

Positive perception and psychological vulnerability levels of academicians during Covid 19 quarantine period

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ABSTRACT

Positive perception positively increases the value of the person, self-confidence and perspective towards time (Icerson and Pines, 2013). The current study aims to determine the relationship between the positive perception and psychological vulnerability levels of academicians who worked in Sports Sciences faculties and Physical Education and Sports High Schools of the universities during the Covid-19 quarantine period. The study group consisted of a total of 136 academicians, 34 women and 102 men. To determine the relationship between the positive perception and psychological vulnerability levels of the participants, "Positive Perception Scale" developed by Akin et al. (2015) and "Psychological Vulnerability Scale" developed by Sinclair and Wallston (1999) and adapted to Turkish by Akin and Eker (2011) were used. Skewness-Kurtosis normality distribution test was used to determine whether the measurements are suitable for normal distribution. Skewness-Kurtosis technique showed normal distribution in all dimensions according to the technique. In the analysis of the study data, Pearson Product Moment Correlation Analysis with descriptive statistics and MANOVA analyses scores were performed to determine the relationship between positive perception and psychological vulnerability. As a result, it is understood that academicians have over mid-level sub-dimensions of positive perception level and below mid-level psychological vulnerability levels. According to the results of the correlation analysis, it was concluded that there was a negative relationship between the psychological vulnerability and sub-dimensions of the positive perception scale.

Keywords: Positive perception, psychological vulnerability, sport.

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INTRODUCTION

Positive psychology, focusing on important functions such as mentally personal competence, happy behaviour, having positive emotions and thoughts, takes into consideration the factors that reveal one's happiness and well-being (Linley et al., 2006; Akin et al., 2014). The fact that the person always looks at the negative sides by not taking into account the beautiful and relaxing aspects of life causes some psychological disorders to appear. Therefore, as long as people think positively and develop these thoughts, they are happy with life and can manage to be happier (Wenglert and Rosen, 2000; Akin et al., 2014). In this sense, it is the relationship between

positive perception and psychological vulnerability in this quarantine period and similar periods, which has been suggested by considering that it will make people look more positive and will also contribute to studies in the field of positive psychology. The first of these, positive perception, is defined on three components, a) positive self-perception (self-worth and abilities), b) positive perception of time (past, present and future), and c) positive perception of human nature (Icekson and Pines, 2013; Akin et al., 2014). The individual's positive attitude towards himself is evaluated in the literature on other concepts of positive psychology such as subjective well-

being, self-esteem and self-efficacy. If the person with these concepts has positive perception, it means that he believes that he will accomplish and change things, and most importantly is proof that he is a confident personality (Schwarzer et al., 1997; Akin et al., 2014). The positive orientation of the person towards the situation is an indication that he has positive psychology (Diener et al., 1998; Lyubomirsky et al., 2006; Akin et al., 2014).

Psychological vulnerability, which is thought to be inversely proportional to positive thoughts, is defined as a mental belief judgment that awaits confirmation by another person in order to reveal one's sense of self. This expectation reveals that he is always dependent on other people, and as a result, it reveals a negative situation that causes the person's achievements to be affected, perhaps to change their goals (Sinclair and Wallston, 1999). Another scientist, Weisman (1976), deals with psychological vulnerability, failure to cope with the emotional difficulties that contain pessimistic attitudes due to inadequacy and inability to cope with psychological situations. In addition, psychological fragility can be expressed as the inadequacy in the literature and avoiding their pleasant situations (Lazarus and Folkman, 1984). Psychological vulnerability shows more studies with women who are more disadvantaged than women (Langner, 1962; Thoits, 1982; Akin and Eker, 2011). This suggests that the reason is due to the fact that these people are constantly in a stressful life struggle. In many studies, sport shows that it is an important social phenomenon that gains meaning as a symptom of welfare and cultural levels in the age-appropriate societies of our age and affects all aspects of social life. While sports contribute to positive developments in people's lives, it is a social behaviour that contributes to the modernization, integrity, development and recognition of the society by establishing a healthy and vigorous structure by connecting with other social institutions. For this reason, it shows that the sport contributes significantly to the psychological factors as well as the social aspects of the sport in order to reveal the social functions in the society and personal life and to achieve the targeted goals (Yetim, 2000). Today, sport is an important natural tool that contributes to the social harmony, mental and physical health, personality formation and development of the person. It plays an important role in getting out of negative mental states for individuals of all ages (Yıldırım, 2003). For this reason, academicians who are educators have expectations from sports (Başaran, 1996). At the same time, many academicians have stated that sports do not have free time activities, and it has a therapeutic side that directs imprisoned energy to appropriate areas and ensures that hidden emotions are exposed (Yıldırım, 2003).

As it is understood from the framework of this literature, this study will show that the psychological negative situations of individuals will be known to be reduced by sports and that these situations will be tackled in a

healthy way.

MATERIALS AND METHODS

In this part, information about the type of the research, the group of the research, the collection of data, the tools of the data and the operations in the data analysis process will be given. The aim of this study is to investigate the effect of academicians' positive perception levels on psychological vulnerability during Covid-19 stay at home period. In this study, the data was compiled through questionnaire. In the research, survey method, one of the descriptive research methods, was used. The survey method is used to identify situations that have occurred in the past or still exist (Büyüköztürk et al., 2015).

Study group

The research group; March - May 2020 Covid-19 quarantine period of Sport Science and Physical Education and Sports School serving in located in Turkey Forty-four (44) of the faculty members of various universities 102 men (75%) and 34 women (25%), including academics constitutes a total of 136 people. The research scale was applied on a voluntary basis by being contacted via e-mail over the period of stay at home.

Gathering data

Firstly, the current information about the purpose of the research was systematically given by scanning the literature. Thus, a theoretical framework was created on the subject. Secondly, Akin et al. (2015) and the "Positive Perception Scale" developed by Sinclair and Wallston (1999) and the Psychological Vulnerability Scale (PVS-6) were used to collect personal information of the participants.

Data collection

The data collection tools required to achieve the objectives set for the research is given below:

Personal information form

An information form consisting of 10 items (Gender, Age, Education, Department, Title, Experience, Age, Location, Sport and Exercise Status, Difficulty in Assessing Leisure Time) was prepared by the researcher in order to collect information about the personal characteristics of the participants and to create independent variables of the research.

Positive perception scale

As a result of the confirmatory factor analysis applied for the construct validity of the scale, it was seen that the scale fits in three dimensions (positive perception of self, positive perception of past, positive perception of human nature) ($\chi^2 = 24.28$, $sd = 16$, $RMSEA = .045$, $NFI = .96$, $NNFI = .97$, $IFI = .99$, $RFI = .93$, $CFI = .99$, $GFI = .98$ and $SRMR = .032$). Factor loads of items are ranked between .57 and .95. The Cronbach alpha internal consistency reliability coefficients of the Positive Perception Scale were found to be .80 for the positive perception subscale of the scale in the past, .71 for the positive perception subscale of the human nature and .75 for the self-perception subscale. The corrected item-test correlations of the Positive Perception Scale rank between .55 and .65.

The internal consistency (Cronbach alpha) reliability coefficients of this study were found as .75 for total positive perception, .80 for positive perception of past tense, .60 for positive perception of human nature and .80 for positive perception of self.

Psychological vulnerability scale

The PFS developed by Sinclair and Wallston (1999) consists of a total of 6 items (eg, I am mostly aware that I feel less worthy than other people) and a 5-point Likert type rating ('1 = not for me at all', '5 = for me completely'). Possible points that can be obtained from the PFS range from 6 to 30, and the increasing points indicate that the level of psychological vulnerability of individuals has also increased. Adaptation of the PFS to Turkish culture was carried out by Akin and Eker (2011). According to the results of the adaptive study confirmatory factor analysis, it is seen that the one-dimensional structure of the PFS is confirmed in university students ($\chi^2/sd = 0.87$, $GFI = .99$, $CFI = 1.00$ and $SRMR = .025$). In addition, it is understood that the Cronbach alpha reliability coefficient ($\alpha = .75$) of the PFS is acceptable (Akin and Eker, 2011).

The internal consistency (Cronbach alpha) reliability coefficients of this study were found to be .70 for General Psychological Vulnerability.

Analysis of data

The data were analyzed using SPSS 25.0 for Windows package program, which was edited in Microsoft Excel 2003 program. Percentage and frequency method were used to determine the distribution of the personal information of the participants. Skewness-Kurtosis normality distribution test was used to determine whether the measurements are suitable for normal distribution. According to Tabachnick and Fidell (2013), kurtosis-skewness values should be between +1.5 and -1.5. According to Skewness-Kurtosis technique, general positive perception and psychological vulnerability sub-dimensions (Trust, Continuity and Control) and positive perception level and sub-dimensions (positive perception of past time, positive perception of human nature and positive perception of self) all showed normal distribution. Descriptive statistics and MANOVA analyzes were used in the analysis of the study data. MANOVA analysis was preferred for comparing two dependent variables (Positive Perception and Psychological Vulnerability) with more than one sub-dimension and more than one independent variable. MANOVA analysis shows whether there is an interaction between the independent variables. It also reduces the rate of possible type I errors (finding a significant difference when there is no significant difference) (Tabachnick et al., 2007).

Looking at Table 1, the total positive perception and positive perception subscales (Positive Perception of Individuals of Past Tense, Positive Perception Regarding Human Nature and Positive Perception of Self) and Skewness-Kurtosis normality test results related to Psychological Vulnerability Scales are -1.5. Since it is +1.5, it is understood that it is suitable for normal distribution.

Table 1. Skewness/Kurtosis normality test regarding general positive perception, sub-dimensions and psychological vulnerability scale of academicians participating in the research.

	General positive perception	Positive perception of past time	Positive perception of human nature	Positive perception of self	Psychological vulnerability
n					
Skewness	-.97	-0.83	-.58	-.98	.13
Kurtosis	.65	0.56	.78	.41	-.28

FINDINGS

Personal features of study group

The data and comments on the demographic

characteristics of the academics participating in the research are given below.

Looking at Table 2, the distribution of the sample group participating in the study regarding their demographic characteristics is seen. According to this distribution, 34%

Table 2. Distribution of the sample group participating in the research regarding demographic features.

Personal features of participants		n	%
Gender	Male	102	75.0
	Female	34	25.0
Age	30 and under	22	16.2
	Between 31 and 40	45	33.1
	Between 41 and 50	47	34.6
	51 and over	22	16.2
Title	Research Assistant / Research Assistant Doctor	30	22.1
	Instructor / Instructor Doctor	19	14.0
	Doctor Instructor	37	27.2
	Associate Professor	36	26.5
	Professor Doctor	14	10.3
Difficulty in assessing leisure time	Sometimes	72	52.9
	Never	64	47.1

of the academicians participating in the research are women and 66% are men. Academicians are between the ages of 16.22% and under 30, 33.1% between the ages of 31-40, 34.6% between the ages of 41-50, 16.2% between the ages of 50 and over. While 52.9% of them sometimes have difficulty in evaluating their leisure time, 47.1% never have difficulty.

Looking at Table 3, the positive perception level averages of the academics, the positive perception sub-dimension point averages and the psychological vulnerability score averages were examined. As a result of this review, it is understood that the general average of positive perception scale of the academicians included in the research = 17.52, the positive perception mean scores of the past time positive mean = 6.1, the positive perception score average of the human nature mean is = 6.0 and the positive perception of self-mean = 5.4 is above the middle level. For this reason, it can be said that academicians have high levels of positive perception, positive perception of past time, positive perception of human nature and positive perception of self.

The psychological vulnerability score averages of academics were examined. As a result of this study, it is understood that the psychological vulnerability scale of academicians included in the research is below the average level with the mean = 2.51. For this reason, it can be said that academics are far from psychological vulnerability.

According to MANOVA findings, no significant interaction was found between the independent variables ($F_{(20, 342, 562)} = 1.11, p > .05$) (Table 4). The main effects findings were examined.

When Table 5 is examined, it was found that it is slightly statistically effective between the Gender Variable and the Past Time Psychological vulnerability variable (F

$(1,106) = 3.88, p < .05$). Bonferonni follow-up test was performed to determine where the mild effectiveness in psychological vulnerability dimension originated. When Bonferonni test was examined, it was determined that female academicians were more psychologically vulnerability in terms of psychological vulnerability compared to male academicians ($p < .05$). In addition, a significant difference was found between the Difficulty Variable in Evaluating Free Time and the Positive Perception Variable ($F_{(1,106)} = 4.65, p < .05$) sub-dimension. Bonferonni follow-up test was performed to determine where the significant difference in the Positive Perception sub-dimension originated. When the Bonferonni test was examined, it was determined that those who had "Never" difficulty in evaluating their leisure time in the positive perception sub-dimension were more positive about past time than those who did not have "Sometimes" difficulty.

There was no statistically significant difference between the psychological vulnerability and positive perception dimension and the positive perception sub-dimensions of the independent variables ($p > .05$).

As can be seen from Table 6, it is determined that as a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the positive perception of past time scale, which is one of the positive perception scale sub-dimensions, and the psychological vulnerability scale test scores, there was a statistically insignificant relationship between the scores at the level of $p > .05$ ($r = -.132; p > .05$), as a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the positive perception of human nature scale, which is one of the positive perception scale sub-dimensions, and the psychological vulnerability scale test scores, there was a

Table 3. Descriptive statistics on social well-being scale used in the research.

	N	Mean	Ss	Min.	Max.
Positive perception of past time	136	6.073	.6347	4.00	7.00
Positive perception of human nature	136	6.022	.6020	4.00	7.00
Positive perception of self	136	5.430	1.3446	2.00	7.00
General positive perception	136	17.525	1.9494	10.00	21.00
Psychological vulnerability	136	2.498	.6549	1.00	4.17

Table 4. MANOVA table.

		F	Hypothesis sd	Error sd	p	η^2
Gender	Pillai's Trace	1.88 ^b	4.000	103.000	.119	.068
	Wilks' Lambda	1.88 ^b	4.000	103.000	.119	.068
	Hotelling's Trace	1.88 ^b	4.000	103.000	.119	.068
	Roy's Largest Root	1.88 ^b	4.000	103.000	.119	.068
Title	Pillai's Trace	.99	16.000	424.000	.470	.036
	Wilks' Lambda	.99	16.000	315.308	.467	.037
	Hotelling's Trace	.99	16.000	406.000	.465	.038
	Roy's Largest Root	3.05 ^c	4.000	106.000	.020	.103
Difficulty in Assessing Leisure Time	Pillai's Trace	1.40 ^b	4.000	103.000	.238	.052
	Wilks' Lambda	1.40 ^b	4.000	103.000	.238	.052
	Hotelling's Trace	1.40 ^b	4.000	103.000	.238	.052
	Roy's Largest Root	1.40 ^b	4.000	103.000	.238	.052
Age	Pillai's Trace	1.32	12.000	315.000	.207	.048
	Wilks' Lambda	1.31	12.000	272.804	.215	.048
	Hotelling's Trace	1.29	12.000	305.000	.223	.048
	Roy's Largest Root	2.12 ^c	4.000	105.000	.083	.075
Title * Difficulty in Assessing Leisure Time * Age	Pillai's Trace	1.10	20.000	424.000	.344	.049
	Wilks' Lambda	1.11	20.000	342.562	.341	.051*
	Hotelling's Trace	1.11	20.000	406.000	.339	.052
	Roy's Largest Root	2.95 ^c	5.000	106.000	.016	.122

*p < 0.05.

Table 5. Main effects table.

	Dependent variables	sd	Mean square	F	p
Gender	Psychological Vulnerability	1	1.67	3.88	.05*
	Positive Perception of Past Time	1	.13	.374	.54
	Positive Perception of Human Nature	1	.31	1.00	.32
	Positive Perception of Self	1	1.32	.74	.39
Title	Psychological Vulnerability	4	.17	.40	.80
	Positive Perception of Past Time	4	.24	.70	.60
	Positive Perception of Human Nature	4	.66	2.13	.08
	Positive Perception of Self	4	2.69	1.50	.21
Difficulty in Assessing Leisure Time	Psychological Vulnerability	1	.54	1.26	.26
	Positive Perception of Past Time	1	1.61	4.65	.03*

Table 5. Continues.

	Positive Perception of Human Nature	1	.47	1.51	.22
	Positive Perception of Self	1	.61	.34	.56
Age	Psychological Vulnerability	3	.50	1.16	.33
	Positive Perception of Past Time	3	.43	1.24	.30
	Positive Perception of Human Nature	3	.78	2.51	.06
	Positive Perception of Self	3	2.38	1.33	.27
Error	Psychological Vulnerability	106	.43		
	Positive Perception of Past Time	106	.35		
	Positive Perception of Human Nature	106	.31		
	Positive Perception of Self	106	1.79		
Total	Psychological Vulnerability	136			
	Positive Perception of Past Time	136			
	Positive Perception of Human Nature	136			
	Positive Perception of Self	136			

*p < 0.05.

Table 6. Pearson product moment correlation analysis results table to determine the relationship between the positive perception scale subscales and the psychological vulnerability test scores.

	N	r	p
Positive Perception of Past Time	136	-.132	.126
Positive Perception of Human Nature	136	-.200*	.019
Positive Perception of Self	136	-.142	.100

*Correlation is significant at the 0.05 level (2-tailed).

statistically significant negative relationship between scores at the level of $p < .01$ ($r = -.200$; $p < .05$), as a result of the Pearson Product Moment Correlation analysis conducted to determine the relationship between the positive perception of self-scale, which is one of the positive perception scale sub-dimensions, and the psychological vulnerability scale test scores, there was a statistically insignificant relationship between scores at the level of $p > .05$ ($r = -.142$; $p < .05$).

RESULTS AND DISCUSSION

The results of the Positive Perception Scale (PPS) and the Psychological Fragility Scale (PFS) applied to academicians during the Covid 19 quarantine / stay home period and the explanations made on it are presented below.

In line with the results, it was concluded that the general positive perception scale general averages of the academicians included in the research in general terms, the positive perception scale averages of the past time, the positive perception score averages about the human

nature, and the average perception of the positive perception of self were above the middle level. It can be said that the reason is due to the positive effect on the mental effect of the academics involved in the sport. According to the results of Temel and Karharman's (2019) work on handball players, the fact that the players have a high level of past perception, positive perception of self and positive perception of human nature are in line with the current work. According to the study of Temel and Nas (2019) on hockey super league players, the fact that the hockey players achieved above the middle level supports the current study.

It is concluded that the psychological fragility scale of academicians is below the average level with their general average score. In this, it is understood that the reason is parallel to the positive perception. It can be said that the effect of sports on the person reduces the negative psychological conditions considerably. According to the study of Bayraktar and Temel (2020), the effect of the social well-being levels of coaches on psychological vulnerability was analysed, it was concluded that the psychological vulnerability levels of the trainers participating in the research were below the

average (Avg. = 2.93), and therefore they were far from psychological vulnerability. In terms of the results of this study, it is understood that it does not support the current study.

According to the results of Multivariate Analysis (MANOVA), no statistically significant interaction was found between the independent variables ($p > .05$). Considering the main effects findings made as a result, it was concluded that it was slightly statistically effective between the gender variable and the past time psychological vulnerability variable ($F(1,106) = 3.88, p < .05$). Accordingly, it can be said that female academicians are more psychologically vulnerable in terms of psychological vulnerability than male academics. In this, it can be concluded that the reason is due to the fact that women act with more emotions.

Again, it was understood that there was a significant difference between the difficulty of evaluating leisure time and the positive perception variable of the past time perception ($p < .05$). Accordingly, it can be said that those who do not have "Never" difficulty in evaluating their leisure time have more positive perceptions about past time than those who responded "We sometimes have difficulty".

In other dimensions, it was concluded that there was no statistically significant difference ($p > .05$).

According to the results of the correlation analysis, in the relationship dimension between psychological vulnerability and positive perception scale sub-dimensions it is concluded that there is a statistically insignificant relationship between the positive perception scale sub-dimensions of the positive perception of past time and the psychological vulnerability dimension at the level of $p > .05$ (-). ($r = -.132; p > .05$), there is a statistically significant negative relationship between the positive perception scale sub-dimensions and the positive perception dimension of human nature and psychological fragility dimension at the level of $p < .01$ (-). ($r = -.200; p < .05$), and there is a statistically insignificant relationship between the positive perception scale sub-dimensions and the positive perception dimension and the psychological fragility dimension at the level of $p > .05$. ($r = -.142; p < .05$).

RECOMMENDATIONS

More studies are needed to examine the relationship between variables in this area. This is because the lack of empirical studies in the related literature has made it difficult to interpret the findings.

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REFERENCES

- Akin, A., and Kaya, M. (2015). The validity and reliability of the Turkish form of positive perception scale. *Journal of European Education*, 5(2): 16-22.
- Akin, A., and Kaya, Ç. (2014). Investigation of the Relationships Between Social Well-being and Emotional Expression in Terms of Various Variables. 3. Educational Research Congress in Sakarya, 258-272.
- Akin, A., and Eker, H. (2011). Turkish version of the psychological vulnerability scale: a study of validity and reliability. Paper Presented at the 32th International Conference of the Stress and Anxiety Research Society (STAR). Münster, Germany.
- Basaran, I. E. (1996). Educational psychology, psychological foundations of education. Ankara: Gul Publishing.
- Bayraktar, A. K., and Temel, V. (2020). Effects of trainers' social well-being levels on psychological fragility. *International Journal of Social Research*, 13(69): 1453-1458.
- Büyükköztürk, S. (2015). Manual of data analysis for social sciences. Ankara: Pegem Akademi Publishing.
- Diener, E., Sapyta, J., and Suh, E. (1998). Subjective well-being is essential to well-being. *Psychological Inquiry: An International Journal for the Advancement of Psychological Theory*, 9(1): 33-37.
- Icekson, T., and Pines, A. M. (2013). Positive perception: A three-dimensional model and a scale. *Personality and Individual Differences*, 54(1): 180-186.
- Langner, T. S. (1962). A twenty-two item screening score of psychiatric symptoms indicating impairment. *Journal of Health and Human Behaviour*, 3: 269-276.
- Lazarus, R. S., and Folkman, S. (1984). *Stress, Appraisal, and Coping*. New York: Springer.
- Linley, P. A., Joseph, S., Harrington, S., and Wood, A. M. (2006). Positive psychology: Past, present, and (possible) future. *The Journal of Positive Psychology*, 1(1): 3-16.
- Lyubomirsky, S., Tkach, C., and DiMatteo, M. R. (2006). What are the differences between happiness and self-esteem? *Social Indicators Research*, 78: 363-404.
- Schwarzer, R., BaBler, J., Kwiatek, P., Schröder, K., and Zhang, J. X. (1997). Assessment of optimistic self-beliefs: comparison of the German, Spanish, and Chinese versions of the general self-efficacy scale. *Applied Psychology: An International Review*, 46(1): 69-88.
- Sinclair, V., and Wallston, K. (1999). Development and validation of the Psychological Vulnerability Scale. *Cognitive Therapy and Research*, 23: 119-129.
- Tabachnick, B. G., and Fidell, L. S. (2013). *Using multivariate statistics*. 6th Edn., Boston: Pearson Education.
- Tabachnick, B. G., Fidell, L. S., and Ullman, J. B. (2007). *Using multivariate statistics*. Boston, MA: Pearson.
- Temel, V., and Karharman, A. (2019). Investigation of the effect of positive perception levels of handball players on mental resilience levels. *Atatürk University Journal of Physical Education and Sports Sciences*, 21(2).
- Temel, V., and Nas, K. (2019). The effect of personality characteristics of students on positive perception level: a study to hockey super league players. *Asian Journal of Education and Training*, 5(1): 269-274.
- Thoits, P. A. (1982). Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. *Journal of Health and Social Behaviour*, 23: 145-59.
- Wengler, L., and Rosen, A. S. (2000). Measuring optimism -

pessimism from beliefs about future events. *Personality and Individual Differences*, 28(1): 717-728.

Yetim, A. (2000). Social view of sport. *Gazi Journal of Physical Education and Sports Sciences*, 5(1): 63-72.

Yıldırım, C. (2003). Comparison of assertiveness levels of secondary school students playing sports and non-sports in sports clubs (Unpublished master's thesis). Istanbul: Marmara University Institute of Health Science.

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