for 16 years and more. When the branches of the participants are examined, 53.8% do team, and 46.2% do individual sports. When the income levels are analyzed, 61.4% of the participants are between 0-1000 TL, 16.3% between 1001-1500 TL, 7.6% between 1501-2000 TL, 8.8% 2001-3000. Between TL, 2.8% between 3001-4000 TL, 1.6% between 4001-5000 TL, and 1.6% have an income of 5001 TL and above. Finally, when the place of residence of the participants is examined, it is seen that 70.1% live in the province, 19.9% live in the district, and 10% live in the village.

Table 2. Gender differences in terms of psychological resilience

Gender	n	Mean	SD	df	t	p
Female	79	19,17	4,23	198	-0,853	,395
Male	121	19,72	4,59			

($p>0,05$)

In table 2, it was presented that no significant gender differences were found in terms of psychological resilience ($p>0,05$).

Table 3. Differences between branch types in terms of psychological resilience

Branch	n	Mean	SD	df	t	p
Team	104	19,55	4,80			
Individual	96	19,45	4,07	198	,157	,875

($p>0,05$)

In table 3, it was displayed that no significant differences were found in terms of psychological resilience ($p>0,05$).

Table 4. Differences between grades in terms of psychological resilience

Variable	Grade	N	Mean	SD	F	p	Post Hoc
Psychological Resilience	1	50	20,02	4,30			
	2	20	19,70	4,16	1,539	,206	-
	3	75	18,65	4,81			
	4	55	20,14	4,09			

($p>0,05$)

Differences between grades in terms of psychological resilience were showed in table 4, indicating no significant differences between any grades ($p>0,05$).

Table 5. Differences between departments in terms of psychological resilience

Variable	Department	N	Mean	SD	F	p
Psychological Resilience	Coaching Education	72	19,45	4,98		
	Physical Education and Sports Teaching	86	19,31	4,25	,340	,713
	Sport Management	42	20,00	3,94		

($p>0,05$)

There were no significant differences between departments in terms of psychological resilience, which was displayed in table 5 ($p>0,05$).

Table 6. Differences between age groups in terms of psychological resilience

Variable	Age Groups	n	Mean	SD	F	p
Psychological Resilience	18 years and under	25	20,24	5,04		
	Between 19 and 22 years	136	19,36	4,51		
	Between 23 and 26 years	33	20,12	3,72	1,236	,297
	Between 27 and 29 years	1	20,00	0		
	30 years and above	5	15,80	3,49		

($p>0,05$)

There were no significant differences between age groups in terms of psychological resilience ($p>0,05$).

Table 7. Differences between sport age groups in terms of psychological resilience

Variable	Sport Age	n	Mean	SD	F	p	Post Hoc
Psychological Resilience	5 years and under	39	18,82	4,31			
	Between 6-10 years	119	20,16	4,45			
	Between 11-15 years	25	18,96	5,03	2,775	,043	6-10>16
	16 years and above	17	17,29	2,84			

($p<0,05$)

A significant difference was found between sport age groups in terms of psychological resilience ($p<0,05$). The participants having sports age between 6-10 years reported higher scores than those having sport age 16 years and above.

Table 8. Differences between incomes in terms of psychological resilience

Variable	Incomes	N	Mean	SD	F	p
Psychological Resilience	0-1000 TL	117	4,26	,39	1,201	,308
	Between 1001-1500 TL	34	4,09	,70		
	Between 1501-2000 TL	17	4,72	1,14		
	Between 2001-3000 TL	19	5,01	1,15		
	Between 3001-4000 TL	7	4,63	1,75		
	Between 4001-5000 TL	4	8,26	4,13		
	5001 TL and more	2	,70	,50		

($p>0,05$)

No significant differences were found between incomes in terms of psychological resilience ($p>0,05$).

Table 9. Differences between places of living in terms of psychological resilience

Variable	Place of living	n	Mean	SD	F	p	Post Hoc
Psychological Resilience	Province	140	18,92	4,49	5,684	,004	Village>Province
	County	42	20,26	3,89			
	Village	18	22,33	4,25			

($p<0,05$)

Differences between places of living in terms of psychological resilience in table 9. A significant difference was found between the participants living in the village and those living in the province. The individuals living in the village reported higher scores than those living in the province.

Discussion

This study aimed to examine the psychological resilience levels of university students who study sports in terms of various variables.

The first hypothesis was "There are significant gender differences in terms of psychological resilience." No significant differences were found between genders in terms of psychological resilience. Some results in literature support our findings (Bingol & Bayansalduz, 2016; Aydin & Egemberdiyeva, 2018; Bektas & Ozben, 2016; Chan, 2003; Crowley, et al., 2003; Hosseini & Besharat, 2010; Maddi et al., 2006; Arici-Ozcan, et al., 2019; Karairmak & Guloglu, 2014; Kirimoglu, et al., 2012; Kirimoglu, et al., 2010; Kumar, 2016; Kumar, et al., 2016; Sezgin, 2009; Soyer, et al., 2013; Ulker & Receptoglu, 2013; Yondem & Bahtiyar, 2016). There are results presenting significant results between genders in terms of psychological resilience (Atan & Unver, 2019; Cutuk, et al., 2017; Desai, 2017; Icel & Ozkan, 2018; Karademir & Acak, 2019; Koc-Yildirim, et al., 2015; Saka & Ceylan, 2018; Onder & Gulay, 2008). While some studies reported that males had higher scores than males (Celik, et al., 2019; Karademir & Acak, 2019; Khan, et al., 2016; Solomon, 2015; Yondem & Bahtiyar, 2016) some studies showed the opposite (Cutuk, et al., 2017; Desai, 2017; Grotberg, 2001; Onder & Gulay, 2008; Saka & Ceylan, 2018; Ulker & Receptoglu, 2013; Koc-Yildirim, et al., 2015). The fact that psychological resilience does not show any significance according to sex variable has been associated with gender roles in some studies (Bektas & Ozben, 2016). Gender roles play an important role in shaping women's and men's behavior (Kimura, 2002). Women socialize by taking an emotional attitude to some of their difficulties (Zakowski, et al., 2003) and women can share the difficult situations they face in life more easily than men. On the other hand, men socialize to look strong and do not give up in the face of troubles and struggle in front of problems and present a different example of resilience (Bektas & Ozben, 2016). It can be thought that the reason for the absence of a relationship between gender and psychological resilience in studies is related to gender roles. In addition, some social, cultural and personal characteristics of the participants may have affected their psychological resilience. In other studies, its relationship with personal characteristics can be investigated.

The second hypothesis was, "There are significant differences between branches in terms of psychological resilience." No significant differences were found between the individual and team athletes in terms of psychological resilience. The second hypothesis was rejected. Some results supported this finding (Sezgin, 2012). Results are reporting significant differences between team and individual athletes (Karademir & Acak, 2019; Reddy & Berhanu, 2016; Solomon, 2015; Gulsen, et al., 2019). We thought that the reason for these discordant findings was due to the study groups. When it comes to team sports or individual sports, we will mention a widespread phenomenon that includes many sports branches. Participants in the working groups may also be selected from different branches. In other studies to be done to understand the source of these differences better, the branch variable can be kept narrower. A study where only psychological resilience is measured comparatively based on branches will be more enlightening for the literature.

The third hypothesis was, "There are significant differences between the grades in terms of psychological resilience." No significant differences were found between grades in terms of psychological resilience. There are studies in contrast to our results (Sarlı, 2019). In their study by Hunter, et al., (2012), they mentioned that university students who are candidates for graduation might have intense anxiety as they will move to a period where they will take more responsibility as an adult after original university life. Different concerns arise, such as changing the atmosphere of friends after graduation, sometimes changing the city or even the country, the need to find a job or graduate programs, financial obligations, and changing the habits acquired at the university (Lane, 2016).

On the other hand, some studies are similar to our study (Yondem & Bahtiyar, 2016). These incompatibilities between the findings may have resulted from the participants coming from different regions, families, and schools, or the expectations of the people, the expectations, and personality traits. We think that it is necessary to make different comparisons such as stress, personality, region, the university in order to explain these incompatibilities better.

The fourth hypothesis was, "There are significant differences between departments in terms of psychological resilience." No significant differences were found between departments in terms of psychological resilience ($p>0,05$). This hypothesis was rejected. Studies are supporting the study in the literature (Kilinc, 2014; Sarlı, 2019). In studies conducted by Sezgin (2009; 2012) on the psychological resilience of teachers, it was concluded that the psychological resilience of teachers in different branches did not differ significantly. The departments of the people were ultimately selected again as a result of their wishes and desires. It can be said that psychological resilience is not affected by departmental differences.

The fifth hypothesis was "There are significant differences between age groups in terms of psychological resilience." Some studies found significant differences between age groups in terms of psychological resilience (Celik, et al., 2019; Goroshit & Eshel, 2013; Karademir & Acak, 2019) while some stated no significant age differences (Bektas & Ozben, 2016; Noticiary, 2014; Chan, 2003; Harrisson et al., 2002; Kirimoglu, et al., 2012; Maddi et al., 2006; Sezgin, 2009; Sezgin, 2012; Sarlı, 2019; Baykose et al., 2017; Ulker & Recepoglu, 2013). Although there was no significant difference in our study, as in the studies of Kilic & Alver (2017), Celik, et al., (2019), the psychological resilience of younger students levels are higher than older ones. This may be since younger participants are more likely to have not yet encountered major problems than older ones. On the other hand, different stress sources such as exams, financial concerns, job, and spouse choice of older participants may have caused this situation. However, in some studies in the literature (Erim & Kucuk, 2017; Gooding, et al., 2012; Goroshit & Eshel, 2013; Ulker & Recepoglu, 2013), the psychological resilience levels of the elderly were higher than younger ones. For these findings, it shows that the elderly are psychologically more resistant and more experienced in the events than the young people. The reason for these different findings in the literature may be related to the personal and social characteristics of the people rather than their age.

The sixth hypothesis was, "There are significant differences between sport age groups in terms of psychological resilience."

A significant difference was found between sport age groups in terms of psychological resilience ($p<0,05$). The participants having sports age between 6-10 years reported higher scores than those having sport age 16 years and above. In parallel with our research, studies are showing that the year of sports has an impact on psychological resilience (Bayar, 2003; Dalkiran & Varol, 2015). As a result of the physical and mental strain of athletes, many physical and mental problems can arise, from injuries to mental disorders. Socialization processes of individuals conditioned by high-performance expectations and "I must win at all cost" idea are impaired, and their social adaptation becomes difficult. The growth of inconsistencies between the ideal and the real situation also threatens the mental health of the young person and society (Baser, 1998). When the literature is examined, some studies are not similar to our study (Celik, et al., 2019; Grgurinovic & Sindik, 2015; Solomon, 2015). We believe that these mismatches in the findings of different studies may be due to the personal characteristics of the athletes. The emotions such as stress, exposure to stress, psychological wear and tear caused by personal factors that exist in the environment of constant competition, competition and winning for those who have been exercising for many years may have decreased the psychological resilience of athletes who have been exercising for many years.

The seventh hypothesis was, "There are significant differences between incomes in terms of psychological resilience." No significant differences were found between incomes in terms of psychological resilience ($p>0,05$). This hypothesis was rejected. While different studies in the literature are not similar to the findings of our study (Barbarin, 1993; Bektas & Ozben, 2016; Bonanno, et al., 2007; Karademir & Acak, 2019; Yondem & Bahtiyar, 2016), studies supporting our study are also available. We believed that the income situation might be useful in terms of psychological well-being or psychological resilience, but this thought did not match the findings obtained. The absence of any significance between income status and psychological resilience may be due to the temporary income of the participants (most of them). In terms of participants who do not yet have a permanent profession and thus do not have a permanent income, income status has not been a factor affecting psychological resilience

The eighth hypothesis was, "There are significant differences between the place of residences in terms of psychological resilience." A significant difference was found between the participants living in the village and those living in the

province. The individuals living in the village reported higher scores than those living in the province. Some studies support our study when the literature is examined (Abuakibash & Lera, 2015; Kilic & Alver, 2017; Sarli, 2019; Albayrak et al., 2018). In the study of Gungormus, et al., (2015), it has been observed that regional differences significantly affect psychological resilience. According to this result, the levels of psychological resilience of the participants differed in terms of lived place. Because of the university life, the psychological resilience levels of the university students who met the city for the first time, who had to live with the stress and intense tempo brought by the city life even if it was not the first time, may have decreased due to this reason.

Conclusion

The results showed that the construct of psychological resilience did not differ according to gender because most of the students in sports faculties had a competitive background at different levels. There were no significant differences between the students doing team and individual sports. This result indicates that students competing in individual and team sports had nearly the same level of psychological resilience because competing in different branches can contribute to psychological resilience to the same degree. Moreover, the sporting background can be the reason of the insignificance between departments. According to the experience findings, the psychological resilience level may tend to reduce with the increasing of experiences because of the exhaustion of competing for a long time. The finding in the comparison of the place of living can be explained that living in a village may have a contribution to have mental comfort more than province life.

The result of the study revealed that psychological resilience is affected by the variables of sports age and place of residence. Therefore, the findings obtained in the study do not support the first, second, third, fourth, fifth, and seventh hypotheses, but supported the sixth and eighth hypotheses.

This study will contribute the study with its descriptive and explanatory findings to design educational programs in sport science departments. It seems that the psychological resilience level tends to decrease with the increase of the experience in sports, which can lead researchers, coaches, and academicians to examine the reason for this reduction.

Recommendation

In future studies to determine the level of psychological resilience, scales for determining the personal characteristics of the participants can be used.

Limitations

We think that not being able to determine detailed personal characteristics is one of the limitations of this study. Besides, different demographic features to be used can be added to the personal information form in order to determine the differences between the findings. Working with larger sample groups, comparing multiple branches, regions, and universities will also contribute to the literature.

Author Contributions

The authors conceived designed and performed the research. All authors worked together for the data collection and acquisition. M.Y. wrote the main introduction and general discussion of the draft manuscript. E.E. analyzed the data, and wrote the initial report for the results. E.E. and Y.O. wrote the draft discussion of the studies. E.E., M.Y. and Y.O. revised the draft manuscript. M.Y. wrote and reviewed the full paper according to the reviewers' suggestions and submitted to the journal.

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Conflicts of Interest

The authors declare that they have no conflict of interest.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent

Written informed consent was obtained from all individual participants included in the study.

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