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RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

The Relationship between Blood Donation Attitudes and Spiritual Well-Being among Adults: A Case Study of Türkiye

Yetişkinlerde Kan Bağışı Tutumları ile Spiritüel İyi Oluş Arasındaki İlişki: Türkiye Örneği

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Abstract:

Raising global awareness of blood donation is of utmost importance. Consequently, it is crucial to identify factors that undermine people's perceptions of blood donation and devise appropriate remedies. This study was conducted to determine the relationship between attitudes of adults living in Türkiye toward blood donation and their levels of spiritual well-being. This descriptive correlational study was conducted from June to September 2022 with 475 participants aged 18 years and older residing in Türkiye. Research data were obtained using the researchers' Individual Characteristics Questionnaire, the Blood Donation Attitude Scale, and the Spiritual Well-Being Scale. The mean age of the participants was 32.64 ± 9.69 years, and 70.1% were women. It was found that 57.7% of participants had never donated blood, 65.9% had not received training on blood donation, 49.1% had received training from healthcare personnel, and 55.8% stated that the training they received was insufficient. A significant but weak positive correlation was found between Blood Donation Attitude Scale total score and Spiritual Well-Being Scale; Transcendence, Harmony with Nature, and the Anomie subscales ($p<0.01$; $p<0.01$; $p<0.05$; $r=0.096$, respectively). There was a positive correlation between Blood Donation Attitude Scale Societal and Social Responsibility subscale score and Spiritual Well-Being Scale Transcendence and Harmony with Nature subscales, and a weak negative correlation between Anomie subscale scores ($p<0.01$, $r=0.122$; $p<0.01$, $r=0.296$; $p<0.05$, $r=-0.112$, respectively). It was found that as the spiritual well-being of adult individuals improved, their attitudes toward blood donation also increased. In conclusion, findings highlight the critical role of nurses in promoting blood donation through effective educational and awareness initiatives.

Keywords: Blood donation, Blood donors, Spiritual well-being, Attitude.

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Öz:

Kan bağışı konusunda küresel farkındalığın artırılması son derece önemlidir. Bu nedenle, bireylerin kan bağışı algılarını olumsuz yönde etkileyen unsurların belirlenmesi ve uygun çözüm yollarının geliştirilmesi büyük önem taşımaktadır. Bu çalışma, Türkiye'de yaşayan yetişkinlerin kan bağışı tutumları ile spiritüel iyi oluş düzeyleri arasındaki ilişkiyi belirlemek amacıyla yapılmıştır. Tanımlayıcı ve ilişkisel türdeki bu araştırma, haziran–eylül 2022 tarihleri arasında Türkiye'de yaşayan 18 yaş ve üzeri 475 katılımcı ile gerçekleştirilmiştir. Araştırma verileri, araştırmacılar tarafından geliştirilen Bireysel Özellikler Formu, Kan Bağışı Tutum Ölçeği ve Spiritüel İyi Oluş Ölçeği kullanılarak toplanmıştır. Katılımcıların yaş ortalaması 32,64 ± 9,69 yıl olup, %70,1'i kadındır. Katılımcıların %57,7'sinin daha önce hiç kan bağışında bulunmadığı, %65,9'unun kan bağışı konusunda herhangi bir eğitim almadığı, %49,1'inin eğitimi sağlık personelinden aldığı ve %55,8'inin aldığı eğitimin yetersiz olduğunu düşündüğü belirlenmiştir. Kan Bağışı Tutum Ölçeği toplam puanı ile Spiritüel İyi Oluş Ölçeği'nin Transandans, Doğa ile Uyum ve Anomi alt boyutları arasında anlamlı ancak zayıf pozitif korelasyon bulunmuştur (sırasıyla $p<0.01$; $p<0.01$; $p<0.05$; $r=0.096$). Ayrıca, Kan Bağışı Tutum Ölçeği'nin Toplumsal ve Sosyal Sorumluluk alt boyutu ile Spiritüel İyi Oluş Ölçeği'nin Transandans ve Doğa ile Uyum alt boyutları arasında pozitif; Anomi alt boyutu ile ise zayıf negatif korelasyon bulunmuştur (sırasıyla $p<0.01$, $r=0.122$; $p<0.01$, $r=0.296$; $p<0.05$, $r=-0.112$). Yetişkin bireylerin spiritüel iyi oluş düzeyleri arttıkça, kan bağışı tutumlarının da olumlu yönde geliştiği saptanmıştır. Sonuç olarak, bulgularımız hemşirelerin etkili eğitim ve farkındalık çalışmaları aracılığıyla kan bağışını teşvik etmedeki kritik rolünü ortaya koymaktadır.

Anahtar Kelimeler: Kan bağışı, Kan bağışçıları, Spiritüel iyi oluş, Tutum.

Introduction

Blood donation is the only source of blood components that cannot be artificially replaced. Despite medical and technological advances, no substitutes for blood have been identified, making blood donation essential for transfusions(Getie, Wondmieneh, et al., 2024; Mohammed et al., 2022). Blood donation is a universal need. Increasing life expectancy, chronic diseases, medical advances, clinical practices, and emergencies highlight the importance of meeting the growing global demand for blood (Casal-Otero et al., 2020). The literature shows that many individuals are reluctant to donate, often unaware of the life-saving importance of blood donation or fearful of health risks. Many donate only if a family member requires blood. Contributing factors include sociological and demographic status, cultural differences, economic level, misinformation, superstitions, prejudices, and spiritual beliefs (Getie, Wondmieneh, et al., 2024; Ogundeji et al., 2021).

Spirituality is an individual's effort to understand and accept life, relationships, their place in the universe, and experiences (Jaysawal & Saha, 2023). Beyond religion, it helps define life's purpose and find meaning. Well-being, a core concept in positive psychology, includes happiness, subjective, objective, and psychological well-being, and quality of life (Jaysawal & Saha, 2023; Klimasiński, 2021). Spiritual well-being refers to the perceived quality of life, connecting personal, social, environmental, and transcendental spaces. It reflects an individual's holistic experience across these four domains of existence (H. Ekşi & Kardaş, 2017; Fisher, 1993). Another factor that affects individuals' spiritual well-being is religious coping attitudes. Studies have found that religious coping can change the relationship between stress and psychological well-being, and various religious coping techniques can reduce the negative relationship between stress and health outcomes (Imran & Leng, 2025). According to Pargament (1997), religion helps us to overcome stress and to cope with critical situations. Elements such as religious ideology, close connection with God, spiritual life integration, rituals, and religious or spiritual significance have been reported to reduce the harmful effects of stress on mental health. In this context, religious coping is thought to minimize the impact of distressing experiences on mental health. Religious commitment can alleviate the negative effects of stress on psychological health; people can relax and find solace through prayer (Pargament, 1997).

Increasing the number of blood donations worldwide is crucial. Therefore, identifying the factors that adversely affect individuals' attitudes towards blood donation and developing appropriate solutions are of great importance.

Spirituality has been a focus of interest in the helping professions for many years (McGinnis, 2022). Nurses play a vital role in safe and effective blood donation. They perform donor screening, education, process management, and post-donation care, assessing health, identifying suitable donors, and minimizing risks (Alshehri et al., 2024; P. Ekşi et al., 2022). Nurses also correct misinformation, reduce donor anxiety, build confidence, and quickly recognize and manage complications. Collaborating with interdisciplinary teams, they enhance efficiency, donor experience, and ensure quality and safety through continuous professional development. Although studies have explored factors influencing blood donation attitudes, the relationship between spiritual well-being and these attitudes remains unexamined (Easmin & Islam, 2024; Eltewacy et al., 2024; Getie, Amlak, et al., 2024; Getie, Wondmieneh, et al., 2024; Ma et al., 2024). This study aimed to investigate how adults' attitudes toward blood donation relate to spiritual well-being, examining whether higher spiritual well-being is associated with more positive attitudes toward blood donation and identifying factors influencing both.

Research Questions

Does adults' attitude toward blood donation increase as their level of spiritual well-being increases?

What factors affect adults' spiritual well-being and blood donation attitudes?

Method

Research Design
It is a descriptive correlational study.

Population and Sample
The research was conducted from September to December 2022 among individuals aged 18 years and older who actively used social media (e.g., Instagram, Facebook, Twitter) and resided in Türkiye. The researchers collected data using a questionnaire created in Google Forms, which they distributed via snowball sampling. The study was completed by 475 participants who agreed to participate and completed the questionnaire.

Data Collection Tools
Data were obtained using the Individual Characteristics Questionnaire, the Blood Donation Attitude Scale, and the Spiritual Well-Being Scale.

The Individual Characteristics Questionnaire
The Individual Characteristics Questionnaire, prepared by the researchers in line with the literature, comprises 21 questions on age, gender, income level, education level, knowledge, and opinions regarding blood donation.

The Blood Donation Attitude Scale
The Blood Donation Attitude Scale (BDAS), a 5-point Likert scale developed by Çelik and Güven (2015), consists of 24 items and 3 subscales (Societal and Social Responsibility, Anxiety, Societal Perception and Conception). There are no reverse-coded items in the scale. The highest score obtained from the scale is 120, and higher scores indicate a more positive attitude towards blood donation. The Cronbach's alpha internal consistency coefficient for the overall scale was 0.84. The consistency coefficients for the scale's subscales were 0.93 for the Societal factor, 0.77 for the Anxiety factor, and 0.71 for the social perception and Conception factors (Çelik & Güven, 2015). In this study, the Cronbach's Alpha value of the scale was 0.888. The reliability of the Societal and Social Responsibility subscale of the scale was found to be 0.956, the reliability of the Anxiety subscale was found to be 0.822, and the reliability of the Societal Perception and Conception subscale was found to be 0.767.

The Spiritual Well-Being Scale
The Spiritual Well-Being Scale (SWBS), designed by Eksi and Kardas in 2017 to reflect Turkish cultural values, is a 5-point Likert scale comprising 29 items across three subscales: Transcendence, Harmony with Nature, and Anomie. The scale's scores range from 29 to 145, with higher scores signifying enhanced spiritual well-being (H. Ekşi & Kardaş, 2017). A high score in any subscale indicates that the individual embodies the characteristics measured by that subscale. The overall Cronbach's Alpha for the scale was 0.88, with the Transcendence subscale at 0.95, the Harmony with Nature subscale at 0.86, and the Anomie subscale at 0.85, as reported by H. Ekşi & Kardaş (2017). In the current study, the scale's Cronbach's Alpha was 0.924. The reliability coefficients for the Transcendence, Harmony with Nature, and Anomie subscales were 0.963, 0.899, and 0.875, respectively.

In this study, the sub-factors were evaluated separately, and the overall score was not calculated to maintain data accuracy. Otherwise, erroneous findings may be obtained, reducing measurement precision and jeopardizing the reliability of the results (Koenig & Carey, 2024).

Data Collection
The initial section of the questionnaire includes a consent form outlining the study's purpose and scope. Following this, there are questions related to Individual Characteristics, the Blood Donation Attitude Scale, and the Spiritual Well-Being Scale. Only participants who provided voluntary consent were included in the analysis. It requires approximately 5-7 minutes to answer the survey questions. The SWBS scale used in this study has been criticized for its subscales that include items directly related to mental health, which may compromise measurement purity and distort the results (Bambling, 2025; Koenig & Carey, 2024). For this reason, the subscales were evaluated independently rather than the SWBS total score.

Ethical Considerations
Approval for the research was granted by the Istanbul Gedik University Scientific Research Ethics Committee (Date: 21.09.2022 / Decision No: 384). Participants were fully informed about the study, and their consent was secured. Permission was obtained from the authors to use the Blood Donation Attitude Scale and the Spiritual Well-Being Scale.

Data Analysis
The data were processed using the Statistical Package for the Social Sciences (SPSS, version 22.0; SPSS Inc., Chicago, IL, USA). Descriptive analysis was conducted using frequencies, percentages, medians, minima, maxima, means, and standard deviations. To evaluate differences between two groups, the Mann-Whitney U test was employed. For analyzing differences among three or more groups that did not follow a normal distribution, the Kruskal-Wallis test was applied. The Mann-Whitney U test also served as a post hoc test to identify pairwise differences following the Kruskal-Wallis test. Pearson's correlation analysis was conducted to explore associations between variables. Statistical significance was determined at $p < 0.05$.

Results

Participants were aged 18–73 years (mean 32.64 ± 9.69), 70.1% male, 50.3% married, and 91.4% had nuclear families. Most (57.3%) were university graduates, 76% employed, 41.7% healthcare personnel, and 84.8% were insured under SGK (Social Security Institution). The majority lived in the Marmara Region (62.5%) and metropolitan cities (63.4%), 73.7% used Instagram, and 87.6% were religious.

Table 1. *Socio-demographic characteristics of the participants (N=475)*

Variables		**Min-Max**	***M* ±*SD***
Age		18-73	32.64 ±9.69
Variables		n	%
Gender	Female	333	70.1
	Male	142	29.9
Level of Education	High school or below	48	10.1
	University Graduate	272	57.3
	Post-graduate	155	32.6
Occupational Status	Employed	361	76.0
	Unemployed	114	24.0
Occupation	Healthcare Personnel	198	41.7
	Teacher	28	5.9
	Student	66	13.9
	Academician	51	10.7
	Other	132	27.8
The Most Frequently Used Social Media Platform	Facebook/ TikTok/LinkedIn	33	6.9
	Instagram	350	73.7
	Twitter	43	9.1
	YouTube	49	10.3
Faith in Religion	Highly religious	26	5.5
	Religious	416	87.6
	Irreligious	33	6.9

Regarding blood donation, 57.7% had never donated; 61.3% had no family members needing blood; 65.9% lacked training; 49.1% were trained by healthcare personnel; 55.8% found the information insufficient. 73.5% reported positive media influence, and 46.9% indicated that transportation conditions affected donation decisions.

Table 2. *Blood Donation characteristics of the participants (N=475)*

	Variables	**n**	**%**
Blood Donor	Yes	201	42.3
	No	274	57.7
Donate Blood Regularly	Yes	41	8.6
	No	220	46.3
	Have never donated blood	214	45.1
Have Someone in Need of Blood Donation	Yes	291	61.3
	No	184	38.7
Received Training on Blood Donation	Yes	313	65.9
	No	162	34.1
Source of Information About Blood Donation and Training	Healthcare Personnel	233	49.1
	Printed Sources (Journal, Book, Article)	75	15.8
	Television	21	4.4
	Social Media Apps (Facebook, Instagram, LinkedIn, etc.)	21	4.4
	Not informed	125	26.3
Blood Donation News in the Media Has a Positive Impact on Blood Donation Attitude	Yes	349	73.5
	No	55	11.6
	Undecided	71	14.9

Significant differences were found between participants' characteristics and BDAS scores. Non-donors had higher total and Social and Social Responsibility subscale scores. Non-donors and those who never donated scored higher on the Anxiety subscale. Regular donors scored higher on Societal Perception and Conception, while non-donors also had higher scores on this subscale. Participants with training scored higher on Social and Social Responsibility, while untrained individuals scored higher on Anxiety. Training from written sources increased Social and Social Responsibility scores. Those undecided about media effects had higher Anxiety scores, while those perceiving positive media effects had higher Social and Social Responsibility scores. Long waiting conditions raised Worry subscale scores.

Table 3. *The relationship between Blood Donation characteristics and the Blood Donation Attitude Scale scores of the participants (N=475)*

Variables		The Blood Donation Scale Total Score		Societal and Social Responsibility		Anxiety		Societal Perception and Conception	
		Min Max	*M±SD*	Min Max	*M±SD*	Min Max	*M±SD*	MinMax	*M±SD*
Blood Donor	Yes	25-113	77.05±15.21	13-59	48.24±10.66	8-40	19.58±6.79	4-20	9.22±4.20
	No	27-117	79.22±14.92	12-60	47.13±9.92	8-40	21.95±6.93	4-20	10.13±4.03
		p=.018 Z = -2.356		*p*=.012 Z =-2.499		*p*=.000 Z =-3.632		*p*=.009 Z=-2.595	
Donate Blood Regularly	Yes	30-113	78.31±15.17	13-56	49.24±10.73	8-40	18.60±7.32	4-20	10.46±4.62
	No	25-109	76.90±15.68	13-59	47.01±10.73	8-40	20.63±7.13	4-20	9.25±4.20
	Have never donated blood	30-117	79.75±14.31	12-60	47.89±9.63	8-40	21.72±6.63	4-20	10.13±3.90
		p=.064 X^2=2		*p*= .144 X^2= 2		*p*= .013 X^2=2		*p*= .023 X^2= 2	
Received Training on Blood Donation	Yes	25-113	78.32±14.24	13-58	48.72±9.65	8-40	20.00±6.63	4-20	9.59±4.03
	No	27-117	78.27±16.60	12-60	45.43±11.03	8-40	22.77±7.24	4-20	10.06±4.30
		p=.693 Z =-.395		*p*=.000 Z = -3.917		*p*=.000 Z =-3.930		*p*=.321 Z =-0.993	
Source of Information About Blood Donation and Training	Healthcare Personnel	25-113	78.00±15.19	13-58	48.66±10.20	8-40	19.61±6.54	4-20	9.73±4.22
	Printed Sources	30-97	79.10±12.09	13-57	49.38±8.55	8-36	20.56±6.83	4-17	9.16±3.56
	Television	30-107	77.85±18.77	13-59	45.14±11.45	11-33	22.33±6.95	4-19	10.38±4.17
	Social Media Apps	39-101	79.57±12.76	23-56	47.76±7.83	8-38	22.00±9.46	4-16	9.80±3.97
	Not informed	27-117	78.25±16.27	12-60	44.96±10.95	8-40	23.26±6.78	4-20	10.03±4.29
		p= .999 X^2=4		*p*=.000 X^2= 4		*p*=.000 X^2=4		*p*=.702 X^2= 4	
Blood Donation News in the Media Has a Positive Impact on Blood Donation Attitude	Yes	30-117	78.92±14.95	12-60	48.50±9.98	8-40	20.62±6.96	4-20	9.79±4.14
	No	25-104	73.27±15.27	13-56	43.94±11.72	8-33	20.45±7.13	4-16	8.87±3.75
	Undecided	30-109	79.18±14.94	13-56	46.02±9.65	10-40	22.91±6.63	4-20	10.23±4.28
		p= .005 X^2=2		*p*= .00 X^2= 2		*p*= .043 X^2=2		*p*= .207 X^2= 2	

X^2: Kruskal Wallis; Z: Mann-Whitney U

Among participants, SWBS Transcendence subscale scores were higher among those who had never donated blood than among those who had. Those who received training in blood donation had higher scores on the "Harmony with Nature" subscale of the SWBS than those who did not. On the other hand, the Anomie subscale scores on the SWBS for those who did not receive blood donation training were higher than for those who did receive it. The mean scores on the Harmony with Nature subscale of the SWBS among participants who received training on blood donation from written sources was higher than that of other groups. The Transcendence and Anomie subscale scores on the SWBS of participants who thought there was not enough information about blood donation were higher than those of the others. In addition, individuals who were undecided about whether media news positively affected their thoughts about blood donation had higher Anomie subscale scores on the SWBS.

Table 4. *The relationship between Blood Donation characteristics and the Three-Factor Spiritual Well-Being Subscale scores of the participants (N=475)*

Variables		SWBS-Transcendence		SWBS-Harmony with Nature		SWBS-Anomie	
		Min-Max	*M±SD*	Min-Max	*M±SD*	Min-Max	*M±SD*
Blood Donor	Yes	18-75	57.74±14.85	12-35	31.01±4.50	7-32	16.28±6.17
	No	15-75	60.59±13.20	7-35	31.01±4.56	7-35	16.99±6.59
		p=.041 Z =-2.047		*p*=.951 Z =-.061		*p*=.308 Z=-1.020	
Donate Blood Regularly	Yes	19-74	55.75±15.93	12-35	30.53±4.81	7-32	15.07±6.61
	No	15-75	57.70±14.66	7-35	30.58±4.98	7-33	16.60±6.23
	Have never donated blood	15-75	61.81±12.45	7-35	31.55±3.90	7-35	17.09±6.54
		p= .004 X^2= 2		*p*= .212X^2=2		*p*= .145X^2= 2	
Received Training on Blood Donation	Yes	18-75	60.53±12.87	20-35	31.58±3.74	7-33	15.86±5.99
	No	15-75	57.16±15.72	7-35	29.91±5.61	7-35	18.29±6.92
		p= .068 Z =-1.824		*p*=.004 Z =-2.858		*p*= .000 Z=-3.631	
Source of Information About Blood Donation and Training	Healthcare Personnel	21-75	60.49±12.45	12-35	31.33±4.03	7-33	15.96±6.30
	Printed Sources	18-75	60.85±14.87	21-35	32.64±2.91	7-33	15.17±5.57
	Television	34-75	59.76±11.74	21-35	29.09±5.55	7-33	18.61±5.30
	Social Media Apps	34-75	52.80±19.08	15-35	29.38±6.75	9-29	15.95±6.15
	Not informed	15-75	57.49±15.15	7-35	30.03±5.18	7-35	18.76±6.83
		p=.164 X^2= 4		*p*=.001 X^2=4		*p*=.000 X^2= 4	
Information About Blood Donation was Sufficient	Yes	21-75	60.72±12.80	12-35	30.85±4.59	7-34	15.44±6.41
	No	15-75	58.02±14.47	7-35	31.07±4.46	7-33	16.58±6.14
	Undecided	15-75	61.50±13.58	7-35	31.01±4.67	7-35	18.20±6.87
		p=.037 X^2= 2		*p*=.995 X^2=2		*p*=.006 X^2= 2	
Blood Donation News in the Media Has a Positive Impact on Blood Donation Attitude	Yes	15-75	59.99±13.59	7-35	31.29±4.32	7-34	16.45±16.17
	No	15-75	55.87±18.06	7-35	30.05±5.92	7-33	15.92±7.48
	Undecided	26-75	59.12±11.94	19-35	30.36±4.20	7-33	18.47±6.53
		p= .347X^2= 2		*p*=.059 X^2=2		*p*=.018 X^2= 2	

Note. X2: Kruskal Wallis; Z: Mann-Whitney U

A significant but weak correlation was found between (BDAS) total scores and SWBS Transcendence, Harmony with Nature, and Anomie subscales ($p<0.01$, respectively) and ($p<0.05$; $r=0.096$, respectively). There was a significant but weak positive correlation between the BDAS Anxiety subscale and the SWBS Anomie subscale ($p < 0.01$, $r = 0.132$; $p < 0.01$, $r = 0.293$, respectively).

A positive association was found between the BDAS perception/conception subscale and the SWBS transcendence and anomie subscales. Nevertheless, the strength of these associations remains weak. The p-value was below 0.01 for both associations.

Table 5. *The relationship between the Blood Donation Scale and the three-factor Spiritual Well-Being Scale scores of the participants (N=475)*

Statistics		The Blood Donation Scale Total Score	Societal and Social Responsibility	Anxiety	Societal Perception and Conception	SWBS-Transcendence	SWBS-Harmony with Nature	SWBS-Anomie
The Blood Donation Scale Total Score	*r*	1	0.799**	0.652**	0.566**	0.189**	0.162**	0.096*
Societal and Social Responsibility	*r*	0.799**	1	0.140**	0.196**	0.122**	0.296**	-0.112*
Anxiety	*r*	0.652**	0.140**	1	0.344**	0.052	-.051	0.293**
Societal Perception and Conception	*r*	0.566**	0.196**	0.344**	1	0.300**	-.058	0.133**
SWBS-Transcendence	*r*	0.189**	0.122**	0.052	0.300**	1	0.485**	0.036
SWBS-Harmony with Nature	*r*	0.162**	0.296**	-0.051	-0.058	0.485**	1	-0.041
SWBS-Anomie	*r*	0.096*	-0.112*	0.293**	0.133**	0.036	-0.041	1

** $p < .01$ * $p < .05$, r = Pearson Correlation Analysis

In the first model, demographic variables (gender, marital status, and education level) explained 2.4% of the variance in blood donation attitudes (R^2 = .024, F (3,467) = 3.857, p = .010). Marital status (β = .106, p = .023) and education level (β = .120, p = .009) were significant predictors, while gender was not significant (p > .05).

In the second model, adding spiritual well-being significantly increased the model's explanatory power (R^2 = .083, ΔR^2 = .059, F (1,466) = 29.964, p < .001). Spiritual well-being was a strong and significant predictor of blood donation attitudes (β = .246, p < .001).

Table 6. *Hierarchical regression analysis predicting blood donation attitudes*

Model	Variable	*B*	Std. Error	*β*	*t*	*p*	*R*	R^2	ΔR^2	*F* Change	Durbin-Watson	VIF Range
1	Constant	63.986	4.750	—	13.472	.000	.155	.024	—	3.857	2.098	1.01–1.03
	Gender	0.180	1.505	.006	0.119	.905	—	—	—	—	—	—
	Marital Status	3.140	1.378	.106	2.279	.023	—	—	—	—	—	—
	Education Level	2.953	1.128	.120	2.618	.009	—	—	—	—	—	—
2	Constant	39.632	6.406	—	6.187	.000	.288	.083	.059	29.964	2.098	1.02–1.05
	Gender	1.269	1.474	.039	0.861	.390	—	—	—	—	—	—
	Marital Status	2.882	1.338	.097	2.154	.032	—	—	—	—	—	—
	Education Level	3.445	1.098	.140	3.137	.002	—	—	—	—	—	—
	Spiritual Well-Being	0.203	0.037	.246	5.474	.000	—	—	—	—	—	—

Note. Dependent variable = Total score of Blood Donation Attitude Scale (BDAS).
R = multiple correlation coefficient; R^2 = explained variance; ΔR^2 = change from previous model; F Change = significance of ΔR^2; Durbin-Watson = autocorrelation test; VIF = variance inflation factor for multicollinearity (1–10 safe).

Discussion

The global demand for blood donations is steadily increasing. Despite this growing need, blood donation rates remain insufficient. It is believed that blood shortages are affected by individuals' spiritual beliefs and values.

In this context, our research sought to explore the connection between attitudes toward blood donation and spiritual well-being.

This study examined demographic and spiritual factors affecting adults' attitudes toward blood donation using hierarchical regression analysis. In the first model, demographic variables (gender, marital status, and education level) explained a small portion of the variance in blood donation attitudes, but marital status and education level were the only significant predictors. This result suggests that individuals' socio-demographic characteristics may influence blood donation attitudes, but their effects are limited.

Spiritual well-being was added to the second model, significantly increasing the model's explanatory power. Spiritual well-being was identified as a strong and significant predictor of attitudes toward blood donation. This finding suggests that individuals' awareness and values about their own lives and society support prosocial behaviors such as blood donation. Furthermore, the fact that education level remained a significant predictor underscores its role in guiding individuals toward conscious and responsible behaviors. The variance inflation factor (VIF) and Condition Index values were within acceptable limits, supporting the reliability of the results. The findings are consistent with previous studies, which have reported that spiritual awareness and educational level positively influence prosocial behaviours, such as blood donation (Almeida et al., 2013; Eltewacy et al., 2024; Ma et al., 2024).

A significant difference was found between the participants' previous blood donation status and the BDAS total and subscale scores. Participants who did not donate blood had more favorable attitudes toward blood donation. Invasive interventions and materials, such as blood bags, applied during blood donation are a source of concern for individuals, and this situation may deter blood donation. Gilchrist et al. (2019) indicated that fear of medical procedures, particularly fear of blood, plays a key role in predicting donation attitudes and intentions (Gilchrist et al., 2019). Additionally, negative beliefs about donation, such as concerns about infectious diseases, further contribute to hesitancy (Thorpe et al., 2024). These fears and misconceptions can lead to adverse reactions during the donation process, resulting in negative experiences that diminish individuals' willingness to donate in the future (Easmin & Islam, 2024; Getie, Amlak, et al., 2024). Nurses play a pivotal role in creating positive donation experiences to address these challenges. These findings, when considered within the framework of the intention-behaviour distinction, show that the positive attitudes and intentions of the participants towards blood donation do not always turn into actual behaviour. Especially fears and negative beliefs about invasive procedures stand out as factors preventing this transformation. Ajzen's (1991) Theory of Planned Behaviour also supports this situation and emphasizes that intention is a necessary but not a sufficient condition for behaviour(Ajzen, 1991). Additionally, the tendency toward social desirability may cause participants to express socially approved behaviours, such as blood donation, more positively than

they actually do(Fisher, 1993; France et al., 2013). This can be considered as one of the possible mechanisms explaining the differences between attitude scores and actual donation behaviour.

Shivamurthy et al. (2024) showed that pre-donation hydration and muscle stretching exercises reduce adverse reactions, such as dizziness and syncope, improving donor comfort and self-efficacy(Shivamurthy et al., 2024). Nurses can educate donors about hydration and guide them through simple stretching exercises before donation. Distraction techniques, including conversation, music, or virtual reality tools, have been found to reduce anxiety and pain during medical procedures (Hassan et al., 2019). Incorporating these strategies can create a calming environment and reduce procedural fears.

Media platforms are widely used to regulate social processes, ensuring individuals focus on highlighted issues and achieve attitudinal and behavioral changes (Razmetaeva, 2023). In our study, the BDAS mean total scores were higher in participants who were undecided about the media's positive effect on blood donation attitudes. Studies indicate social media is effective for spreading blood donation and organ donation requests (Harrell et al., 2022; Ramondt et al., 2022; Yegen et al., 2025). Research from Brazil, India, and the USA found posts on social media platforms encouraged people to donate blood (Harrell et al., 2022). Based on these findings, public service announcements and blood donation information should be increased in the media. Sharing content through nurses and healthcare professionals with large social media followings can significantly boost donation rates.

This is in line with the Social Cognitive Theory (Bandura, 2001) and the Theory of Planned Behaviour (Ajzen, 1991), which explain the role of social influence and norms in behaviour change. Donation behaviours made visible through social media strengthen individuals' self-efficacy perceptions and increase the likelihood of converting intentions into behaviour by reinforcing social norms. As a matter of fact, recent empirical studies show that donation messages given on social media significantly increase individuals' attitudes towards donation and their participation rates.

Spiritual well-being can be defined as a balanced state of readiness to accept spiritual development, communication with others, a meaningful and purposeful life, and belief in and faith in divine power (Jaysawal & Saha, 2023; Klimasiński, 2021). In this regard, when attitudes toward blood donation and spiritual well-being were evaluated, Spiritual Well-Being Scale scores were higher among participants who had not previously donated blood. Studies have shown that individuals with lower religious affiliation, including agnostics, tend to donate blood less frequently than their more religious counterparts (Eltewacy et al., 2024). Research has found that religious beliefs positively affect attitudes toward blood donation (Nyambiya et al., 2020; Umair et al., 2023). Nyambiya et al. suggested that some participants viewed blood donation as a means of fulfilling religious and social responsibility, and that there is a positive relationship between blood donation and spiritual well-being, which aligns with their beliefs about helping others and community support (Nyambiya et al., 2020). One possible mechanism underlying this relationship is altruism. Religious values may encourage individuals to consider the well-being of others beyond their own interests. In this context, blood donation, as an altruistic behaviour, seems to be compatible with religious teachings. In addition, the theory of planned behavior and the intention-behavior distinction theory are also noteworthy. People may adopt blood donation as a religious and morally right action, but the transformation of this intention into behaviour needs the support of personal beliefs as well as social norms and environmental conditions. Furthermore, the connection between religious values and the common good offers a crucial explanatory framework. Religious beliefs can make blood donation both an individual and a collective responsibility, encouraging individuals to prioritize not only personal spiritual fulfillment but also social benefit. When these theoretical perspectives are evaluated together, it becomes clear that the positive effect of religious beliefs on blood donation is multidimensional (Aras & Peker, 2024; Hagger et al., 2022).

A study in Türkiye on nurses' attitudes toward blood donation found that 73.6% had received training, 13.4% had donated organs, and trained nurses scored higher on the social opinion and understanding dimensions (P. Ekşi et al., 2022). This indicates that training positively influences both individual attitudes and awareness of social responsibility. Surgical nurses, who directly witness the importance of blood and blood products, can play a pioneering role (Ali et al., 2022; P. Ekşi et al., 2022). They can raise awareness by organizing training sessions for colleagues and the community, emphasizing the critical role of blood donation in emergencies and planned surgeries.

In our study, participants who felt inadequately informed had higher SWBS transcendence and anomie subscale scores, suggesting that a lack of information causes anxiety and uncertainty. Conversely, high Social and Social Responsibility scores among trained individuals show that training develops positive attitudes and awareness. Extending training to the broader society can reduce negative perceptions and increase donation rates.

Conclusion

This study examined the relationship between blood donation attitudes and spiritual well-being. Most participants had not received training on blood donation, lacked sufficient information, perceived positive media influence, and reported that the transportation conditions at donation centers affected their decisions. Non-donors showed more favorable attitudes toward blood donation and higher levels of spiritual well-being. Those willing to donate indicated that transportation conditions negatively influenced their decisions. A positive correlation was found between attitudes toward blood donation and spiritual well-being.

Based on these findings, it is recommended to organize social and individual activities to foster positive attitudes toward blood donation and promote spiritual well-being; actively use social media and public service announcements; provide regular nurse training to improve community knowledge; and include blood donation topics in health education curricula.

Nurses play a key role in informing, educating, and alleviating concerns regarding blood donation. Surgical nurses, witnessing the vital importance of blood, can lead awareness efforts. Educational programs and empathic communication by nurses can transform negative attitudes

and increase donation rates. Strengthening nurses' educational and counseling roles is essential, and future studies should examine this impact with larger samples.

This study revealed a weak positive correlation between the BDAS score and the SWBS Transcendence, Harmony with Nature, and Anomie subscale scores. As participants' spiritual well-being increased, their attitudes toward blood donation also increased. Since individuals' donation attitudes are influenced by their levels of spirituality, it is recommended that they support spiritual well-being and conduct studies to increase blood donation rates across societies.

Limitations
Because data were gathered online through a survey distributed on social networking sites, individuals without access to such sites could not be included in the research, which constitutes a limitation.

Declarations

Ethics Approval and Consent to Participate
This study was conducted in accordance with the journal's writing guidelines, publication principles, and ethical standards for research and publishing. The authors bear full responsibility for any potential violations related to the article. Approval for the research was granted by the Istanbul Gedik University Scientific Research Ethics Committee (Date: 21.09.2022 / Decision No: 384).

Consent for Publication
Not applicable

Availability of Data and Materials
The datasets analyzed during the current study are available from the corresponding author upon reasonable request.

Competing Interests
The authors declare no conflicts of interest.

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Authors' Contributions
The study was planned by NC and EBK. The analysis and interpretation of the data were conducted by SD and NC. SD, EBK, KDB, and NC contributed to the writing of the manuscript, data collection, and critical review processes. All authors have read and approved the final version of the manuscript.

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