The Effect of Athlete Mindfulness on the Development of Athlete Psychological Skills

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Abstract

The aim of this study was to investigate the effect of athlete mindfulness, which is expressed as the ability of athletes to establish a cause-effect relationship without losing the perception of reality in the moments and situations related to sports, on the development of their psychological skills, which is emphasized by sports psychologists to positively affect athlete performance by 85%.

This study was designed according to the relational screening and causal comparison methods in order to examine the interaction between the variables. The study group comprised of 362 athletes who can be reached by non-random sampling methods and determined according to the criterion sampling method. As a data collection tool "Athlete Psychological Skills Assessment Scale" developed by Smith et al., (1995) and adapted to Turkish culture by Erhan et al. (2015) was used. Also, "Athlete Mindfulness Scale" developed by Thienot et al. (2014) and adapted to Turkish culture by Tingaz (2020) was used. In the analysis of the data obtained, the demographic variables of the participants were analyzed by correlation and t-test in independent samples, and structural equation model was used in determining the effect of mindfulness levels of athletes on the development of their psychological skills.

As a result, it has been concluded that the mindfulness of the athletes is a significant predictor of the development of the psychological skills of the athletes and explains it at the level of .30.

Keywords: Awareness, Mental Skills, Athlete Psychology

Özet

Sporcu Bilinçli Farkındalığının Sporcu Psikolojik Becerilerinin Gelişimine Etkisi

Sporcuların, spora dair yaşanılan anlar ve durumların içerisinde gerçeklik algısını yitirmeden neden sonuç ilişkisi kurabilmesi olarak ifade edilen sporcu bilinçli farkındalığının, spor psikologları tarafından sporcu performansını %85 oranında olumlu olarak etkilediği vurgulanan psikolojik becerilerinin gelişimine etkisini araştırmayı amaçlayan bu çalışma, değişkenler arasındaki etkileşimin incelenmesi adına ilişkisel tarama ve nedensel karşılaştırma yöntemlerine göre dizayn edilmiştir.

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Çalışma grubu seçkisiz olmayan örnekleme yöntemlerinden ulaşılabilir ve ölçüt örnekleme yöntemine göre belirlenmiş 362 sporcudan oluşmaktadır. Çalışmada veri toplama aracı olarak Smith ve ark., (1995) tarafından geliştirişmiş ve Erhan ve ark. (2015) tarafından Türk kültürüne uyarlanmış olan "Sporcu Psikolojik Becerilerini Değerlendirme Ölçeği" ve Thienot ve ark. (2014) tarafından geliştirilmiş ve Tingaz (2020) tarafından Türk kültürüne uyarlamış olan "Sporcu Bilinçli Farkındalık Ölçeği" kullanılmıştır. Elde edilen verilerin analizinde katılımcıların demografik değişkenleri korelasyon ve bağımsız örneklemlerde t-testi ile Sporcuların bilinçli farkındalık düzeylerinin, sporcuların psikolojik becerilerinin gelişimi üzerine etkisi yapısal eşitlik modeli ile analiz edilmiştir.

Sonuç olarak sporcuların bilinçli farkındalığının sporcuların psikolojik becerilerinin gelişimi üzerinde anlamlı bir yordayıcı olduğu ve .30 düzeyinde açıkladığı sonucuna ulaşılmıştır.

Anahtar Kelimeler: Farkındalık, Zihinsel Beceriler, Sporcu Psikolojisi

INTRODUCTION

Nowadays, in addition to training science, sports psychology which is defined by Rejeski and Barwley (58) as providing scientific, educational, and professional support in order to ensure development, progress and permanence in people's behaviors towards sports, is also used to support the development of athletes in the field of sports and to increase their sports performance (30). Sport psychology, which is defined as the application of the psychological principle to sports and physical activities at all levels of skill development, reflects the outputs of psychology in its focus and methods (14). In this context, it is possible to say that the effect of sports psychology on physical performance is important. Karageorghis and Terry (48) state that athletes focus on training 90% physically and 10% mentally, but 90% of the competitions are mental because there are very few situations where elite athletes are physically separated from each other. This inference supports the importance of sports psychology. In addition, studies conducted by sports psychologists have concluded that psychological skills positively affect athlete performance by 85%, and the importance of sports psychology and therefore psychological skills is emphasized (15). While the high-performance level desired by the athletes can be weakened by some psychological barriers apart from physical injuries, it can also be strongly supported by psycho-physiological aids (11). Sports success and sports performance depend on the capacity of individuals to be physically and psychologically ready, and therefore individuals should have good discipline and be able to cope with potential problems (10). This will be possible by integrating learned behaviors with psychological skills such as stress management, concentration, motivation, focus, decision making, problem solving, mental toughness, goal setting, and self-confidence (53). In short, the development of psychological skills will positively support the performance of athletes (74). At this point, it is also important whether the behaviors of the athletes, which include some psychological skills, are done consciously or not. Because it is stated in the relevant literature that conscious behaviors will be more effective than unconscious behaviors (73). In this context, it is possible to say that the mindfulness levels of the athletes will also have an effect on the development of psychological skills that can bring athletes to high performance. This idea is supported by Schwanhausser's (62) statement that there are studies that increase sportive performance because mindfulness provides people with mindfulness protocols such as determination and acceptance (75). Mindfulness, which is the actor of this dual relationship, creates a new research area for sports psychology because it focuses on increasing athlete performance (11).

If the concept of mindfulness is briefly mentioned, although this concept has a history of 2500 years (47), it has recently attracted the attention of the literature as a subject of scientific research (76, 7). Mindfulness, originally known as mindfulness, finds meaning in the Pali language as the integrated form of the words remembering, awareness and attention (66).

The concept of mindfulness, which is known as conscious awareness in Turkish (57), is generally integrated with the meaning of remembering. However, remembering here is not remembering the events experienced, but remembering the real thing in the present moment, in other words, it is conveyed as the state of being able to turn the reality of that moment into sensations and experiences, and to be able to grasp the lived events with their correct, clear and real meanings (59).

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There are many definitions for mindfulness in the literature. When these definitions are examined, mindfulness is expressed as allowing people to stay in the moment and accept the situation without questioning or judging (2003), contacting past experiences and the lived moment through stimuli (45, 13), compassionate acceptance of the moment by establishing a cause-effect relationship (54) accepting or rejecting the situation by being consciously aware of it, even if it is automatic (79). According to studies, mindfulness is an innate feature of people, but this skill can be developed with practical exercises. (35). For this situation, Kabat-Zinn (44) emphasized the development of some skills to reveal conscious awareness. These are Non-Judgment: it is the comprehension of the mechanical reactions given by observing the feelings, thoughts and behaviors of the individual as an outside eye (2). This situation enables the moment to be noticed in a transparent and objective way (44). Patience is to fully accept the present moment and store it in the mind to notice and use when needed (44). During this time, it allows the mind to come from a state of constant thinking to a state of listening and observing. The Novice (Beginner) Mind: It is defined as a state of discovery in which the world is watched with excitement and the sensations are given priority (55). This makes it easier to catch new opportunities and possibilities (44). Confidence refers to revealing one's own self and increasing sensitivity towards that self (44). Not to be greedy: Conscious awareness asks people to concentrate on their body by focusing on their own existence without a purpose by isolating them from the intense goals of the outside world (44). Acceptance: The state of acceptance is expressed as the state of accepting and surrendering to that reality by being willing to see oneself with his whole self and holistic realization (44). Allowing (Letting It Flow): Emphasizes the importance of trying to perceive and follow the existing world as it is, without molding one's mind into a shape, desire or emotional state (44, 45).

To activate all these skills, to capture the state of conscious awareness and to ensure permanence in this situation, thoughts and attitudes should be shaped by exercising and practicing intensely and consistently, just like developing a muscle (3, 2). In short, a state of awareness that people have may exist at some moments, but exercises should be done to maintain and improve this state (28).

The importance of mindfulness for individuals has been emphasized in the relevant literature as a skill that can be used in all areas such as work, family, school, and social life. This skill is also important in the field of sports, where some people practice as a hobby and some as a job. In fact, exercises, approaches, and practices have been created that sports actors can benefit from in order to gain conscious awareness skills. With the aim of activating the conscious awareness of sports actors, the ability to cope with the difficulties that will be discussed within the scope of this study, the state of being open to learning, the ability to concentrate, the confidence and achievement motivation, and it is expected that psychological skills, which are to get rid of worries, the ability to be mentally ready with goal setting, the ability to perform well under pressure and stress, will be developed (31). As stated in the introduction part of the study, psychological skills are important for athletes. It is known that conscious awareness is also important for the development of psychological skills. In this context, it would be correct to mention the relationship between the development of psychological skills and mindfulness.

Athlete Psychological Skills and Mindfulness

In recent years, Awareness-Based Interventions, which emphasize acceptance rather than the traditional cognitive-behavioral approach to change or suppress cognitive and emotional experiences, have been adopted in the field of sports in order to eliminate the negative psychological factors that athletes are exposed to with healthier methods (60, 63).

Mindfulness interventions aim to transform psychological states by using the strategy of harming the relationship with the person, using techniques such as awareness and acceptance (41, 79). This will provide the athletes with the opportunity to reduce the negative effects on them by accepting them instead of seeing the difficulties as factors to be resisted.

There are some studies in the relevant literature on these interventions. When the related studies are examined, Conscious Awareness increases the sportive performance of the athletes (27, 50), reduces the symptoms of competition anxiety and athlete's nutrition disorder (Chen et al., 2019), Norouzi et al. (56). In another study by Kabat-Zinn (43) in order to activate the level of mindfulness, it was determined that the programs aimed at reducing the stress level by controlling the awareness based on awareness contributed to

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a decrease in anxiety, stress and depression levels and psychological well-being in athletes. has been done. In a study conducted by Brown and Ryan (12) it is claimed that mindfulness causes positive outcomes such as an increase in life-long satisfaction and positive emotions, and a decrease in situations such as stress. Similarly, in studies conducted in line with mindfulness-based interventions, it is stated that mindfulness-based interventions increase emotions in a positive way (32) and decrease anxiety and stress levels (4, 20). In this context, it is understood that mindfulness is one of the methods used to increase the performance of athletes by minimizing the psychological events that negatively affect the performance of athletes through mindfulness-based practices and interventions.

Researching the relationship between these two concepts is important both in terms of practice and theory. In terms of practice, it is the planning of the technical staff responsible for the performance of the athletes, considering the contribution of mindfulness practices in the development programs they organize for the development of the psychological skills of the athletes that will provide a competitive advantage against their opponents. Theoretically, the concept of mindfulness has not been integrated into sports yet because it is a current concept, so few studies have been done. Therefore, it is thought that this research is important in terms of contributing to the literature on the connection of psychological skills and mindfulness concepts with sports. In this context, this study aims to investigate the effect of mindfulness of athletes on the development of psychological skills that will make athletes superior to other competitors.

METHOD

This study, which aims to investigate the effect of mindfulness levels of athletes on the development of athletes' psychological skills, was designed according to the relational screening model, which is one of the quantitative research methods and tests whether more than one variable has a relationship in itself and if there is a relationship, it aims to determine its level (49) also it was designed according to causal comparison model (17) that focus on determining the reasons for the emergence of a situation or phenomenon in question, the factors affecting the causes, and the consequences of these effects.

Study group

Within the scope of the research, the study group was determined according to the accessible sampling and criterion sampling technique, which are random sampling methods (22). The criterion of the said study group is that the participants are individuals who do sports. Demographic information about the participants is given in the table below.

Table 1. Demographic information of the participants

Variable	Type	Frequency	Percent
Gender	Female	118	%46,6
	Male	135	%53,4
Age			
Sports Type	Team	105	%41,5
	Individual	148	%58,5
Sports Year			

Data Collection Process

In the study, both web-based and face-to-face data were obtained during the data collection process. In web-based data collection, the researchers created a questionnaire via Google forms, which informed the athletes in detail about the research and included measurement tools, and the survey link was shared with the participants. The link in question was sent to the athletes via WhatsApp and e-mail. Face-to-face research data were obtained through hand-delivered questionnaires to volunteer athletes. In this context, the participants answered the scale form on the internet and face-to-face, and the answers were transferred to the electronic environment and recorded.

Data collection tool

The data collection tool used in this study consists of three parts. In the first part, there is a personal information form with demographic information such as age, gender, year of doing sports and type of sport. In the second part, the "Athlete Psychological Skills Assessment Scale" (SPBDÖ), which evaluates the

psychological skills of the athletes, was used. In the third part, the "Athlete Mindfulness Scale" was used to determine the mindfulness levels of the participating athletes. Information on the validity and reliability analyzes of the measurement tools in the study are given below.

Athlete Psychological Skills Assessment Scale" (APSAS)

The "Athlete Psychological Skills Assessment Scale" (APSAS) consists of 7 factors and 28 items. It was developed by Smith et al., (67) and adapted to Turkish culture by Erhan et al. (31). The first factor was named as "the ability to cope with difficulties" and consisted of items 5, 17, 21, 24. The second factor was named as "Coachability" and consisted of items 3*, 10*, 15, and 27. The third factor was named "Concentration" and consisted of items 4, 11, 16, and 25. The 4th factor was named as "Confidence and success motivation" and consists of items 2, 9, 14, 26. The 5th factor was named as "goal setting and mental preparation" and consists of items 1, 8, 13, and 20. The 6th factor was named as "Performing well under pressure" and consisted of items 6, 18, 22, 28. The 7th factor was named as "Freedom From Worry" and consisted of 7*, 12*, 19*, 23.* items. The scale, designed as a 4-point Likert type, is scored between 0 and 3 ((0) almost never, (1) sometimes, (2) often, and (3) almost always). Since items 3, 7, 10, 12, 19 and 23 of the scale are negative, they are scored inversely. The results of the confirmatory factor analysis conducted in line with the data of this study to test the scale for conformity with the structural equation model are given below.
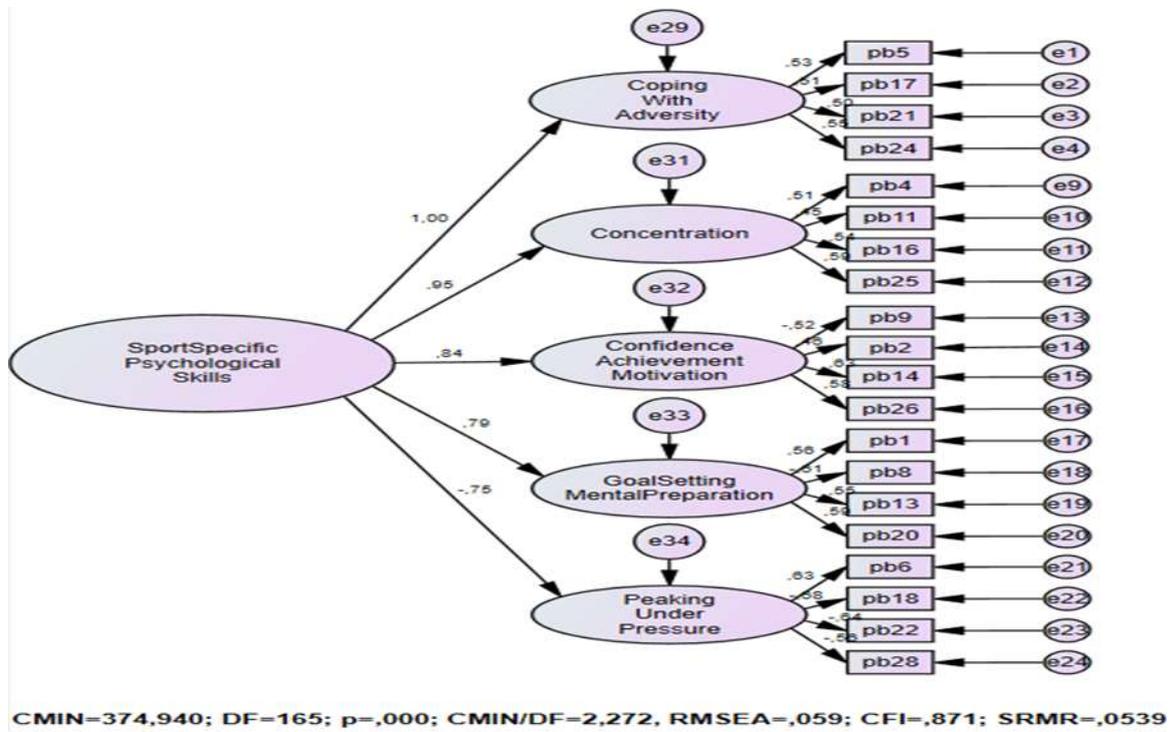

CMIN=374,940; DF=165; p=,000; CMIN/DF=2,272, RMSEA=,059; CFI=,871; SRMR=,0539

Figure 1. Confirmatory factor analysis model for the Athlete Psychological Skills Assessment Scale

When the figure is examined, the confirmatory factor analysis process of the Athlete Psychological Skills Assessment Scale, which was confirmed with seven factors in the original and five factors in the scope of this study, is as follows: The structure was tested with seven factors in the first analysis. As a result of the first analysis, it was determined that the regression coefficients of the factors of being open to learning and getting rid of anxiety were not significant, and the factor loadings of the items were not in the range of the criterion values, so they were not suitable for the model. In line with these findings, two factors were excluded from the analysis and the analysis was repeated (39), the model and values in the figure emerged. When the fit index values of the model in the figure were examined, it was determined that χ2/df (<3), CFI (>.80), SRMR (<.80) and RMSEA (<.80) values were within acceptable fit value ranges (42, 25, 24). When the other parameters of the measurement tool are examined; It was determined that the factor loads of the items were between .45 and .68, the R2 (Square of the Multiple Correlation) values were between 0.207 and 0.468, and the t values given for the significance of the path between the item and the dimension were between 6.340 and 9.543. When

the said values are examined; It has been determined that the factor loads are above the threshold value range specified in the literature, and the t values are above 1.96 (38). Item-total correlation explains the relationship between the scores obtained from the existing items in the measurement tool and the total score. In this context, it was determined that the corrected item total correlation values examined varied between 0.335 and 0.522. The fact that these values are moderate and positive indicates that the items in the measurement tool exemplify similar behaviors and the scale is at a high level in terms of internal consistency (16). It is also stated in the literature that the item-total correlations of 0.30 and above will be sufficient for the items in the measurement tool and that the items with these values are good items (16). Finally, the Cronbach alpha internal consistency coefficient (α) value was calculated as 0.719 ($\alpha \geq .70$). It is possible to state that the fact that all these values are in the criterion value range is proof of the adequacy of the scores obtained from this scale (33, 39).

Athlete Mindfulness Scale

Athlete Mindfulness Scale developed by Thienot et al. (71) and adapted to Turkish culture by Tingaz (72) consists of 3 factors and 15 items. The first factor was named "Awareness". This factor consists of 1, 2, 3, 4, and 5 items. The second factor consists of 6, 7, 8, 9, and 10 items called "No Judgment", which should be scored reversely. The third factor was named "Refocusing" and consisted of Items 11, 12, 13, 14, and 15. The Athlete Mindfulness Scale is scored between 1 and 6 ((1) Almost Never, (2) Extremely Rarely, (3) Rarely, (4) Sometimes, (5) Often, and (6) Almost Always). It is a Likert type scale. The results of the confirmatory factor analysis conducted in line with the data of this study to test the scale for conformity with the structural equation model are given below.
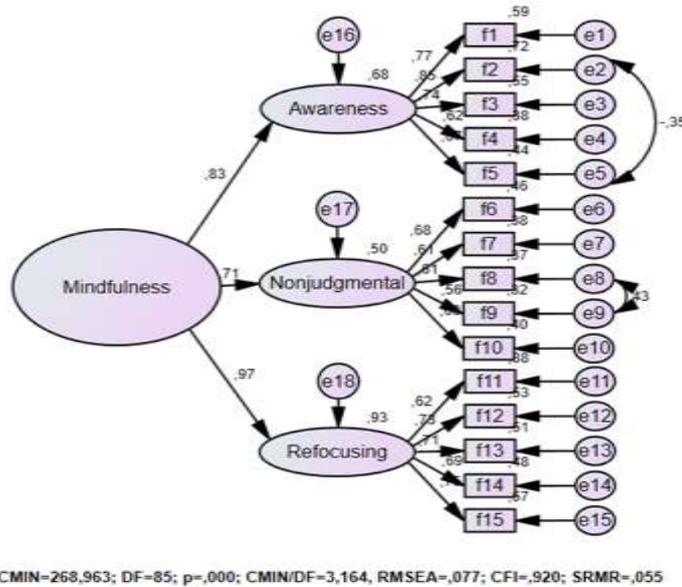

CMIN=268,963; DF=85; p=,000; CMIN/DF=3,164, RMSEA=,077; CFI=,920; SRMR=,055

Figure 2. Confirmatory factor analysis model for the Athlete Mindfulness Scale

When the figure is examined, the CFI (>.90) and SRMR (<.80) values of the fit index values of the three-factor Mindfulness Scale (BFI) have good agreement, $\chi 2/df$ (3< $\chi 2/df$<5) and RMSEA (<. 80) value was found to be within acceptable fit value ranges (24, 42). Two modifications of the model were made during the analysis process before these values were reached. In the first analysis, on the grounds that the fit index value of the RMSEA (=.089) was not within the criterion value range (24, 39), a modification was made between the 8th and 9th items, which would make the most contribution to the modification suggestions. The analysis was repeated and it was determined that the RMSEA (=.084) value was not in the criterion value range (39), and the second and final modification was made between the 2nd and 5th items, and the fit index values in the figure were reached.

When the other parameters of the measurement tool are examined; It was determined that the factor loads of the items were between .56 and .85, the R2 (Square of the Multiple Correlation) values were between 0.317 and 0.723, and the t values given for the significance of the path between the item and the dimension were between 8.598 and 16.109. When the said values are examined; It has been determined that factor loads are above .50, which is the threshold value specified in the literature, and t values are above 1.96 (38). Item-total

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correlation explains the relationship between the scores obtained from the existing items in the measurement tool and the total score. In this context, the corrected item-total correlation values examined varied between 0.473 and 0.649. The fact that these values are moderate and positive indicates that the items in the measurement tool exemplify similar behaviors and the scale is at a high level in terms of internal consistency (16). It is also stated in the literature that the item-total correlations of 0.30 and above will be sufficient for the items in the measurement tool and that the items with these values are good items (16). Finally, the Cronbach alpha internal consistency coefficient (α) value is 0.893 ($\alpha \geq .70$). It is possible to state that the fact that all these values are in the criterion value range is proof of the adequacy of the scores obtained from this scale (33, 39).

Analysis of data

The data obtained from the participants were first analyzed with z-score, missing values, outliers and descriptive statistics. In the analysis of the z scores, the scores of the athletes were converted into z scores, and it was determined that there were 25 data with scores other than +2.58 and -2.58, which are the threshold values in the literature. The extreme values in question were removed from the data set and re-examined and it was determined that there was no data with outliers (38). In the second stage, the normality distributions of the data were examined and their suitability for the analyzes (Structural equation model, confirmatory factor analysis, parametric or non-parametric) was tested (24). Z (kurtosis and skewness) values obtained by dividing the values of kurtosis and skewness by their own standard errors were taken into account in meeting the normality criterion of the data (69). In this study, the threshold value of ±2.58 expressed by Field (33) was taken as basis. It has been determined that the skewness values of the Z (kurtosis and skewness) values of the data vary between -2.23 and +0.90, and the kurtosis values vary between -2.28 and +1.55. In this context, it meets the normality assumption of the data. Parametric tests were applied in the analysis of the data that met the normality distribution, and t-test and correlation analysis were used in independent samples for the analysis of independent variables. Structural equation modeling was used to determine the predictive level of mindfulness in the evaluation of athlete's psychological skills. Before factor analysis and Structural equation modeling, multicollinearity was checked to test the suitability of the data for factor analysis. In the analysis results, the relationship between the independent variables was not higher than 0.90, the Variance Inflation Factor (VIF) values were lower than the threshold value of 10, the Condition Index (CI) values were lower than the threshold value of 30, and the tolerance values were lower than the threshold value of 10. (24) and it was determined that there was no multicollinearity problem. After these analyzes, Factor Analysis phase was passed. The factor structure of the measurement intervals was analyzed by Confirmatory Factor Analysis (CFA). Constructs confirmed after DFA were analyzed by SEM. χ2 and χ2/df (Chisquare/degree of freedom), CFI (Comparative fit index), SRMR (Standardized root mean square error) and RMSEA (Approximate root mean square error) for sample groups larger than 250 in the evaluation of the model resulting from CFA and SEM) fit index values were taken into account (Gürbüz, 2019; Hu and Bentler, 1999). In addition, within the scope of SEM, path coefficients and r2 values were examined to examine the predictive level of athlete mindfulness of athlete's psychological skills.

RESULTS

The findings regarding the analysis of the data within the scope of the study are given below.

Tables related to the results of independent groups t-test and correlation analysis within the scope of the analysis results of the participants' demographic variables regarding athlete mindfulness and athlete psychological skills are given below.

Table 2. Examination of athlete mindfulness and athlete psychological skills in terms of gender variable

Variable	Gender	n	Mean	SS	SD	t	P
Athlete Mindfulness	Female	83	4.42	0.85	360	-0.468	0.64
	Male	279	4.46	0.78			
A Psychological Skills	Female	83	3.05	0.28	360	-1.741	0.08
	Male	279	3.11	0.24			

When the table was examined, no significant difference was determined regarding the gender variable in the mindfulness scores of the athletes (t(360)= -0.468; p>0.05). No significant difference was found regarding the gender variable in the development scores of the athletes' psychological skills (t(360)= -1.741; p>0.05). In line

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with these results, it is possible to say that the athletes' being male or female has no effect on the development of mindfulness and psychological skills.

Table 3. Investigation of athlete mindfulness and athlete psychological skills in terms of age variable

	Age
Athlete mindfulness	0.038
Athlete Psychological Skills	0.029
(p>0.05)	

According to table no relationship was determined between the athletes' mindfulness (r (362)=0.038, p>0.05) and the development of psychological skills (r (362)=0.038, p>0.05) in terms of age variable. These result means that the mindfulness and psychological skills of the athletes do not increase or decrease according to the age change.

Table 4. Investigation of athlete mindfulness and athlete psychological skills in terms of sport type variable

Variable	Gender	n	Mean	SS	SD	t	P
Athlete Mindfulness	Individual	165	4.46	0.80	360	-0.06	0.95
	Team	197	4.45	0.79			
A.Psychological Skills	Individual	198	3.10	0.26	360	-0.77	0.54
	Team	165	3.08	0.25			

When the table is examined, no significant difference was determined regarding the type of sport variable in the mindfulness scores of the athletes (t(360)= -0.06; p>0.05). No significant difference was found regarding the type of sport variable in the development scores of the athletes' psychological skills (t(360)= -0.77; p>0.05). In line with these results, it is possible to say that there is no effect on the development of mindfulness and psychological skills of the athletes, whether the type of sport is a team or individual sport.

Table 5. Investigation of athlete mindfulness and athlete psychological skills in terms of the variable of years of doing sports.

	Sports Year
Athlete Mindfulness	0.156**
Athlete Psychological Skills	0.187**
(p<0.05**)	

When the table is examined, a statistically significant relationship was determined between the athletes' mindfulness (r (362)=0.156, p>0.01) and the development of their psychological skills (r (362)=0.187, p>0.01) in terms of year of doing sports. In line with these results, it is possible to state that as the years of doing sports increase, the development of mindfulness and psychological skills of the athletes also increases.

The models and findings related to the structural equation model analysis regarding the effect of athlete mindfulness on athlete psychological skills are given below.
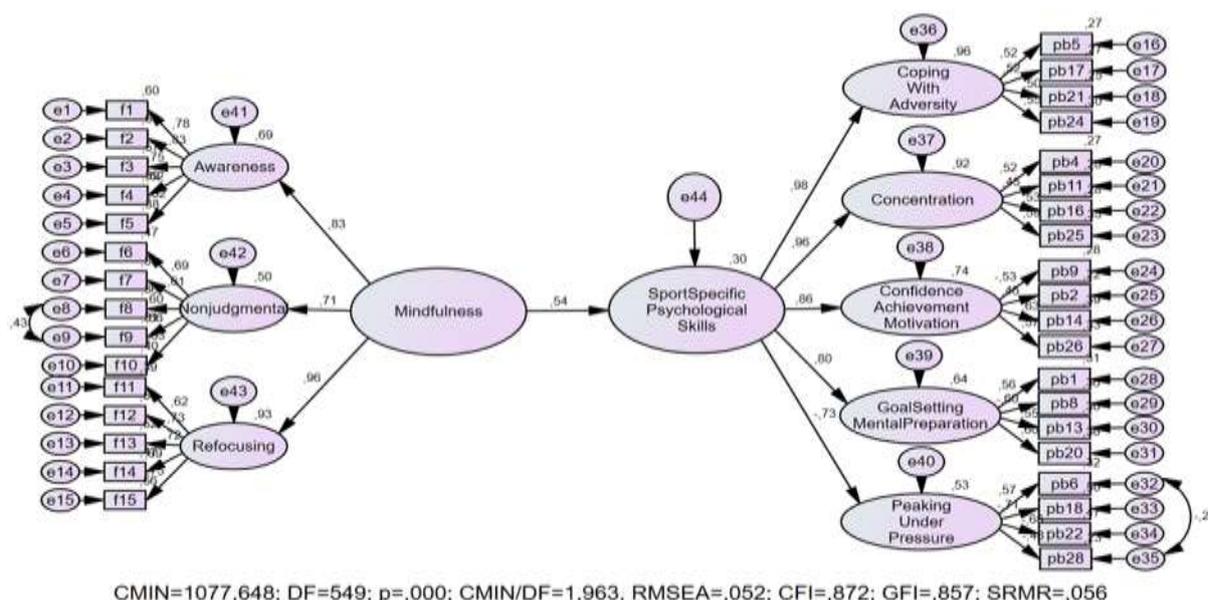
CMIN=1077,648; DF=549; p=,000; CMIN/DF=1,963, RMSEA=,052; CFI=,872; GFI=,857; SRMR=,056

Figure 3. Athlete Conscious Awareness and Athlete Psychological Skills Structural Equation Model

Table 6. Findings Related to the Research Model

Impact			β	Standard Error	t	p	R²	Result
Athlete Mindfulness	→	P. Skills	0.543	0.061	6.149	0.000	0.30	Acceptance

A structural equation model was created to determine the effect of athlete mindfulness on athlete psychological skills. When the fit index values of the model in the figure were examined, it was determined that $\chi2/df$, CFI, SRMR and RMSEA values were in good fit value ranges (42, 25, 24). In addition, it is seen that athlete mindfulness has a statistically significant and positive effect on athlete psychological skills (β: ,54; p<0.05). It was concluded that a one-unit increase in athlete conscious awareness caused an increase of .54 on athlete psychological skills, and athlete mindfulness had a predictive effect on athlete psychological skills at the level of 30%.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

There was no difference in terms of gender in the development of athlete mindfulness and psychological skills. In other words, the fact that the athlete is male or female does not affect the development of mindfulness and psychological skills. When the relevant literature on mindfulness was searched, Baer, Samuel, and Lykins (6) found that mindfulness did not differ according to the gender variable. Similarly, in the study conducted by Tingaz (73), it was determined that there was no statistically significant difference in gender among the athletes studying at the faculty of sports sciences. According to the results of the research conducted by Acar (1) on psychological counselor candidates, the gender variable did not differ in mindfulness. In addition to these results, as a result of the mindfulness research conducted by Vural and Okan (75) on shooting athletes, it was found that the mindfulness and non-judgment sub-dimensions of mindfulness did not differ significantly according to the gender variable, but in the refocus dimension, male athletes had higher scores than female athletes. This situation suggests that mindfulness and psychological skills develop as a result of environmental factors that they are exposed to rather than their gender and conducting research on more equal and more gendered people will shed light on the result obtained. Contrary to all these results, as a result of Kesler's (51) study on elite wrestlers, it was revealed that men have higher mindfulness scores compared to women. When the interaction between psychological skills and gender is examined within the scope of the literature, according to the results of a study conducted by Yıldız and Erhan (78) on athletes engaged in winter sports, no difference was found in the psychological skills of athletes according to gender. This result supports

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our research, but contrary to this result, in a study conducted by Şahinler (68) on athletes, it was determined that female athletes had higher scores than male athletes regarding their psychological skills.

No significant relationship was determined in terms of age variable between the athlete's mindfulness and the development of psychological skills. In other words, it was concluded that there is no relationship between mindfulness level and the development of psychological skills of the athlete in terms of the increase or decrease in age. In the relevant literature there are studies which supports the research result. Kolayiş and Çelik (52) in their studies on the licensed athletes, no statistically significant difference was determined between mindfulness and age variable. In addition to this result, Azak's (5) study on individuals in different professions similarly did not find a significant relationship between mindfulness and age. When the literature is examined for the relationship between psychological skills and age, no significant difference has been observed in the sub-dimensions of age and the psychological skills of athletes, such as being open to learning and performing well under pressure and stress. A significant difference was found in the dimensions of coping with difficulties, concentration, confidence and success motivations, setting goals and being mentally ready, and getting rid of worries. In addition, as a result of the research conducted by Sevinç (64), it was revealed that there is a significant difference between age and psychological skills. Although it is known that there are different results from this study in the literature, in the light of the information we have obtained as a result of the research, it is thought that the age of the athletes does not contribute to the development of mindfulness or psychological skills because these skills develop with experience rather than age.

No difference was determined in terms of the type of sport performed in the development of athlete conscious awareness and psychological skills. In other words, the fact that the athlete is doing one of the team or individual sports does not affect the development of mindfulness and psychological skills. In addition to the results of the study, in the literature review conducted within the scope of athlete mindfulness, according to the results of the study conducted by Tingaz (73) and Can and Kaçay (18) for athlete students, no significant difference was found between the branches performed in the team or individual field and athlete mindfulness. This result supports the research as it reflects the same result as this study. When the literature is examined in terms of the type of sports performed with psychological skills, contrary to the results of the study, it has been revealed as a result of the studies that there are significant differences between individual and team sports in previous studies (68, 78). In order for the results to have a wider scope, it is recommended to conduct extensive research on athletes with different demographic characteristics.

A significant relationship was determined between the athlete's mindfulness and the development of psychological skills in terms of year of doing sports. In other words, as the athlete's years of doing sports increase, the level of mindfulness and the development of psychological skills increase. It is thought that this situation is because of the automaticity in the learned behaviors performed continuously during training or during the competition. As the sports year increase, experience of the athlete will also increase which includes the movements. So it is normal to have a relationship with the sports year at this point. In the relevant literature significant differences were determined between sports age and psychological skills (68, 21, 37). Contrary to these results, there are also studies in which there are no significant differences between psychological skills and the year of doing sports (23, 77). In the study of Vural and Okan (75), it has been proven that sports age has a relationship with the refocus sub-dimension of mindfulness and on the total score of mindfulness. However, when some studies are examined, it has been determined that there is no statistical relationship between the year of sports and mindfulness (51, 73).

Finally, one of the most important results is that the mindfulness of the athlete has a positive effect on the development of the athlete's psychological skills. It has been concluded that athlete mindfulness has a 30% effect on the development of athlete psychological skills. It is also consistent with the results of other studies that mindfulness and mindfulness-based interventions provide people with well-being in mood and general psychology (34). In this context, when the literature is examined, increasing awareness improves the ability to overcome difficulties by providing coordination between people's feelings and thoughts and by reducing the emotions with irregular functions. (65). In addition, mindfulness contributes significantly to the concentration of clues that make it easier for athletes to set performance goals and reach those goals (70). Looking at the results of Schwanhausser's (62) research, mindfulness enables athletes to achieve sportive success by adapting them to the sports environment and increasing their mental readiness level. In addition, studies by Brown and

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Ryan (12) revealed that as a result of mindfulness-based interventions made to increase mindfulness, positive emotions are increased (32) and the level of situations such as anxiety and stress is reduced. Naturally, this situation suggests that it is closely related to the ability to get rid of worries. Similarly, Jon Kabat-Zinn et al. (46) had the rowers preparing for the Olympics independently perform mindfulness training two to seven weeks before the Olympics. Some of the medal-winning U.S. Olympic team rowers have reported that mindfulness meditation has shown benefit in optimizing performance during race time. On top of that, some researchers emphasized that the Awareness-Acceptance and Engagement approach (MAC) and Awareness Sports Development Program (MSPE) will help increase athlete performance, as well as increase mindfulness for awareness, acceptance, concentration, sense of control and bodily sensations, and reduce stress and anxiety (8, 9, 26, 36, 40, 61).

As a result, mindfulness can help the athletes to be highly motivated during the competition, to keep stress in balance, to cope with difficulties and to use their skills well on all factors (29), to perform well under pressure, and in the development of psychological skills that will naturally provide a competitive advantage against their competitors. It is possible to state that it is an effective parameter that contributes 30%. It has been determined that the athletes' being fully aware of the situation by staying in the moment during competition, training and other times is effective in the development of psychological competencies that form the infrastructure of the behaviors that should be exhibited in problem situations or situations where psychological skills are needed. This situation suggests that sports actors responsible for athlete performance should also consider the development of mindfulness levels in the development of athletes. In the results of this study, it would be correct to evaluate the existence of certain limitations and the results of the study taking into account the existing limitations. It is recommended to contribute to the literature and to provide a new perspective to practitioners by conducting different studies at points where the scope of the said study is not sufficient. This study was carried out with a working group consisting of amateur and professional athletes from different sports branches. Therefore, it should be accepted that the results cannot be generalized to athletes in all sports branches. In this context, the results may vary in studies to be conducted on athletes with different demographics and wider masses based on a different or a single branch. In addition, the measurement tool used in this study to evaluate the psychological development of athletes originally consisted of seven factors. Within the scope of this study, it worked as five factors. These dimensions are freedom from anxiety and openness to learning. It is thought that the reason why the dimensions are not working in this study is due to the fact that the participants have been doing sports for an average of seven years. The fact that this period is long causes the anxiety of the athletes to decrease over time and to increase their sufficient knowledge and experience. Therefore, it is thought that the dimensions Coachability and Freedom From Worry do not fit the model. Therefore, for researchers who will use the measurement tool in different studies, revalidation of the scale in different athlete groups can be encouraged.

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