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Psychological Needs in Sports, Spirituality Index of Well-Being, and Motivation in Sports

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Abstract: The aim of this study is to examine the relationship between the psychological needs of athletes who attend gyms, the spirituality index of well-being, and motivation in sports, and to determine the mediating role of the spirituality index of well-being between psychological needs in sports and motivation in sports. Although sports spirituality is rapidly developing in the international literature, sports and spirituality have not been studied together in the national literature before. Therefore, this study holds the distinction of being one of the pioneering research efforts on the subject of spirituality in athletes in Türkiye. In this context, the data of 422 athletes, 176 women and 246 men, who have been attending gym facilities in Antalya for at least one year, were included in the research. Participants were administered a personal information form, Psychological Need States. It was found that the spirituality index of well-being is positively related to all satisfaction subscales and negatively related to all frustration subscales of psychological needs and that the life scheme is related to many subscales of sport motivation. Furthermore, it was also found that the spirituality index of well-being is a mediating variable between psychological needs in sports and motivation in sports. The data draw attention to the importance of sports spirituality. It is recommended to integrate spirituality into healthcare for athletes.

Keywords: spirituality in sports; psychological needs; motivation; well-being; gymnasiums; Türkiye; holistic care; athletes

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1. Introduction

Advancements in the field of athlete health and sports performance emphasize the importance of holistic care for athletes (Schinke et al. 2018; Fisher et al. 2017; Debois et al. 2015). Holistic care includes not only physical health but also the psychological, social, spiritual, economic, and cultural human needs of athletes (Papathanasiou et al. 2013). This approach enhances athletes' performance (Jones et al. 2007). Meeting the basic psychological needs of athletes positively impacts their motivation and well-being (Ryan and Deci 2000).

Although studies on religion/spirituality indicate that religion is institutional while spirituality is meaning-centered, these two extremely human concepts are often used interchangeably. The number of research studies on religion/spirituality in sports psychology is rapidly increasing. Findings show that religion/spirituality plays an important role among

athletes in various ways (Roe and Parker 2022; Smith 2019). For example, in areas such as reducing anxiety, team/group cohesion, and coping with uncertainties, religion/spirituality contributes to the holistic health of athletes. From a sports psychology perspective, studies on religion/spirituality are grouped under the following nine headings: the role of religion/spirituality, counseling, trust, religious/spiritual belief, flow or being in the moment, identity, anxiety and depression, coping with distress, and well-being and recovery (Hagan 2021; Jackson and Wood 2018; Wiese-Bjornstal 2019).

Flow or being in the moment and prayer are the two most frequently experienced religious/spiritual experiences among athletes (Ravizza 2002; Czech et al. 2004). Many athletes experience flow. Flow is the feeling that one's skills are adequate to overcome challenges directed toward a goal, and it is a system of rule-based actions that provide feedback on how a person is performing (Csikszentmihalyi 1990). Flow is one of the fundamental factors explaining athletic performance. There is a positive relationship between flow and sports performance and between flow and spirituality (Watson and Nesti 2005). Additionally, research shows that athletes often pray before competitions or matches, which enhances their performance during and after competitions as well as their overall well-being (Hopsicker 2009; Czech et al. 2004).

Religion/spirituality not only contributes to athletes' sports performance but also plays a significant role in their ability to continue playing or doing the sports and their adapt to post-career life. Athletes face numerous unexpected challenges, such as career-ending injuries, illnesses, lost seasons, and competition. Religion/spirituality helps them accept these adversities with a deeper understanding (Maranise 2013; Watson and Nesti 2005; Wiese-Bjornstal et al. 2018); Additionally, athletes' religious/spiritual identity, beliefs, and practices contribute to the therapeutic process in situations such as post-injury emotional problems, adaptation and interpersonal conflict, anxiety, grief, trauma, and depression as well as psychological factors such as anxiety, depression, control, and evaluation (Koenig 2012; Wiese-Bjornstal 2019). All these empirical data highlight the importance of sports spirituality as an integral aspect of coaching and healthcare for teams and athletes (Maranise 2013; Jules et al. 2018; Rooney et al. 2021; Hagan and Schack 2017).

Well-being is defined as the balance between negative and positive emotions (as cited in Lyubomirsky et al. 2005). Some researchers use the concepts of well-being and happiness interchangeably (Seligman 2004; Lyubomirsky 2001). Accordingly, well-being refers to the frequency of positive emotions and the rarity of negative emotions, a cognitive assessment of whether an individual's life is progressing in the right direction, and a continuous search for the meaning and purpose of life (Seligman 2004). The literature shows that happy individuals tend to be successful in multiple life areas such as income, friendships, health, job performance, and marriage (Lyubomirsky et al. 2005). The effect of spirituality on well-being is defined as "an optimal health-oriented lifestyle and state of well-being in which the body, mind and spirit are converged for the individual to live fully and functionally within the social and natural environment" (Myers et al. 2000). In the wellness model, spirituality is a central component of the core essence and includes the fundamental essence of the meaning and purpose of life (Myers and Sweeney 2004).

Sport motivation is an internal state that drives and sustains individuals to engage in sports and strive to achieve their goals (Shang and Yang 2021). Sport motivation directly affects athletes' enthusiasm for training and competition and their performance (Zhang 2015). Generally speaking, the factors that influence the intensity and direction of motivation stem from an individual's internal needs and external conditions (Demir 2022). External conditions refer to environmental factors, including various biological and social stimuli outside the individual. In this context, tangible support, coach behaviors, and reward incentives can be given as examples of extrinsic motivation. On the other hand, the intrinsic dimension of sport motivation includes factors such as self-esteem, a strong sense of belonging and identity, enthusiasm, vitality, self-confidence, and dedication to sports with firm determination (Freeman et al. 2011). Research shows that spirituality plays a vital role in all these aspects (Smith 2019).

Athletes' interactions with others significantly impact them in many ways. The social environment created by important figures such as coaches, parents, and peers can influence athletes' motivation and many motivation-related factors (Chu and Zhang 2019). According to the basic psychological needs theory, individuals have three fundamental psychological needs: autonomy, competence, and relatedness (Deci and Ryan 2000; Ng et al. 2011). The need for autonomy refers to individuals having the will, the ability to make choices, and the freedom to determine their own actions (Ryan and Deci 2006). The need for competence means that individuals perceive themselves as capable, proficient, and effective when performing any activity (Deci and Ryan 1985). Finally, the need for relatedness refers to the necessity for individuals to establish trusting relationships with others, feel emotionally and personally connected to those around them, and integrate socially with them. Considering this, the satisfaction of autonomy, competence, and relatedness needs has been found to be positively associated with positive mood, psychological well-being, intrinsic motivation, and flow experience (Ryan and Deci 2017; Hollembeak and Amorose 2005; Reinboth and Duda 2006; Kipp and Weiss 2013). Conversely, low satisfaction of these needs is associated with negative conditions such as high levels of burnout and depression (Hodge et al. 2008; Kim and James 2019).

The Current Study

The current study tests the mediating role of the spirituality index of well-being between athletes' motivations in sports and their psychological needs in sports. In this context, the study seeks to answer the following questions:

(a) Is there a relationship between athletes' psychological needs in sports, motivation in sports, and the spirituality index of well-being?
(b) Do athletes' psychological needs in sports, motivation in sports, and the spirituality index of well-being differ according to gender, age, education level, and whether they are licensed athletes?

2. Method

2.1. Research Group

A total of 422 athletes, consisting of 176 (41.7%) women and 246 (58.3%) men, aged between 14 and 40 years, participated in the study. The research group was selected through a convenience sampling method from athletes in Antalya who have been attending gyms for at least one year and are actively training with a coach.

2.2. Data Collection Tools

To determine the demographic characteristics of the athletes participating in the study, a personal information form created by the researchers, and the Psychological Need States in Sport Scale, the Sport Motivation Scale, and the Spirituality Index of Well-Being Scale were used. The measurement tools used in this research are explained below.

Personal Information: This form includes questions aimed at determining age, gender, education, sports branch, and whether the participant is a licensed athlete. A licensed athlete is an athlete who owns the appropriate certificate of eligibility and authorization to play or take part in a game.

Psychological Need States in Sport Scale (PNSSS): Developed by Bhavsar et al. (2020) and adapted to Turkish by Sarı et al. (2022), this scale aims to determine the extent to which athletes' needs for "autonomy", "competence", and "relatedness" are satisfied or frustrated. The scale consists of 29 items that complete the sentence, "in the basic sports branch I do, I…" There are six sub-dimensions in the scale. These sub-dimensions, along with the number of items and sample items, are presented below:

Autonomy satisfaction (5 items): "I feel free to make decisions about the way I train".
Autonomy frustration (5 items): "I feel forced to behave in certain ways".
Competence satisfaction (5 items): "I can overcome difficulties".
Competence frustration (4 items): "I feel useless".

Relatedness satisfaction (5 items): "I feel close to others".
Relatedness frustration (5 items): "I feel excluded".

There are no reverse-scored items in the scale. The Turkish adaptation's confirmatory factor analysis (CFA) resulted in acceptable $\chi 2/df$, RMSEA, SRMR, and CFI values. The Cronbach's alpha coefficients for the subscales of the Turkish version of the scale are all above 0.70. In this study, the Cronbach's alpha coefficient was found to be 0.784.

Sport Motivation Scale (SMS): Originally developed by Mallett et al. (2007) and adapted to Turkish by Demir (2022), this scale aims to evaluate individuals' emotional responsiveness to sports and sporting processes and their motivation toward the environment. It consists of 24 items across 6 subscales: amotivation, identified regulation, external regulation, integrated regulation, introjected regulation, and intrinsic motivation. This scale differs from other motivation scales in that it emphasizes self-regulation. Motivation scales consist of intrinsic motivation, extrinsic motivation, and amotivation sub-dimensions. However, this scale developed by Mallet and his colleagues is based on self-regulation theory and was created by integrating intrinsic–extrinsic motivation with self-regulation. Accordingly, the source of self-regulation can be either intrinsic or extrinsic. However, in any case, athletes with high self-regulation perform better, cope with difficulties more efficiently, and are more resilient. Another sub-dimension of the scale, apart from intrinsic and extrinsic self-regulation, is amotivation. Amotivation refers to the athlete viewing the sport as a burden and a restriction.

The Sport Motivation Scale (SMS-6) is a five-point Likert-type measurement tool rated by participants who are interested in sports or who do sports. The internal consistency coefficients in the original scale range from 0.70 to 0.80, with all items being positive. In this study, the Cronbach's alpha was found to be 0.868.

Spirituality Index of Well-Being (SIWB): Developed by Daaleman and Frey (2004) and adapted to Turkish by Keskinoğlu et al. (2019), this scale consists of 12 items and 2 subscales (self-efficacy: items 1, 2, 3, 4, 5, 6; life scheme: items 7, 8, 9, 10, 11, 12). The five-point Likert scale responses range from 1 (strongly disagree) to 5 (strongly agree). In this study, the Cronbach's alpha was found to be 0.838.

2.3. Procedure

Data collection for the study was conducted online via Google Forms in June 2024. In the provided consent form, the researchers provided a detailed explanation and shared their email address. This allowed participants to receive feedback on any questions that might arise.

2.4. Data Analysis

The data obtained in the study were statistically analyzed using the SPSS 22.0 computer program. Descriptive statistics for categorical data were presented as numbers and percentages, while numerical data were presented as arithmetic mean, standard deviation, minimum, and maximum values. The independent samples *t*-test and one-way ANOVA were used for comparing quantitative data. Pearson correlation analysis was used to test the significance of the relationship between dependent and independent variables. The mediation effect was analyzed using regression analysis. The findings were evaluated at a 95% confidence interval and a 5% significance level (see Table 1).

Table 1. Descriptive information about the participants.

Independent Variable	Number (n)	Percentage (%)
Gender		
Female	176	41.7
Male	246	58.3

Table 1. *Cont.*

Independent Variable	Number (n)	Percentage (%)
Age		
14–18	81	19.2
19–25	215	50.9
26–32	84	19.9
33 and above	42	10.0
Education		
High school	189	44.8
University	233	55.2
Sports discipline		
Individual sport	184	43.6
Team sport	176	41.7
Both	62	14.7
Sports license		
Yes	207	49.1
No	215	50.9
TOTAL	**422**	**100.0**

2.5. Findings

Table 2 shows the results of an independent samples *t*-test conducted to determine if there are significant differences in the scores of subscales of the scales between genders. The Sport Motivation Scale consists of six subscales: amotivation, identified regulation, external regulation, integrated regulation, introjected regulation, and intrinsic motivation. The Psychological Need States in Sport Scale also has six subscales: autonomy satisfaction, autonomy frustration, competence satisfaction, competence frustration, relatedness satisfaction, and relatedness frustration. The Spiritual Index of Well-Being Scale consists of two subscales: self-efficacy and life scheme. According to the analysis, significant gender differences were found in the amotivation subscale of the Sport Motivation Scale and the autonomy satisfaction subscale of the Psychological Need States in Sport Scale. Amotivation in sports is the decrease in the intrinsic state that drives and sustains individuals to engage in sports and strive to achieve their goals. It is when an athlete perceives the sport as a burden and a restriction rather than a source of enjoyment. Specifically, women were found to be more amotivated than men (1.936 ± 0.84, $p < 0.04$). Additionally, men had higher autonomy satisfaction compared with women (3.113 ± 1.28; $p < 0.27$). No significant gender differences were found in the other subscales.

Table 2. *T*-test results of scores on Sport Motivation Scale, Psychological Need States in Sport Scale, and Spiritual Index of Well-Being Scale subscales in terms of participants' gender.

Subscales	Gender	N	Mean ± SD	t	*p*
Amotivation	Female	176	1.936 ± 0.84	−2.91	**0.004 ***
	Male	246	2.219 ± 1.07		
Identified regulation	Female	176	3.386 ± 1.05	−1.09	0.275
	Male	246	3.497 ± 1.00		
External regulation	Female	176	3.386 ± 1.05	−1.09	0.275
	Male	246	3.497 ± 1.00		
Integrated regulation	Female	176	4.048 ± 0.75	1.18	0.238 *
	Male	246	3.956 ± 0.80		
Introjected regulation	Female	176	4.085 ± 0.85	−0.352	0.725
	Male	246	3.956 ± 0.80		

Table 2. *Cont.*

Subscales	Gender	N	Mean ± SD	t	*p*
Intrinsic motivation	Female	176	4.055 ± 0.89	0.050	0.960
	Male	246	4.050 ± 0.96		
Autonomy satisfaction	Female	176	2.840 ± 1.17	−2.21	**0.027 ***
	Male	246	3.113 ± 1.28		
Autonomy frustration	Female	176	2.095 ± 1.03	−1.17	0.242
	Male	246	2.215 ± 1.03		
Competence satisfaction	Female	176	3.537 ± 0.88	−1.75	0.079 *
	Male	246	3.696 ± 0.93		
Competence frustration	Female	176	2.693 ± 1.03	0.473	0.637 *
	Male	246	2.642 ± 0.97		
Relatedness satisfaction	Female	176	3.102 ± 0.94	−1.79	0.073
	Male	246	3.272 ± 0.97		
Relatedness frustration	Female	176	2.659 ± 1.04	−0.119	0.906
	Male	246	2.672 ± 1.09		
Self-efficacy	Female	176	3.576 ± 0.75	0.285	0.776 *
	Male	246	3.355 ± 0.80		
Life scheme	Female	176	3.762 ± 0.93	0.028	0.978
	Male	246	3.759 ± 0.96		

* $p < 0.05$ indicates a statistically significant difference.

Table 3 presents the ANOVA results of the scores obtained from the subscales of the Sport Motivation Scale, Psychological Need States in Sport Scale, and Spirituality Index of Well-Being Scale according to the age variable of the participants. The Sport Motivation Scale consists of six subscales: amotivation, identified regulation, external regulation, integrated regulation, introjected regulation, and intrinsic motivation. The Psychological Need States in Sport Scale consists of six subscales: autonomy satisfaction, autonomy frustration, competence satisfaction, competence frustration, relatedness satisfaction, and relatedness frustration. The Spirituality Index of Well-Being Scale consists of two subscales: self-efficacy and life scheme.

Table 3. ANOVA results for scores on the Sport Motivation Scale, Psychological Need States in Sport Scale, and Spiritual Index of Well-Being Scale subscales based on participants' age variable.

Subscales	Age	N	Mean ± SD	F	*p*	Difference
Amotivation	14–18 (a)	81	**2.16 ± 0.989**	5.052	**0.002 ***	a > d b > d c > d
	19–25 (b)	215	**2.20 ± 1.07**			
	26–32 (c)	84	**2.02 ± 0.823**			
	33 and above (d)	42	**1.58 ± 0.697**			
Identified regulation	14–18 (a)	81	3.58 ± 0.890	1.532	0.206	-
	19–25 (b)	215	3.46 ± 1.06			
	26–32 (c)	84	3.41 ± 1.04			
	33 and above (d)	42	3.17 ± 0.972			
External regulation	14–18 (a)	81	3.58 ± 0.890	1.532	0.206	-
	19–25 (b)	215	3.46 ± 1.06			
	26–32 (c)	84	3.41 ± 1.04			
	33 and above (d)	42	3.17 ± 0.972			

Table 3. *Cont.*

Subscales	Age	N	Mean ± SD	F	*p*	Difference
Integrated regulation	14–18 (a)	81	3.94 ± 0.777	0.355	0.786	-
	19–25 (b)	215	3.98 ± 0.803			
	26–32 (c)	84	4.00 ± 0.772			
	33 and above (d)	42	4.10 ± 0.777			
Introjected regulation	14–18 (a)	81	3.95 ± 0.812	2.459	0.062	-
	19–25 (b)	215	4.12 ± 0.935			
	26–32 (c)	84	4.04 ± 0.940			
	33 and above (d)	42	4.41 ± 0.835			
Intrinsic motivation	14–18 (a)	81	3.94 ± 0.928	0.486	0.692	-
	19–25 (b)	215	4.08 ± 0.910			
	26–32 (c)	84	4.04 ± 0.946			
	33 and above (d)	42	4.11 ± 1.05			
Autonomy satisfaction	14–18 (a)	81	**3.62 ± 1.09**	9.161	**0.000 ***	a > d
	19–25 (b)	215	2.89 ± 1.13			
	26–32 (c)	84	2.77 ± 1.27			
	33 and above (d)	42	**2.78 ± 1.63**			
Autonomy frustration	14–18 (a)	81	**2.18 ± 0.910**	4.935	**0.002 ***	a > d b > d c > d
	19–25 (b)	215	**2.28 ± 1.06**			
	26–32 (c)	84	**2.10 ± 1.15**			
	33 and above (d)	42	**1.62 ± 0.721**			
Competence satisfaction	14–18 (a)	81	**3.95 ± 0.987**	4.935	**0.002 ***	a > b, c
	19–25 (b)	215	**3.50 ± 0.918**			
	26–32 (c)	84	**3.59 ± 0.811**			
	33 and above (d)	42	3.70 ± 0.805			
Competence frustration	14–18 (a)	81	**2.04 ± 1.04**	15.519	**0.000 ***	b > a, d
	19–25 (b)	215	**2.89 ± 1.08**			
	26–32 (c)	84	2.85 ± 0.961			
	33 and above (d)	42	**2.32 ± 0.978**			
Relatedness satisfaction	14–18 (a)	81	**3.41 ± 1.04**	4.974	**0.002 ***	a > c b > c d > c
	19–25 (b)	215	**3.22 ± 0.890**			
	26–32 (c)	84	**2.87 ± 0.951**			
	33 and above (d)	42	**3.30 ± 1.05**			
Relatedness frustration	14–18 (a)	81	**2.01 ± 1.06**	15.792	**0.000 ***	b > a, d c > a d > a
	19–25 (b)	215	**2.92 ± 1.02**			
	26–32 (c)	84	**2.70 ± 0.959**			
	33 and above (d)	42	**2.52 ± 1.07**			
Self-efficacy	14–18 (a)	81	**3.72 ± 0.864**	6.828	**0.000 ***	a > b d > b, c
	19–25 (b)	215	**3.43 ± 0.774**			
	26–32 (c)	84	**3.55 ± 0.681**			
	33 and above (d)	42	**3.94 ± 0.697**			

Table 3. *Cont.*

Subscales	Age	N	Mean ± SD	F	*p*	Difference
Life scheme	14–18 (a)	81	**3.73 ± 1.10**	7.406	**0.000 ***	d > a, b, c
	19–25 (b)	215	**3.61 ± 0.964**			
	26–32 (c)	84	**3.85 ± 0.784**			
	33 and above (d)	42	**4.34 ± 0.599**			

* $p < 0.05$ indicates a statistically significant difference.

Table 3 shows the one-way ANOVA results to determine whether there is a significant difference in the mean scores of the subscales according to the age variable. There is a relationship between age and amotivation, that is, seeing sports as a burden and restriction rather than a pleasure. Amotivation is less common in adult participants. Similarly, a positive relationship is seen between the spirituality index of well-being and age. The spiritual well-being of adult participants is higher. There is a relationship between all subscales of psychological needs in sports and age. However, here, the sense of inhibition and adequacy related to age varies according to the participant's status as an adolescent, young adult, or adult. It is seen that the developmental period in which the athlete is determined to be is decisive in determining his/her psychological needs.

According to the ANOVA results, there were statistically significant differences in the group means for the subscales of amotivation, autonomy satisfaction, autonomy frustration, competence satisfaction, competence frustration, relatedness satisfaction, relatedness frustration, self-efficacy, and life schema (F = 5.052, $p = 0.002 < 0.05$; F = 9.161, $p = 0.000 < 0.05$; F = 4.935, $p = 0.002 < 0.05$; F = 4.935, $p = 0.002 < 0.05$; F = 15.519, $p = 0.000 < 0.05$; F = 6.828, $p = 0.000 < 0.05$; F = 7.406, $p = 0.000 < 0.05$).

Post hoc LSD analysis, which was carried out in order to find the source of the difference, revealed that the amotivation levels of participants aged 14–18, 19–25, and 26–32 (2.16 ± 0.989; 2.20 ± 1.07; 2.02 ± 0.823, respectively) were significantly higher than those aged 33 and above (1.58 ± 0.697). Participants aged 14–18 (3.62 ± 1.09) had significantly higher autonomy satisfaction levels than those aged 33 and above (2.78 ± 1.63). Participants aged 14–18, 19–25, and 26–32 (2.18 ± 0.910; 2.28 ± 1.06; 2.10 ± 1.15, respectively) had significantly higher autonomy frustration levels than those aged 33 and above (1.62 ± 0.721). Participants aged 14–18 (3.95 ± 0.987) had significantly higher competence satisfaction levels than those aged 19–25 and 26–32 (3.50 ± 0.918 and 3.59 ± 0.811, respectively). Participants aged 19–25 had significantly higher competence frustration levels than those aged 14–18 and 33 and above. Participants aged 14–18, 19–25, and 33 and above (3.41 ± 1.04; 3.22 ± 0.890; 3.30 ± 1.05, respectively) had significantly higher relatedness satisfaction levels than those aged 26–32 (2.87 ± 0.951). Participants aged 19–25 (2.92 ± 1.02) had significantly higher relatedness frustration levels than those aged 14–18 and 33 and above (2.01 ± 1.06 and 2.52 ± 1.07, respectively), and participants aged 26–32 and 33 and above (2.70 ± 0.959 and 2.52 ± 1.07, respectively) had significantly higher relatedness frustration levels than those aged 14–18 (2.01 ± 1.06). Participants aged 14–18 (3.72 ± 0.864) had significantly higher self-efficacy levels than those aged 19–25 (3.43 ± 0.774), and participants aged 33 and above (3.94 ± 0.697) had significantly higher self-efficacy levels than those aged 19–25 and 26–32. Participants aged 33 and above had significantly higher life scheme levels than those aged 14–18, 19–25, and 26–32 (3.73 ± 1.10; 3.61 ± 0.964; 3.85 ± 0.784, respectively).

Table 4 shows the results of the *t*-test, which was carried out to determine whether the mean scores obtained from the subscales of the Sport Motivation Scale (6 subscales), Psychological Need States in Sport Scale (6 subscales), and Spiritual Index of Well-Being Scale (2 subscales) significantly differ according to the education variable. In this respect, the differences in the group means for the subscales of autonomy satisfaction, competence satisfaction, competence frustration, relatedness satisfaction, and relatedness frustration

were found to be statistically significant (t = 6.309 $p = 0.00 < 0.05$; t = 4.364 $p = 0.00 < 0.05$; t = −5.819 $p = 0.00 < 0.05$; t = 5.757 $p = 0.00 < 0.05$; t = −5.602, respectively). According to this, high school graduates have higher scores in autonomy satisfaction (3.40 ± 1.17), competence satisfaction (3.84 ± 0.985), and relatedness satisfaction (3.49 ± 0.983) compared with university graduates (2.66 ± 1.21; 3.45 ± 0.815; 2.96 ± 0.882). On the other hand, university graduates have significantly higher scores in competence frustration (2.93 ± 0.929; 2.33 ± 1.19) and relatedness frustration (2.92 ± 0.908; 2.35 ± 1.17).

Table 4. *T*-test results for scores on the subscales of the Sport Motivation Scale, Psychological Need States in Sport Scale, and Spiritual Index of Well-Being Scale subscales based on participants' education variable.

Subscales	Education Level	N	Mean ± SD	t	*p*
Amotivation	High school	189	2.20 ± 1.05	1.884	0.060
	University	233	2.01 ± 0.939		
Identified regulation	High school	189	3.50 ± 0.949	0.983	0.326
	University	233	3.40 ± 1.08		
External regulation	High school	189	3.50 ± 0.949	0.983	0.326
	University	233	3.40 ± 1.08		
Integrated regulation	High school	189	3.96 ± 0.775	−0.620	0.536
	University	233	4.01 ± 0.799		
Introjected regulation	High school	189	4.03 ± 0.905	−1.330	0.184
	University	233	4.15 ± 0.910		
Intrinsic motivation	High school	189	4.00 ± 0.964	−0.991	0.322
	University	233	4.09 ± 0.909		
Autonomy satisfaction	High school	189	3.40 ± 1.17	6.309	**0.000 ***
	University	233	2.66 ± 1.21		
Autonomy frustration	High school	189	2.21 ± 0.989	0.897	0.370
	University	233	2.12 ± 1.07		
Competence satisfaction	High school	189	3.84 ± 0.985	4.364	**0.000 ***
	University	233	3.45 ± 0.815		
Competence frustration	High school	189	2.33 ± 1.19	−5.819	**0.000 ***
	University	233	2.93 ± 0.929		
Relatedness satisfaction	High school	189	3.49 ± 0.983	5.757	**0.000 ***
	University	233	2.96 ± 0.882		
Relatedness frustration	High school	189	2.35 ± 1.17	−5.602	**0.000 ***
	University	233	2.92 ± 0.908		
Self-efficacy	High school	189	3.59 ± 0.865	0.691	0.490
	University	233	3.54 ± 0.712		
Life scheme	High school	189	3.70 ± 1.04	−1.109	0.268
	University	233	3.80 ± 0.868		

* $p < 0.05$ indicates a statistically significant difference.

In Table 5, the *t*-test results are demonstrated to determine whether there is a significant difference in the mean scores of the subscales of the Sport Motivation Scale (6 subscales), Psychological Need States in Sport Scale (6 subscales), and Spiritual Index of Well-Being Scale (2 subscales) based on the variable of being a licensed athlete. A licensed athlete is an athlete who has the appropriate certificate of eligibility and authorization to play and take part in a game. In this context, the differences in the group means for the subscales of identified regulation, external regulation, integrated regulation, intrinsic motivation, competence frustration, relatedness satisfaction, and relatedness frustration were found to be statistically significant (t = 3.409, $p = 0.01 < 0.05$; t = 3.409, $p = 0.01 < 0.05$; t = 3.166,

$p = 0.02 < 0.05$; t = 2.792, $p = 0.005 < 0.05$; t = −2.62, $p = 0.009 < 0.05$; t = 2.565, $p = 0.011 < 0.05$; t = −3.85, $p = 0.000 < 0.05$, respectively). According to the results, licensed athletes scored significantly higher than non-licensed athletes in the subscales of identified regulation (3.62 ± 0.948; 3.28 ± 1.06), external regulation (3.62 ± 0.948; 3.28 ± 1.06), integrated regulation (4.11 ± 0.703; 3.87 ± 0.846), intrinsic motivation (4.18 ± 0.812; 3.92 ± 1.02), and relatedness satisfaction (3.32 ± 1.01; 3.08 ± 0.902). On the other hand, non-licensed athletes scored significantly higher than licensed athletes in the subscales of competence frustration (2.80 ± 1.01; 2.52 ± 1.15) and relatedness frustration (2.86 ± 0.979; 2.46 ± 1.13). These data show us that being licensed, that is, having the eligibility and authorization certificate given to athletes to play in a game and take part in it, increases their motivation. It also ensures that their psychological needs are more satisfied, and they feel less inhibited.

Table 5. *T*-test results for scores on the Subscales of the Sport Motivation Scale, Psychological Need States in Sport Scale, and Spiritual Index of Well-Being Scale subscales based on the license variable of the participants.

Subscales	License	N	Mean ± SD	t	*p*
Amotivation	Yes	176	2.17 ± 1.07	1.472	0.142
	No	246	2.03 ± 0.908		
Identified regulation	Yes	176	3.62 ± 0.948	3.409	**0.001 ***
	No	246	3.28 ± 1.06		
External regulation	Yes	176	3.62 ± 0.948	3.409	**0.001 ***
	No	246	3.28 ± 1.06		
Integrated regulation	Yes	176	4.11 ± 0.703	3.166	**0.002 ***
	No	246	3.87 ± 0.846		
Introjected regulation	Yes	176	4.14 ± 0.864	0.968	0.334
	No	246	4.06 ± 0.950		
Intrinsic motivation	Yes	176	4.18 ± 0.812	2.792	**0.005**
	No	246	3.92 ± 1.02		
Autonomy satisfaction	Yes	176	3.10 ± 1.26	1.647	0.100
	No	246	2.90 ± 1.22		
Autonomy frustration	Yes	176	2.10 ± 0.974	−1.22	0.222
	No	246	2.22 ± 1.09		
Competence satisfaction	Yes	176	3.68 ± 0.991	1.261	0.208
	No	246	3.57 ± 0.832		
Competence frustration	Yes	176	2.52 ± 1.15	−2.62	**0.009 ***
	No	246	2.80 ± 1.01		
Relatedness satisfaction	Yes	176	3.32 ± 1.01	2.565	**0.011**
	No	246	3.08 ± 0.902		
Relatedness frustration	Yes	176	2.46 ± 1.13	−3.85	**0.000**
	No	246	2.86 ± 0.979		
Self-efficacy	Yes	176	3.62 ± 0.799	1.696	0.091 *
	No	246	3.50 ± 0.766		
Life scheme	Yes	176	3.81 ± 0.956	1.116	0.265
	No	246	3.71 ± 0.945		

* $p < 0.05$ indicates a statistically significant difference.

Table 6 presents the correlation analysis of the subscale scores of the Sport Motivation Scale (6 subscales), Psychological Need States in Sport Scale (6 subscales), and Spiritual Index of Well-Being Scale (2 subscales). The significant relationships ($p \leq 0.05$) between variables are as follows: Amotivation is positively correlated with identified regulation (r: 0.548), external regulation (r: 0.548), integrated regulation (r: 0.255), autonomy (r: 0.276), competence frustration (r: 0.159), relatedness frustration (r: 0.179), and autonomy satisfaction (r: 0.130), while it is negatively correlated with introjected regulation (r: −0.321), intrinsic motivation (r: −0.262), competence satisfaction (r: −0.128), self-efficacy (r: −0.344), and life scheme (r: −0.370). Identified regulation and external regulation are positively correlated with each other (r: 1.00), integrated regulation (r: 0.566; r: 0.263), introjected regulation (r: 0.460), intrinsic motivation (r: 0.544), and competence satisfaction (r: 0.163). Integrated regulation is positively correlated with introjected regulation (r: 0.763), intrinsic motivation (r: 0.695), competence satisfaction (r: 0.247), relatedness satisfaction (r: 0.150), and life scheme (r: 0.149) but negatively with autonomy frustration (r: −0.219). Introjected regulation is positively correlated with intrinsic motivation (r: 0.734), competence satisfaction (r: 0.245), competence frustration (r: 0.063), relatedness satisfaction (r: 0.149), and life scheme (r: 0.132), while it is negatively correlated with autonomy frustration (r: −0.263). Intrinsic motivation shows positive correlations with competence satisfaction (r: 0.228), relatedness satisfaction (r: 0.146), and life scheme (r: 0.134) but a negative correlation with autonomy frustration (r: −0.224). Autonomy satisfaction is positively correlated with autonomy frustration (r: 0.246), competence satisfaction (r: 0.598), relatedness satisfaction (r: 0.592), and self-efficacy (r: 0.131), while it negatively correlates with competence frustration (r: −0.407) and relatedness frustration (r: −0.388). Autonomy frustration has positive correlations with competence frustration (r: 0.233), relatedness satisfaction (r: 0.120), and relatedness frustration (r: 0.212) but is negatively correlated with self-efficacy (r: −0.300) and life scheme (r: −0.369). Competence satisfaction is positively correlated with relatedness satisfaction (r: 0.556) and self-efficacy (r: 0.146) and negatively correlated with competence frustration (r: −0.374) and relatedness frustration (r: −0.315). Competence frustration is positively correlated with relatedness frustration (r: 0.715) and negatively correlated with relatedness satisfaction (r: −0.186), self-efficacy (r: −0.343), and life scheme (r: −0.241). Relatedness satisfaction is correlated positively with self-efficacy (r: 0.124) but negatively with relatedness frustration (r: −0.252). Relatedness frustration is negatively correlated with self-efficacy (r: −0.427) and life scheme (r: −0.251). Finally, self-efficacy is positively correlated with life scheme (r: 0.854). The correlation table shows that being spiritually well makes athletes feel competent and increases their motivation. It also reduces the feeling of frustration.

Table 6. Correlation analysis of the subscales of Sport Motivation Scale, Psychological Need States in Sport Scale, and Spiritual Index of Well-Being Scale.

		MTV	IR	ER	IR	IR	IM	AS	AF	CS	CF	RS	RF	SE	LS
Amotivation	**r**	1													
	p														
	n	422													
Identified Regulation	**r**	0.548 **	1												
	p	0.022													
	n	422	422												
External Regulation	**r**	0.548 **	1	1											
	p	0.022	0												
	n	422	422	422											
Integrated Regulation	**r**	255 **	0.566 **	0.263 **	1										
	p	0	0	0											
	n	422	422	422	422										
Introjected Regulation	**r**	−0.321 **	0.460 **	460 **	763 **	1									
	p	0	0	0	0										
	n	422	422	422	422	422									
Intrinsic Motivation	**r**	−0.262 **	0.544 **	544 **	695 **	0.734 **	1								
	p	0	0	0	0	0									
	n	422	422	422	422	422	422								
Autonomy Satisfaction	**r**	0.130 **	−0.011	−0.011	−0.014	−0.067	−0.013 **	1							
	p	0.008	0.827	0.827	**0**	0.169	0.789								
	n	422	422	422	422	422	422	422							
Autonomy Frustration	**r**	376 **	−0.066	−0.066	−0.219 **	−0.263 **	−0.224 **	0.246 **	1						
	p	0	0.174	0.174	0	0	0	0							
	n	462	422	422	422	422	422	422	422						
Competence Satisfaction	**r**	−128 **	0.163 **	163 **	0.247 **	0.245 **	0.228 **	0.598 **	0.079	1					
	p	9	0.001	0.001	0	0	0	0	0.107						
	n	422	422	422	422	422	422	422	422	422					
Competence Frustration	**r**	0.179 **	0.06	0.06	0.009	0.063 **	0.37	−0.407 **	0.233 **	−0.374 **	1				
	p	0	0.222	0.222	0.859	0.199	0.443	0	0	0					
	n	422	422	422	422	422	422	422	422	422	422				
Relatedness Satisfaction	**r**	−13	0.086	0.086	0.150 **	0.149 **	0.146 **	0.592 **	0.120 **	0.556 **	−0.186 **	1			
	p	783	0.079	0.079	0.002	0.002	0.003	0	0.013	0	0				
	n	422	422	422	422	422	422	422	422	422	422	422			
Relatedness Frustration	**r**	0.159 **	0.079	0.079	0.037	0.130 **	0.082	−0.388 **	0.212 **	−0.315 **	0.715 **	−0.252 **	1		
	p	0	0.103	0.103	0.445	0.007	0.092	0	0	0	0	0			
	n	422	422	422	422	422	422	422	422	422	422	422	422		
Self-Efficacy	**r**	−0.344 **	−0.084	−0.084	0.054	0.023	0.017	0.131 **	−0.300 **	0.146 **	−0.343 **	0.124 **	−0.427 **	1	
	p	0	0.083	0.083	0.269	0.63	0.72	0.007	0	0.003	0	0.011	0		
	n	422	422	422	422	422	422	422	422	422	422	422	422	422	
Life Scheme	**r**	−0.370 **	0.033	0.033	0.149 **	0.132 **	0.134 **	−0.041	−0.369 **	0.041	−0.241	0.062	−0.251 **	0.859 **	1
	p	0	0.504	0.504	0.022	0.006	0	0.404	0	0.397	0	0.201	0	0	
	n	422	42	422	422	422	422	422	422	422	422	422	422	422	422

** shows the strength of the relationship between two variables.

In Table 7, the effects of the study's independent and mediator variables on the dependent variable are presented. The data are evaluated based on the total scores of the scales. Accordingly, three different sub-models were created in line with the model. In Model 1, the effect of athletes' psychological needs on the spirituality index of well-being was found to be significantly negative (β = −213, p = 0.000). In Model 2, the effect of athletes' psychological needs on sport motivation was significantly positive (β = 0.163, p = 0.000). In Model 3, the effect of athletes' psychological needs on the two mediator variables was calculated. Accordingly, it was observed that the spirituality index of well-being acted as a mediator variable on athletes' psychological needs and had a significantly negative effect (β = −201, p = 0.005). Therefore, as the spirituality index of well-being increases, the psychological needs in sports decrease.

Table 7. Regression analysis results.

Variable	Model 1 Spiritual Index of Well-Being Scale			Model 2 Sport Motivation			Model 3 Sport Motivation		
	B	SE	P	B	SE	P	B	SE	P
Constant	98.834	3.399	0.000	69.821	4.530	0.000	85.552	5.792	0.000
Psychological Need States in Sport	−0.213	0.931	0.000	0.163	0.051	0.002	0.143	0.051	0.005
Spiritual Index of Well-Being				−0.201	−4.232	0.005			
T	20.050	10.024	14.168						
P	<0.000			<0.002			<0.000		
R2	0.213			0.153			0.252		

3. Discussion

The aim of this study is to determine the relationship between the psychological needs in sports, sport motivation, and the spirituality index of well-being among athletes attending gyms, as well as to identify the mediating role of the spirituality index of well-being on the psychological needs and sport motivation. The study included data from 422 athletes, consisting of 176 women and 246 men, who have been attending gyms and working with a trainer in Antalya, Türkiye, for at least 1 year.

Meeting the basic psychological needs of athletes positively affects their motivation and well-being (Ryan and Deci 2000). Relationships with significant individuals such as coaches, parents, and peers particularly influence athletes' motivation (Chu and Zhang 2019). According to the theory of basic psychological needs, individuals have three fundamental psychological needs: autonomy, competence, and relatedness (Deci and Ryan 2000; Ng et al. 2011). The study found that spiritual well-being is associated with athletes feeling more competent and less frustrated. Therefore, athletes with higher spiritual well-being better meet their psychological needs. Meeting these psychological needs, in turn, enhances their motivation in sports. This finding is considered to make a significant contribution to the field of sports spirituality, which is extremely limited in Türkiye.

The study found that, in terms of gender differences, men exhibit higher levels of amotivation compared with women. Additionally, in the area of psychological needs, men have higher autonomy satisfaction than women. The gender differences may be related to gender roles. The reason for men being more amotivated than women could be related to their greater opportunities to participate in all types of sports activities, which leads to them experiencing a lower sense of deprivation and having higher expectations. Additionally, men's higher autonomy satisfaction could be related to the gender role of women, which is considered more dependent rather than autonomous. No significant gender difference was found in the spirituality variable, which is also consistent with the literature (Eryücel 2017, 2018). The independence of spiritual well-being from gender roles is viewed positively.

In the study, it was found that age is a significant variable in the basic psychological needs, motivation, and spiritual well-being of athletes. Since the study group included adolescents, young adults, and adults, differences were observed among the participants due to age, biological factors, and life experiences. Nourishing an individual physically, mentally, socially, emotionally, and spiritually in accordance with their developmental stage ensures a balanced and harmonious transition to the next stage of development. In the study, while amotivation was higher in the adult group, autonomy frustration was more prevalent among adolescents and young adults. The life scheme scores were higher in the adult group compared with adolescents and young adults. In this context, it may be beneficial to raise awareness and provide training in gyms about motivation, basic psychological needs, and spiritual well-being according to the developmental stages of athletes.

Regarding the education variable, while there was no significant difference in the motivation and spirituality index of well-being scores, significant differences were found in the subscales of the Psychological Need States in Sport Scale. It was found that those with a university level of education had significantly higher scores in relatedness frustration and competence frustration compared with those with a high school level of education. This data sample would suggest that higher education does not meet the psycho-logical needs of individuals. Such findings are occasionally encountered in research. Although it is considered that this may be due to the fact that university education raises expectations among individuals, it is also considered beneficial to structure higher education institutions in a way that supports individuals' psychological needs (Goldman et al. 2017). This is because psychological needs are an important part of health and well-being.

In the study, significant differences were found between licensed and non-licensed athletes. Licensed athletes had significantly higher average scores in the subscales of the motivation scale, such as identified regulation, external regulation, integrated regulation, and intrinsic motivation, as well as in relatedness satisfaction, compared with non-licensed athletes. On the other hand, non-licensed athletes had significantly higher average scores in competence frustration and relatedness frustration. It can be said that being a licensed athlete increases motivation in sports. Additionally, non-licensed athletes seem to feel more frustration. Considering the psychological needs of non-licensed athletes could be beneficial for coaches and managers. No relationship was found between the spirituality index of well-being and being a licensed athlete, which is consistent with the literature (Zorba et al. 2022; Aelterman et al. 2012). The spirituality index of well-being has two subscales: self-efficacy and life scheme. Therefore, individuals with high spiritual well-being are expected to respect effort and expertise. However, their self-efficacy and life scheme are expected to extend beyond their certificates of expertise.

In the study, it was found that the subscales of the spirituality index of well-being, such as self-efficacy and life scheme, are significantly related to many sub-dimensions of the sport motivation and psychological need states scale. According to the correlation table, the self-efficacy subscale is related to all subscales of psychological needs in sports. Self-efficacy is positively related to autonomy satisfaction, competence satisfaction, and relatedness satisfaction and negatively related to autonomy frustration, competence frustration, and relatedness frustration. These findings indicate a strong correlation between psychological needs in sports and the spirituality index of well-being. The literature emphasizes the vital contributions of internalized religious beliefs in reducing existential uncertainties, developing a sense of control, and enhancing coping skills and resources for managing anxiety (Hayward and Krause 2014). Similar findings are also evident in studies specifically conducted on athletes (Storch and Storch 2002; Fischer 1997; Storch et al. 2004; Jackson and Wood 2018; Najah et al. 2018). Therefore, integrating spirituality into coaching and healthcare for teams and athletes is considered beneficial. Another finding from the correlation table is that self-efficacy, a subscale of the spirituality index of well-being, is negatively related to amotivation in sports. This finding is consistent with the literature. The life scheme, another sub-dimension of the spirituality index of well-being, is positively

related to the subscales of sport motivation, such as intrinsic motivation, integrated regulation, and introjected regulation and negatively related to amotivation. Regular exercise requires serious motivation. The life scheme is also negatively related to the subscales of psychological needs in sports, such as autonomy frustration, competence frustration, and relatedness frustration. Sport motivation directly affects athletes' enthusiasm for training and competitions and their performance (Zhang 2015). Whether athletes perceive sports as a pleasure or a burden results in completely different outcomes for their performance. Viewing sports as a pleasure increases their efforts, while seeing it as a burden increases burnout. Consequently, athletes either continue the sport or quit (Zhang 2015). Therefore, a decrease in sport motivation is considered an early sign of athlete burnout (Demir 2022). It is recommended to integrate spirituality into sports training and organizations.

In the regression analysis conducted on the mediating role of the spirituality index of well-being, it was found to be a partial mediator between psychological needs in sports and sport motivation. Accordingly, part of the sports motivation of athletes comes from their psychological needs, and part comes from their spiritual well-being. All these empirical data highlight the importance of sports spirituality as an integral aspect of coaching and healthcare for teams and athletes (Jules et al. 2018; Rooney et al. 2021). Although studies on sports spirituality are rapidly developing in the international literature, this research is a pioneer in Türkiye. In light of all these findings and literature data, it is considered beneficial to integrate spirituality into sports organizations.

4. Conclusions

In conclusion, there is a significant positive relationship between athletes' motivation in sports and the spirituality index of well-being. Among athletes' psychological needs, spirituality has a positive relationship with the competence subscale and a negative relationship with the frustration subscale. It is recommended to integrate spirituality into sports facilities with a holistic approach. Spirituality plays a mediating role between athletes' psychological needs and motivation. Psychological needs and motivation in sports vary by gender, which might be related to gender roles. Preventive measures against gender inequality are suggested. Athletes' motivation, psychological needs, and spiritual well-being differ according to their ages. It may be beneficial for gym managers and coaches to prepare holistic training programs sensitive to athletes' developmental stages and psychological needs. Educational level differentiates only in terms of psychological needs. Interestingly, high school graduate athletes experience more satisfaction and less frustration compared with university graduates. It is recommended to structure university education to meet individuals' psychological needs. No relationship was found between educational level and motivation or spiritual well-being. Including spiritual counseling in education may be beneficial.

Licensed athletes have been found to have higher motivation and fewer psychological needs. Institutionalization in sports organizations appears to be beneficial. Finally, although studies on sports spirituality are rapidly developing in the United Kingdom and the United States, this research is pioneering in Türkiye. Studies on sports spirituality with amateur, professional, and elite athletes in various sports disciplines in Türkiye could be beneficial. In light of all these findings and literature data, integrating spirituality into sports organizations is considered to be advantageous.

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