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Research Article

Personal Assets and Gratification Delay among Youths: Eudaemonic Well-being as a Potential Mediator

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Abstract

This study investigated the relationship between personal developmental assets, eudemonic well-being, and gratification delay among youths. The participants of the study were 614 students selected from secondary schools. Specifically, this study examined the model's fit to the data, the direct effect of personal assets on eudaemonic well-being and gratification delay; the contribution of eudaemonic well-being to gratification delay, and the indirect effect of personal assets on gratification delay. Data were collected using selected factors and items from the gratification delay, Ryff psychological well-being, and developmental asset profile scales. Data were analysed with confirmatory factor analysis and structural equation modelling. The result revealed that the model fits the data well. The personal asset has a considerable direct effect on both eudemonic well-being and the ability to delay gratification. In addition, eudaemonic well-being has a significant effect on the ability to delay gratification. Furthermore, eudemonic well-being partially mediates the relationship between personal assets and the ability to delay gratification. Personal asset has a direct and indirect significant effect on the ability to delay gratification. It is concluded that intervention that improves the personal assets and eudaemonic well-being of youths contributes to enhance the ability to delay gratification.

Keywords:
Personal developmental asset • Gratification delay • Eudaemonic Well-being • Youth • Positive Development

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Introduction

The conception of positive youth development, well-being and gratification delay of adolescents has been the focus of attention among researchers for the last three decades (Burns et al., 2020; Dawd, 2017; Fehlbaum, 2020; Kumar & Pareek, 2018). Adolescence is a very important and influential age which is characterized by the development of values, social affiliations, interests and perseverance for long-term goals (Carvalho & Veiga, 2020; Russo-Netzer & Shoshani, 2020). One of the challenges that the growing individuals experience during this period is a lack of controlling impulses, deprived self-regulation and delayed gratification(Herndon et al., 2015; Krueger et al., 1996).

Gratification Delay

Success in the academic arena and demonstrating other thriving behaviours demands dedication to a long-term goal. Literature suggests that successful individuals are competent enough to regulate their emotions and delay gratification (Flook et al., 2015; Kim et al., 2020). Gratification delay is considered as the ability to sacrifice immediate rewards and sustain goal-oriented behaviour for the sake of long-term better rewards (Dawd, 2017; Doebel et al., 2020; Oriol et al., 2017). The term, gratification delay has been interchangeably used with self-regulation, impulse control, self-control, reduction in substance use and violent behaviour (Cheng & Catling, 2015; Hoerger et al., 2011; Michaelson et al., 2013). A study conducted by Dawd (2017) disclosed that the ability to delay gratification is a predictor of important life outcomes, including academic achievement, good health, and success. On the other hand, deficits in gratification delay are associated with a broad range of public health problems, such as risky sexual behaviour, bullying, and substance misuse (Herndon et al., 2015). Furthermore, studies documented that the ability to delay gratification and sustain goal-oriented behaviour is determined by the personal and ecological developmental asset profiles of children and youths(Scales et al., 2000, 2006, 2011).

Developmental Asset Profile

Developmental assets are considered, as building blocks which are related to lowered risk behaviour patterns and increased patterns of thriving behaviour among youths. They refer to the positive values, relationships, skills, and experiences that help youths thrive. Studies publicized that developmental assets can be internal/ personal and external or ecological. (Lerner et al., 2011; Benson et al., 2011).

The personal/internal asset on which this paper is focused denotes the intrapersonal skills, competencies, and self-perceptions of youths. It includes commitment to learning, positive value, positive identity, and social competence. Commitment to

learning denotes the appreciation of the importance of continuous learning and their belief in their capabilities, including achievement motivation, school engagement, bonding to school and reading for pleasure (Scales, 1999; Scales et al., 2006, 2011). Positive value is about possessing guiding principles which help youths make healthy life decisions, including caring, equality, integrity, honesty, and responsibility. Social competence denotes the skills that young people need to establish effective interpersonal relationships and adapt to novel or challenging situations, including planning and decision-making, interpersonal competence, cultural competence, resistance skills and peaceful conflict resolution (Benson et al., 2011; Scales, 1999; Scales et al., 2006, 2011). Positive identity is about a sense of control and purpose and recognition of own strengths and potential, including personal power, self-esteem, a sense of purpose and a positive view of the personal future (Scales, 1999; Scales et al., 2006, 2011).

The developmental asset profile-based model assumes that the greater the amount of positive experience the youths have, the greater the likelihood of controlling their emotion, self-regulation and delaying gratification (Leffert et al., 1998; Scales, 1999; Scales et al., 2006). Similarly, an experimental study conducted by Funder & Block (1989) documented that participants who exhibited the ability to delay gratification tended to be responsible, productive, ethically consistent, interested in intellectual matters, and overly controlled. However, those who are not able to delay gratification tend to be rebellious, unpredictable, self-indulgent, or hostile. Literature suggests that the ability to delay gratification is associated with the nature and extent of well-being youths exhibit (Guerra-Bustamante et al., 2019; Poon et al., 2021)clarity, and repair.

Eudaemonic Well-being

Eudaemonic well-being is conceived as the personal experiences associated with living a life of virtue in pursuit of human excellence. Correspondingly, eudaemonic well-being signifies the issues of meaning-making and being functional. In addition, unlike the hedonic orientation which involves seeking happiness, life satisfaction, positive affect, and reduced negative affect; the eudaemonia orientation embraces seeking authenticity, meaning, excellence, and personal growth (Huppert et al., 2013; Kesebir, 2018). In this paper, eudaemonic orientation is framed considering the psychological well-being model. Accordingly, three adapted constructs namely, environmental mastery (the ability to choose and create fitting environments for growth by utilizing one's ability to control both internal and external factors); purpose in life (overall meaningful direction for life); and self-acceptance (knowing, liking, and thus ultimately accepting, oneself) were considered (Van et al., 2008; Gao & McLellan, 2018; Thin, 2016)previous studies reported inconsistent findings of the reliability and validity of Ryff's Scales of Psychological Well-being (SPWB.

Studies documented that eudaemonic well-being is one of the factors that determine the ability of youths to delay gratification(Guerra-Bustamante et al., 2019; Kumar & Pareek, 2018). This implies that eudaemonic well-being might mediate the relationships between personal asset profile and the ability to delay gratification.

Personal Assets, Gratification Delay and Eudemonic Well-being

A series of studies revealed that the ability to delay gratification depends on the exposure of youths to the developmental asset profile. For example, a study conducted by Twito et al. (2019) indicated that adequate exposure to personal asset profile including possessing commitment to learning, positive identity and positive value is related positively to self-regulation and achievement which is a manifestation of gratification delay. Similarly, studies further demonstrated that promoting mastery of social and emotional core competencies plays a paramount role in positive youth development and preventing adolescents' engagement in risky behaviour (Valois, 2014). On the other hand, studies have shown that low self-control and poor gratification delay are risk factors for aggression and delinquency(Cheng & Catling, 2015; Erikson & Roberts, 1971). Likewise, youths who can delay immediate gratification were presented as ego-controlled, ego-resilient, conscientious, open to experience, and agreeable which signifies the characteristics of eudemonic well-being (Krueger et al., 1996).

Studies also publicised that gratification delay is associated with well-being. For example, a study conducted by Poon et al(2021)life flourishing, and lack of depressive symptoms. We collected four waves of data from 111 Hong Kong youths (75.7% male, mean age = 17.7 showed that delayed gratification was associated with well-being indicators. Similarly, Soares et al(2019) suggested that the cumulative effects of the total personal as well as each personal asset independently are positively correlated with eudaemonic well-being. As explicitly mentioned elsewhere, eudaemonic well-being is associated with both exposure to personal assets and the ability to delay gratification. Furthermore, since individuals with better well-being can manage themselves, well-being might mediate the relationships between personal assets and gratification delay (Dejenie et al., 2023).

Context of the Present Study

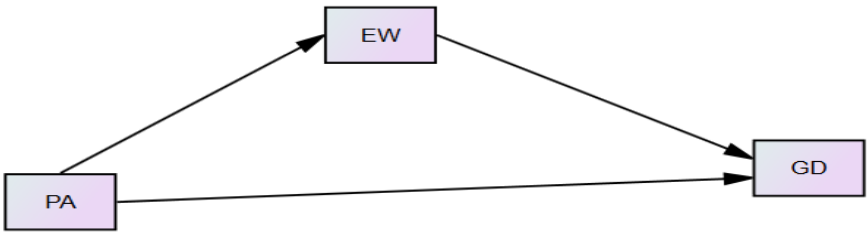
Regardless of the above evidence, scant empirical studies existed on the strength-based perspective of youth development in Africa. In addition, given that exposure to developmental asset profile, the manifestation of well-being and the ability to delay gratification of youths might be culture bounded. Thus, research findings based on the Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies might not be applicable in the African context (Dejenie et al., 2023, 2024).

In Ethiopia, given the existing inter-group conflict, war, poverty, unemployment and underemployment, youths might have been deprived of exposure to a personal asset profile. A study conducted by Oshri et al.(2019) suggested that exposure to socioeconomic hardship is associated with greater delayed reward discounting, a form of impulsive decision-making that reflects a reduced capacity to delay gratification and a significant correlation between various risky behaviours. Contradicting the above finding, another study revealed that engaging in risky behaviour provides experience that leads to greater patience for long-term rewards (Romer et al., 2010) such as sensation seeking, that increase during adolescence. Using a discounting of delayed reward paradigm, this research examines the ability to delay gratification as a potential source of control over risk-taking tendencies that increase during adolescence. In addition, it explores the role of experience resulting from risk taking as well as future time perspective as contributors to the development of this ability. In a nationally representative sample (n=900. In addition, studies also publicised that individuals who have been in harsh environments develop 'hidden talents' which enhance their social and cognitive abilities for solving problems (Ellis et al., 2022; Frankenhuis et al., 2020). The above contradictory findings implied that inconsistent presumptions exist on the relationships among experience with asset profiles, well-being, and gratification delay.

Despite the existence of the above-mentioned theoretical and empirical evidence in the area, little empirical study has been conducted in Africa. As far as the researchers' knowledge, a scant empirical study has been documented regarding the relationships between personal developmental assets, gratification delay, and eudaemonic well-being. Therefore, recognizing how personal asset construct is interrelated with the ability to delay gratification and eudaemonic well-being might be compulsory for designing interventions targeting youths.

Hence, based on the discussions made so far about Personal Assets (PA), Eudemonic Well-being (EW), and Gratification Delay (GD) as well as the relationships among these latent variables, we synthesized a new model which is indicated in Figure 1. The proposed model considers PA as an independent variable that affects both GD and EW. EW is presented as a mediator variable in the relationship between PA and GD. GD is considered as a dependent variable which is affected by PA directly and indirectly.

Figure 1:
Proposed Model



The variables indicated in the above model are latent or synthetic constructs in nature and thus require applying rigorous statistical models like structural equation modelling (SEM). Furthermore, while reviewing the existing literature, we have identified a lack of empirical evidence, scant literature in the African context and methodological gaps in the area. In addition, a study indicating how personal developmental assets are associated with the capability of delaying gratification and eudaemonic well-being is lacking. Hence, this study was conducted to examine how personal developmental assets, gratification delay and eudaemonic well-being constructs are intertwined.

This study was therefore intended to address the following hypothesis:

H1. Personal assets are positively and significantly correlated with eudaemonic well-being.

H2. Personal assets are positively and not significantly correlated with gratification delay.

H3. Eudaemonic well-being is positively and significantly correlated with gratification delay.

H4. Eudaemonic well-being fully mediates the relationship between personal assets and gratification delay.

Methods

Participants

In this study, grade ten, eleven, and twelve students of Bahir Dar City (urban) and nearby schools located in the rural setting have participated. In Bahir Dar City, participants were drawn both from private and public schools, while the participants from the rural settings were solely from public schools. 682 participants were selected from 12 schools, four from each group. In selecting the target participants from each group, school, grade level and section multistage sampling technique was used.

Measures

The construct gratification delay was measured using a scale validated by Espada et al (2019)psychological well-being, and social relationships. Although individual differences in delay of gratification begin to emerge in adolescence, few studies have tried to evaluate this construct in adolescents, especially in Spanish. The goal of this study was to validate the Delaying Gratification Inventory and to analyse its psychometric properties in Spanish adolescents. Method: Using a sample of 695 adolescents (M =

15.18, SD = 1.22 in a Spanish context and piloted in the context of the current study. The original scale consists of 35 items with five factors (food, physical, social, money and achievement) (Dawd, 2017; Hoerger et al., 2011)such as obesity, risky sexual behavior, and substance abuse. However, 6 decades of research on the construct has progressed less quickly than might be hoped, largely because of measurement issues. Although past research has implicated 5 domains of delay behavior, involving food, physical pleasures, social interactions, money, and achievement, no published measure to date has tapped all 5 components of the content domain. Existing measures have been criticized for limitations related to efficiency, reliability, and construct validity. Using an innovative Internet-mediated approach to survey construction, we developed the 35-item 5-factor Delaying Gratification Inventory (DGI. However, considering the socio-cultural differences of the study area relative to the country context on which the original instrument was validated, adapting this tool was required. Therefore, using pilot data collected from 258 participants, 35 items of the gratification delay scale were subjected to principal components analysis (PCA). Before performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser Meyer-Olkin value was .72, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Mclean & Ernest, 1998).

Principal components analysis revealed the presence of four components with eigenvalues exceeding 1, explaining 23.5%, 15.87%, 11.86% and 8.6% of the variances respectively. An inspection of the scree plot revealed a clear break after the third component, and thus it was decided to retain three components for further investigation. The three-component solution explained a total of 58.36% of the variance. Accordingly, only nine items with a commonality coefficient of .45 or above and showing strong loadings (.5 or above) and loading substantially on only one component were considered. Correspondingly, two of the factors were also discarded and thus only three factors were considered.

For measuring youths' experience of personal developmental assets, a Developmental Assets Profile (DAP) scale developed by Search Institute in 2005 (Scales et al., 2011) and piloted in the current study context was used. The original scale consists of 32 items with four factors namely, positive value, positive identity, commitment to learning, and social competence. Considering the contextual differences of the current study area, adapting this instrument was required. Thus, using pilot data collected from 258 participants, the 32 items were subjected to principal component analysis (PCA). Before performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser Meyer-Olkin value

was .88, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Mclean & Ernest, 1998). Principal component analysis revealed the presence of six components with eigenvalues exceeding 1. An inspection of the scree plot revealed a clear break after the third component, and thus it was decided to retain three components for further investigation. The three-component solution explained a total of 54.6% of the variance. Accordingly, only three of the personal developmental asset factors, namely positive identity, commitment to learning and social competence were considered. However, only seven items with a commonality coefficient of .45 or above and showing strong loadings (.5 or above) and loading substantially on only one component were selected.

Concerning the eudaemonic well-being construct, contextualized items from Ryff's(1995) psychological well-being scale with six factors were used (Ryff et al., 1995). The original six-factor scale namely, Autonomy, Personal growth, Environmental mastery, Purpose in life, Positive relationship with others and self-acceptance were subjected to principal components analysis (PCA). Before performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of coefficients of .3 and above. The Kaiser Meyer-Olkin value was .73, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix (Mclean & Ernest, 1998). Hence, only ten items with a three-component solution (environmental mastery, purpose in life and self-acceptance) that explained a total of 50% of the variance and with a commonality coefficient of .45 or above and showing strong loadings (.5 or above) and loading substantially on only one component were considered.

Data Analysis

AMOS 28 was used for computing the confirmatory factor analysis (measurement model) and structural equation modelling (SEM). SEM is a well-known statistical technique that has become an indispensable tool for academics and practitioners. Literature unfolded that SEM is a statistical technique which is particularly well appropriate for assessing the relationships among observed and latent variables and is primarily applicable for model and theory testing as well as scale development(Mcquitty & Wolf, 2015; Ockey & Choi, 2015). Given that this study intends to examine the relationships of the structural and measurement models between and within developmental assets, eudaemonic well-being and gratification delay, the researchers used SEM for analysing the data.

Though data were collected from 682 participants, 57 questionnaires were incomplete and thus discarded. The remaining 625 questionnaires were encoded;

however, while checking for the univariate and multivariate assumptions 11 cases were found to be multivariate outliers and thus deleted. Hence, the analysis was done based on the data collected only from 614 secondary school students. In addition, based on a preliminary analysis of the final data, items which indicated low loading with the corresponding factor were discarded. Furthermore, after checking the convergent and discriminant validity of the final data using the average variance extracted technique one factor from the gratification delay was discarded(Alarcón et al., 2015). Therefore, the analysis was done based on two factors for the gratification delay and three factors for the eudaemonic well-being and personal assets.

Table 1.
Demographic Information of the Participants (N=614)

Characteristics		Frequency	Percentage
Gender	Male	317	51.6
	Female	297	48.4
Grade Level	Grade Ten	204	33.2
	Grade Eleven	203	33.1
	Grade Twelve	207	33.7
Resident	Rural	210	34.2
	Urban (Bahir Dar City)	404	65.8
School type	Private	208	33.9
	Public rural	209	34.0
	Public urban	197	32.1

Age: Mean= 17.95; Minimum=15; Maximum=25

As shown in Table 1, majority of the participants (51.6%) are males. In terms of grade level, the participants are approximately equal. However, concerning resident 65.8% are from urban schools (both private and public schools).

Results

Measurement Model

As part of evaluating the measurement model, the convergent and discriminant validity was checked. Regarding the convergent validity, the standardized loadings were significant, and most loadings were above 0.71, which indicates that the latent variables explain more than 50% of the variance for most indicators. This revealed reasonable convergent evidence. Concerning the discriminant evidence, the cross-loadings between indicators and other latent variables were examined. It is demonstrated that indicators load considerably higher on the latent variables they measure than on other latent variables. From the results of Modification Indices, no Modification Indices for cross-loading are significant which indicates good discriminant evidence(Alarcón et al., 2015; Wang et al., 2015; Reichardt & Coleman, 2010).

CFA was carried out with respective dimensions of GD, PA, and EW to assess the parameter estimates and the overall fit of the measurement model to the data. In this

study, the commonly used fit indexes, namely chi-square (CMIN/DF), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), standardized root mean squared residual (SRMR), and root mean square error of approximation (RMSEA) were used to assess the degree to which the measurement model fits the data.

Table 2:
AMOS outputs on the fitness indices of the measurement model against the criteria

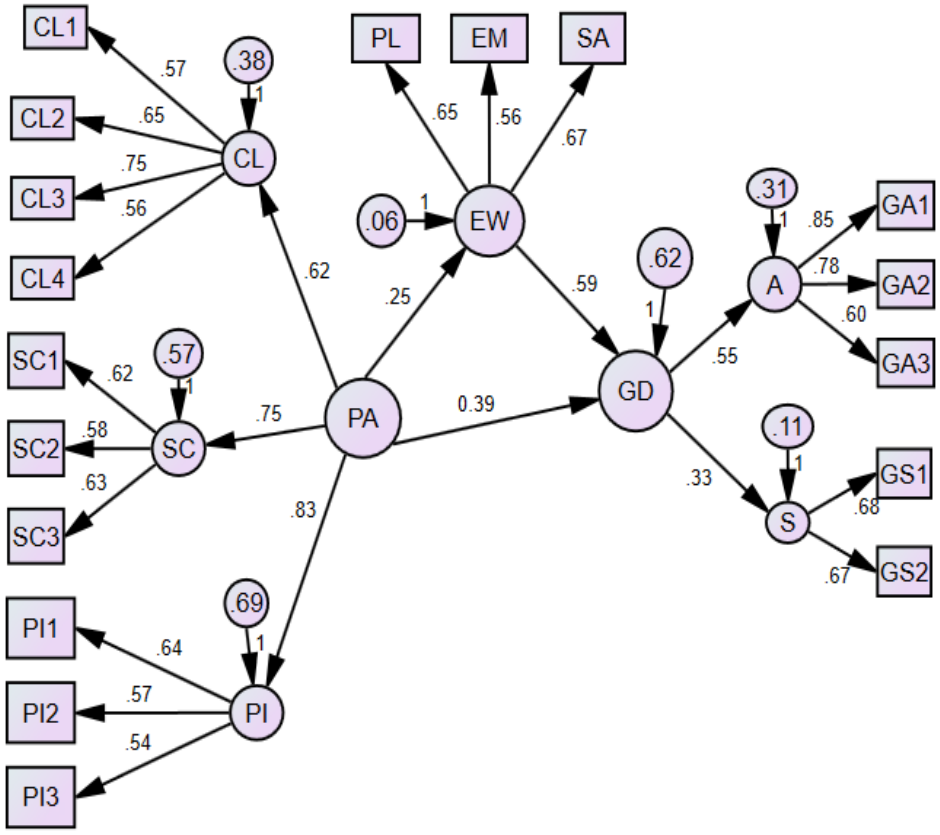
Criteria	PA	EW	GD	Cutoff
Relative chi-square (CMIN/DF)	2.51	2.21	1.92	<5
Goodness of fit index (GFI)	.98	.98	.99	>.90
Adjusted goodness of fit index (AGFI)	.97	.96	.98	>.90
Comparative fit index (CFI)	.98	.98	.99	>.90
Standardized root mean squared residual (SRMR)	.05	.06	.06	<.08
Root mean square error of approximation (RMSEA)	.04	.04	.03	<.06

As it has been indicated in Table 2, the measurement model satisfied all the fit indices. To all the latent constructs (PA, EW, and GD), the chi-square test (CMIN/DF) is below 5; GFI, AGFI and CFI are all above .9. In addition, the SRMR and the RMSEA are lower than the cutoff (.08) and (.06) respectively, for all factors (Hooper et al., 2008; Hu & Bentler, 1999; Mcquitty & Wolf, 2015). This implies that the model fits the data well.

Structural Equation Modelling (SEM)

In the full structural equation model presented below, gratification delay with two factors and personal asset with three factors were treated as endogenous and exogenous constructs respectively, whereas eudemonic well-being with three factors was treated as a mediator.

Figure 2:
Structural and Measurement Model



Note: PA (Personal Asset); EW, (Eudaemonic well-being); GD (Gratification delay); A (Achievement); S (Social); PL, (Purpose in life); EM (Environmental Mastery); SA (Self-acceptance); PI (positive identity); SC (Social competence); Cl (Commitment to learning).

Table 3.
AMOS outputs on the fitness indices of the Structural Equation Modelling (SEM) against the criteria

Criteria	Obtained Value	Cutoff
Relative chi-square (CMIN/DF)	3.14	<5
Goodness of fit index (GFI)	.94	>.90
Adjusted goodness of fit index (AGFI)	.92	>.90
Comparative fit index (CFI)	.92	>.90
Standardized root mean squared residual (SRMR)	.07	<.08
Root mean square error of approximation (RMSEA)	.043	<.05

As presented in Table 3, the SEM output satisfied all the fit indices. The chi-square test (CMIN/DF) is below 5; GFI, AGFI and CFI are all above .9. In addition, the SRMR and the RMSEA are also lower than the cutoff (.08) and (.06) respectively, for all factors (Hooper et al., 2008; Hu & Bentler, 1999; Mcquitty & Wolf, 2015) This implies that the full model fits the data well.

Table 4:
Unstandardized and standardized regression weights of the measurement model

Parameters/dimensions			Unstandardized				Standardized
Estimate S.E.			C.R.	P	Estimate		
Social	<---	GD	1.000				.33
Achievement	<---	GD	.478	.128	3.74	***	.56
Social Competence (SC)	<---	PA	1.000				.83
Positive Identity (PI)	<---	PA	.834	.118	7.06	***	.75
Commitment to learning (CL)	<---	PA	.934	.128	7.29	***	.62
Environmental Mastery (PL)	<---	EW	1.000				.65
Self-acceptance (SA)	<---	EW	.711	.073	9.74	***	.56
Purpose in life (PL)	<---	EW	.884	.087	10.20	***	.67

Note: *P<.05; **P<.01; ***P< .001; FO (first order)

As shown in Table 4, the regression weights of all the dimensions of GD, PA, and EW are significant with the critical ratio test greater than ±1.96, at p< .05. Similarly, the standardized regression weights of all dimensions in the measurement model were significantly represented by their respective latent variables. Specifically, the standardized regression weights of the second-order latent factors in the measurement model range from .33 (social dimension of the GD Construct) to .83 (Positive identity, in the PA construct). This implies that the measurement model explained the respective second-order constructs ranging from 33% to 83%. This, in turn, reveals that the first-order factors were significantly represented by their respective latent variables at p<.05. Furthermore, the standardized regression weights of the EW dimensions were significantly represented by their respective latent variables with standardized regression estimates ranging from .56 (self-acceptance to .67(purpose in life).

Relationships among DG, PA, and EW Constructs

Table 5:
Correlation coefficients of GD, PA, and EW

Latent variables			Unstandardized				Standardized
Estimate S.E.			C.R.	P	Estimate		
PA	-->	EW	.46	.09	5.16	***	.25
PA	-->	GD	.52	.06	8.67	***	.39
EW	-->	GD	.34	.07	4.85	***	.59

Note: *P<.05; **P<.01; ***P< .001

In the hypothesized model in Figure 2, the circles represent latent variables, and the rectangles represent measured variables. The absence of a line connecting variables implies a lack of a hypothesized direct effect. The hypothesized model examined the predictors of the ability to delay gratification. Gratification delay was a second-order latent construct with 2-factor indicators (achievement and social). It was hypothesized that exposure to personal assets, a latent variable with 3 latent factor indicators (social competence, positive identity, and commitment to learning) directly predicted

the ability of gratification delay. Additionally, it was hypothesized that exposure to personal assets directly predicts eudemonic well-being and eudemonic well-being with 3 observed variable indicators (environmental mastery, self-acceptance, and purpose in life) also directly predicts the ability to delay gratification. Furthermore, eudemonic well-being was examined as a mediator factor between personal assets and gratification delay.

As shown in Table 5, at 0.05 level of significance, a positive and statistically significant relationship is indicated among GD, PA, and EW constructs with standard regression weights ranging from .25 to .59. Specifically, PA had positive standardized regression weight with GD (β = .39) and EW (β= .25). Similarly, EW is positively and significantly correlated with GD (β=.59). The above finding implies that the three latent constructs in the structural model are significantly interrelated.

Based on the structural model in Figure 2, we examined the direct, indirect, and total effects of the independent (PA) and mediator (EW) factors on the dependent variable (GD) using bootstrapping. Accordingly, as shown in Table 5, the paths pointing from PA to EW (β =.25, $p<.01$) and GD (β =.39, $p<.01$) have positive standardized regression coefficients indicating that PA significantly predicted both EW and GD. Unlike our hypothesis for a non-significant contribution of PA to GD, the standardized regression coefficients also indicated that PA had a more direct effect on GD than EW. In addition, despite its significance, the square multiple correlation was .06 for the EW construct, indicating that PA explains only 6% of the variance in EW.

The path that links EW and GD with a standardized coefficient (β =.59, $p<.01$) indicates that GD was significantly predicted by EW. The squared multiple correlation for GD construct also revealed that 62% of the variance in GD was predicted by the joint effects of PA and EW, whereas the rest 38% of the variation in GD was attributed to the residual that couldn't be explained by the model. Correspondingly, PA had an indirect significant effect on GD through the mediation of EW with a standardized regression coefficient (β = .15, $p<.01$). Furthermore, the total effect of the model is (β= .54, $p<.01$). In general, findings show that PA has a significant direct, indirect, and total effect on the ability to delay gratification. However, contrasting our hypothesis of a full mediation, the relationship between exposure to PA and the ability to GD is partially mediated by the EW which implies that H4 is not supported.

Discussion

The structural model depicted that the ability to delay gratification is meaningfully explained by the joint effect of personal assets and eudaemonic well-being. This finding is consistent with our hypothesis and is supported by evidence. For example, previous studies have shown that the ability to delay gratification and sustain goal-

oriented behaviour is determined by the personal and ecological developmental asset profiles of youths (Scales et al., 2006, 2000, 2011). Similarly, it is supported by studies which indicate that the greater the amount of positive experience the youths have, the greater the likelihood of controlling their emotion, self-regulation and delaying gratification (Leffert et al., 1998; Scales, 1999; Scales et al., 2006).

The current finding is also supported by a study conducted by Krueger et al.(1996) which unfolded that youths who can delay gratification are ego-controlled, ego-resilient, conscientious, open to experience, and agreeable. Likewise, this finding is consistent with studies which demonstrated that low self-control and deprived gratification delay are risk factors for aggression and delinquency(Cheng & Catling, 2015; Erikson & Roberts, 1971). Furthermore, the current finding is consistent with what Funder and Block (1989) enlightened which stated that youths who exhibited the ability of gratification delay tended to be accountable, ethically consistent, productive, and overly controlled; however, those who are unable to delay gratification exhibits disobedient and self-indulgent. This implies that fruitful development is linked to the experience with assets, and the more personal assets the youth reveal the better gratification delay capability they would exhibit.

The correlation between eudaemonic well-being and gratification delay was also significant as presented elsewhere. This finding is also supported by evidence. For instance, a study conducted by Poon et al.(2021)life flourishing, and lack of depressive symptoms. We collected four waves of data from 111 Hong Kong youths (75.7% male, mean age = 17.7 showed that delayed gratification was associated with well-being indicators. Correspondingly, Soares et al.(2019) suggested that the cumulative effects of the total personal as well as each personal asset independently are positively correlated with eudaemonic well-being. Moreover, this finding is consistent with a study conducted by Oshri et al.(2019) which suggested that exposure to socioeconomic hardship is associated with greater delayed reward disregarding, which is a form of thoughtless decision-making that reflects a reduced capacity to delay gratification and a significant correlate of various risk behaviours.

However, the current finding's relationship with studies which suggested that passing through challenging environments improves tolerance and in turn, the ability to delay gratification is not clearly shown in this study. For example, it does not clearly show how it is linked with a study which revealed that engaging in risky behaviour provides an experience that leads to greater patience for long-term rewards(Romer et al., 2010)such as sensation seeking, that increase during adolescence. Using a discounting of delayed reward paradigm, this research examines the ability to delay gratification as a potential source of control over risk-taking tendencies that increase during adolescence. In addition, it explores the role of experience resulting from risk

taking as well as future time perspective as contributors to the development of this ability. In a nationally representative sample (n=900. Furthermore, given the design of the current study, this finding's relationship with studies which has shown that individuals who have been in harsh environments develop 'hidden talents' is not explicitly supported (Ellis et al., 2022; Frankenhuis et al., 2020).

Concerning the mediation, the structural equation modelling output revealed that personal asset is considerably linked with both eudaemonic well-being (the mediator) and gratification delay (the dependent variable). In addition, eudaemonic well-being is also substantially connected with gratification delay. This implies that there is a partial mediation because there is a significant relationship between the independent and dependent variables controlling the mediator too. This essentially contrasts with our hypothesis for a full mediation. However, this finding is supported by empirical evidence. For instance, Bembenutty (2022) showed that experience with developmental assets is related to the ability to delay gratification and other thriving behaviours. This finding is also consistent with a study which indicated that gratification delay is positively and strongly correlated with sustaining motivation and academic success (Benson et al., 2011).

Given the direct, indirect, and total substantial effect results of the structural equation modelling, the researchers concluded that the ability to delay gratification is highly determined by the personal asset and eudaemonic well-being. Working on improving the personal asset context of youths and enhancing their eudaemonic well-being contributes to optimizing the potential to delay gratification. Therefore, parents, teachers, and governmental organizations such as the Ministry of Education, Ministry of Health, Ministry of Women, children and Social Affairs and NGOs working to strengthen the positive development of youths shall give due attention to cultivating the personal asset profile and enhancing eudaemonic well-being.

Despite its contribution in demonstrating the interplay among exposure to personal assets, eudaemonic well-being and gratification delay, this study has limitations. First, cross-sectional data were used which did not show age-related changes. This study also utilized only quantitative data which did not show the participants' unique experiences. Finaly, the study's sample size and demographic characteristics may limit the generalizability of the findings.

Considering the above-mentioned limitations, the following recommendations were suggested. Parents, teachers, and school administrators shall give due attention to cultivating the personal assets of students, including positive identity, commitment to learning, and social competence so that students will display thriving behaviour, including the ability to delay gratification and engage in academic competence. A subject focusing on personal development shall be developed and given to secondary

school students. In addition, clubs working on personal development track shall be initiated in each secondary school. Each textbook prepared for students shall integrate personal development ingredients to be incorporated with the content of the subject matter. How the personal asset experience of youths passing through a 'harsh environment' and those living with a "normal condition" is linked with the ability to delay gratification is subject to further investigation. Furthermore, a study demonstrating the causal relationships between eudaemonic well-being and gratification delay is suggested.

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Ethical approval. This study was conducted considering the ethical procedures. First, a letter of collaboration was obtained from Postgraduate, Research and Community Service office of the College of Education, Bahir Dar University. The purpose of the study was explained to the participants and how they were selected. Participation was solely voluntary based, and the participants were asked for their consent.

Authors' contribution. All authors contributed to the study's conception and design. Material preparation, data collection, analysis and the first draft were performed by Meseret Ayalew. Dawit Astrat (PhD) and Amare Sahle (PhD) edited and commented the manuscript. All authors read and approved the final manuscript.

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Data availability statements. The data that support the findings of this study are available on request from the corresponding author.

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Research Article

Life Satisfaction, Psychological Resilience, and Spiritual Well-Being Levels of Pregnant Women

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Abstract
Pregnancy is a period in a woman's life with physical, psychological, and social changes. This study aimed to examine the resilience, life satisfaction, and spiritual well-being levels in pregnant women. This descriptive and cross-sectional study was conducted on 380 pregnant women who applied to the obstetrics and gynecology outpatient clinics of a hospital Black Sea region of Türkiye between June and August 2023. The data were collected using an Introductory Information Form, Brief Resilience Scale, Satisfaction with Life Scale, and Spirituality Index of Well-Being. Data analysis was done in the SPSS program. Results showed that the mean resilience and life satisfaction scores of pregnant women were moderate, whereas the mean spiritual well-being scores were at good levels. There was a weak positive correlation between resilience and life satisfaction and a weak negative correlation between spiritual well-being and resilience. Additionally, resilience was higher in first-time pregnant women than those experiencing their second or subsequent pregnancies. Moreover, life satisfaction was higher in women with planned pregnancies and those whose income was equal to their expenses. Finally, spiritual well-being was lower for women older, those with lower education levels, and those with more income than expenses. Resilience, life satisfaction, and spiritual well-being should be evaluated in prenatal follow-ups.

Keywords:
Pregnancy • Psychological resilience • Life satisfaction • Spirituality well-being

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Introduction

Pregnancy is a unique and important life experience for women and causes many biopsychosocial changes. Although pregnancy is recognized as a pleasant and developmental period in a woman's life, the physical, psychological, and social changes, and stressful and challenging life events during this period can make women vulnerable (Kazemi et al., 2017). Therefore, pregnancy is a period that requires adaptation, and requiring good resilience, life satisfaction, and spiritual well-being in pregnant women.

Resilience is a concept tightly connected with maintaining overall well-being throughout life and can be a potent factor in effectively managing pregnancy-related challenges. Resilience, on the other hand, refers to the ability to adapt to life's challenges and encompasses qualities such as inner strength, competence, and flexibility (Alves et al., 2021). Higher resilience in the face of challenges supports individuals in realizing their potential and exhibiting positive, desired, and harmonious behaviors in their lives (Ölmez & Karadağ, 2022). Therefore, maintaining high resilience during pregnancy which is an important psychosocial adjustment period becomes crucial for adapting to the changes that naturally arise from pregnancy and motherhood (Alves et al., 2021).

Life satisfaction is an integral component of resilience and is an overall assessment of one's life conditions over a certain period. The changes that occur during pregnancy can be challenging for some pregnant women and may affect their life satisfaction (Kazemi et al., 2017). Several factors, including social support, having a planned pregnancy, mother's age, education level, economic status, and number of children affect life satisfaction (Abujilban et al., 2017; Gebuza et al., 2014; Kumcağız, 2016). Social support, meeting material and spiritual needs, and maintaining a positive perspective during pregnancy can enhance life satisfaction. However, negative emotions, thoughts, and unfavorable pregnancy experiences can diminish life satisfaction (Gebuza et al., 2014). Pregnancy is a period characterized by stress and anxiety (Isaacs & Andipatin, 2020). However, individuals with higher levels of life satisfaction were reported to experience lower levels of stress and anxiety (Oosterveer et al., 2014).

Another method to cope with substantial life changes is spirituality (Kazemi et al., 2017; Piccinini et al., 2021). Spirituality motivates individuals to seek out elements they consider sacred in their lives as well as to make sense of or transform their lives (Toledo et al., 2021). Spiritual well-being is a dimension of individual well-being that can be regarded as an indicator of a person's quality of life. High spirituality helps individuals overcome life's inconsistencies, which in turn can enhance life satisfaction (Niaghiha et al., 2019). One of the most important functions of spiritual well-being is to mitigate physical and psychological damages caused by stressful life events

encountered throughout one's lifespan (Ölmez & Karadağ, 2022). Spiritual well-being helps in coping with stress, has a positive impact on mental health, and contributes to increased physiological well-being (Bilgiç & Bilgin, 2021; Piccinini et al., 2021). This is why spirituality is considered one of the important resources for coping with challenges and anxiety experienced during pregnancy (Bilgiç & Bilgin, 2021; Kazemi et al., 2017). Furthermore, spiritual well-being creates psychological experiences such as inner peace, happiness, hope, and a sense of purpose, thereby contributing to increased life satisfaction (Niaghiha et al., 2019). It was indicated that negative spiritual well-being during pregnancy is associated with higher levels of depressive symptoms, anxiety, stress, and lower life quality; whereas, positive spiritual well-being is linked to higher life quality (Piccinini et al., 2021).

Present Study

During pregnancy, concerns are mostly focused on physical problems and other aspects of health might be neglected. However, previous studies have reported that problems including stress, anxiety, and depression experienced during pregnancy are associated with negative pregnancy outcomes (Isaacs & Andipatin, 2020). Therefore, it is important to maintain the psychological and spiritual well-being of pregnant women as well as their physical well-being. Resilience and spiritual well-being have a protective effect against challenging life experiences and significantly influence the preservation of women's overall well-being (Armans et al., 2020; Bilgiç & Bilgin, 2021).

Previous studies examined different aspects of resilience, life satisfaction, and spiritual well-being of pregnant women. In many studies, resilience, life satisfaction, and spiritual well-being were examined regarding variables such as quality of life, health promotion behaviour, social support, perceived stress, anxiety, prenatal depression, religious coping, prenatal attachment, and fear of birth (Chehrazi et al., 2021; Gebuza et al., 2014; Karagöz, 2022; Piccinini et al., 2021; Sade & Özkan, 2020; Tuxunjiang et al., 2023; Yaylaoğlu & Zengin, 2023). Rafati et al. (2023) observed a negative correlation with spiritual well-being in pregnant women exposed to domestic violence. Tuxunjiang et al. (2023) determined a negative correlation between resilience and anxiety in pregnant women. Another research investigated the relationship between religious and spiritual beliefs and symptoms of depression, anxiety, stress, and quality of life (Piccinini et al., 2021). However, only a limited number of studies in the literature have examined the relationship between these concepts (Afrashteh et al., 2024; Niaghiha et al., 2019; Ruseckienė et al., 2021). It is critical to investigate these concepts, given their impact on pregnancy outcomes.

Although women experience psychosocial changes during pregnancy that can be stressful, prenatal care services primarily concentrate on physical well-being and routine follow-ups, but there is a need for incorporating psychosocial assessments.

Increasing knowledge about resilience, life satisfaction, and spiritual well-being in pregnant women can enable effective interventions to improve women's psychosocial health and provide better quality care.

Purpose

In this study, we aimed to investigate the levels of resilience, life satisfaction, and spiritual well-being among pregnant women and to explore the relationship between these concepts. To address the aims of the research, we sought answers to the following questions:

i. What are the levels of resilience, life satisfaction, and spiritual well-being among pregnant women?

ii. Is there a correlation between resilience, life satisfaction, and spiritual well-being in pregnant women?

iii. Do descriptive variables among pregnant women differ in relation to their resilience, life satisfaction, and spiritual well-being levels?

Method

Research Design

Descriptive studies aim to describe a situation, reveal the meaning of a phenomenon, and generate new information. Also, cross-sectional studies, which analyze data at a single point in time, are appropriate for describing phenomena or relationships among phenomena (Polit & Beck, 2004). In this study, we adopted a descriptive cross-sectional design to determine the levels of resilience, life satisfaction, and spiritual well-being among pregnant women and to explain the relationship between these concepts.

Universe and Sampling

The population of this study consisted of pregnant women who attended the obstetrics and gynecology outpatient clinics of a hospital in Samsun, Türkiye. We established the sample size in this study as 377, with a margin of error of 0.05 and a confidence interval of 95% (http://www.raosoft.com/samplesize.html). The inclusion criteria were being 18 years or older, having sufficient Turkish proficiency for communication, being beyond 12th weeks of gestation, having no psychiatric health issues, and having psychological and mental health. We excluded women who did not meet the inclusion criteria. We invited 400 pregnant women to participate in the study, and 20 declined or did not fully complete the questionnaires. Consequently, the final sample size comprised 380 pregnant women.

Data Collection Tools

Introductory information form. The form was prepared by the authors and consisted of seven items designed to determine the descriptive information (age, education level, employment status, income level, gravidity, planned pregnancy status, and hospitalization status during pregnancy) about the participants (Bilgiç & Bilgin, 2021; Niaghiha et al., 2019). In this form, the term "gravity" refers to the number of pregnancies a person has experienced. Accordingly, we used the term "primigravida" for women experiencing their first pregnancy, while "multigravida" was used for those experiencing their second or subsequent pregnancies.

Brief resilience scale (BRS). This scale was developed by Smith et al. (2008). The validity and reliability of the scale's Turkish version were assessed by Doğan (2015). The instrument consisted of 6 items rated on a 5-point Likert-type scale. Items 2, 4, and 6 of the scale are reverse-scored. Scores ranging from 6 to 30 are taken from the scale. Higher scores indicate higher levels of resilience. The internal consistency coefficient of the scale was reported as 0.83.

Satisfaction with life scale (SWLS). The instrument was developed by Diener et al. (1985). The validity and reliability of the Turkish version were assessed by Dağlı and Baysal (2016). The tool is a 5-point Likert type and consists of 5 items. Scores ranging from 5 to 25 are taken from the scale. Higher scores indicate higher satisfaction with life. The Cronbach's alfa coefficient of the scale was reported as 0.88.

Spirituality index of well-being (SIWB). The scale was developed by Daaleman and Frey (2004). The validity and reliability studies for the Turkish version of the scale were carried out by Ekşi et al. (2019). The index consists of 12 items on 2 factors (Self-efficacy and Life scheme) rated through a 5-point Likert-type scale. Self-efficacy refers to one's belief in their own ability and potential. This subscale consists of 6 items. On the other hand, the Life Schema subscale also consists of 6 items measuring a sense of order, meaning, and goal in one's life. Scores ranging from 12 to 60 are taken from the total scale. Lower scores indicate higher spiritual well-being. The Cronbach's alfa coefficient of the total scale was 0.75; the Self-efficacy and Life scheme factors were 0.90 and 0.81, respectively.

Data Collection

We collected the study data from pregnant women who applied to the obstetrics and gynecology outpatient clinics of a hospital in Samsun between June and August 2023. We applied data collection forms through face-to-face interviews. It took about 10-20 minutes to fill out the survey forms.

Data Analysis

We analyzed the data using the IBM SPSS (v23.0) program. We assessed the normal distribution of the data by examining skewness and kurtosis values (±2). We used descriptive statistics (frequency, percentage, mean, standard deviation), Independent Samples t-test, One-way ANOVA (post hoc Tukey HSD), Pearson correlation analysis, and linear regression analysis to examine the data.

Results

The mean age of participants was 28.56 ± 5.55 (18-42) years, and the majority (61.3%) fell within the 18-29 age group. Of the pregnant women, 41.6% were high school graduates, 72.1% were housewives, and 60.5% had an income equal to their expenses. Furthermore, 59.5% were multigravida and 74.5% had planned pregnancies. Descriptive characteristics of pregnant women are presented in Table 1.

Table 1.
Participant demographic characteristics

	N	%
Age		
18-29	233	61.3
30-39	132	34.7
40 and older	15	4.0
Education status		
Literate	10	2.6
Primary school	127	33.4
High school	158	41.6
College	85	22.4
Employment status		
Employed	106	27.9
Housewife	274	72.1
Income level		
Income less than expenses	110	29.0
Income equal to expenses	230	60.5
Income more than expenses	40	10.5
Gravidity		
Primigravida	154	40.5
Multigravida	226	59.5
Planning of pregnancy		
Planned	283	74.5
Unplanned	97	25.5
Hospitalization status during pregnancy		
Yes	67	17.6
No	313	82.4

The pregnant women's mean BRS (18.74 ± 3.11) and SWLS (16.73 ± 4.17) scores were moderate as well as the mean SIWB score was good level (27.37 ± 10.42). Considering the SIWB subscale mean scores, Self-efficacy was 15.05 ± 5.09 Life

scheme was 12.32 ± 6.17. Also, the Pearson correlation analysis showed a weak negative correlation between SIWB and BRS (r = - .293, p = .000) and a weak positive correlation between SWLS and BRS (r = .254, p < .001). However, no correlation was observed between SWLS and SIWB (p > .05).

Linear regression analysis related to the prediction of the SWLS and SIWB by the BRS is presented in Table 2. Analysis results revealed that resilience positively predicts life satisfaction (β = .254, p = .000) but negatively predicts spiritual well-being (β = -.293, p = .000). According to the study results, resilience explained 6.5% of life satisfaction (F = 26.141, p = .000) and 8.6% spiritual well-being (F = 35.515, p = .000) (Table 2).

Table 2.
Linear regression analysis related to the prediction of the SWLS and SIWB by the BRS

Dependent variable	Independent variables	B	Std. Error	β	t	*p*
SWLS	Constant	10.338	1.267		8.163	.000
	BRS	.341	.067	.254	5.113	.000*
	R = .254, R^2= .065, F = 26.141, p = .000					
SIWB	Constant	45.747	3.125		14.638	.000
	BRS	-.980	.164	-.293	-5.959	.000*
	R = .293, R^2 = .086, F = 35.515, p = .000					

BRS: Brief Resilience Scale, SWLS: Satisfaction with Life Scale, SIWB: Spirituality Index of Well-Being, *p < .001

The distributions of the BRS, SWLS, and SIWB scores according to the characteristics of the pregnant women are shown in Table 3. According to the analysis results, the mean BRS score of primigravidas was higher than multigravidas. Furthermore, the mean SWLS score differed significantly based on income level and planned pregnancy. Regarding the spiritual well-being of the participants, the SIWB mean score differed significantly with age, education level, and income level (p < .05). However, no difference was observed between other variables and the scale scores (p > .05) (Table 3).

Table 3.
Distribution of BRS, SWLS, and SIWB mean scores of pregnant women according to descriptive characteristics

	BRS	SWLS	SIWB
	Mean ± SD	Mean ± SD	Mean ± SD
Age			
18-29	18.82 ± 3.02	16.98 ± 4.32	27.18 ± 10.38[a]
30-39	18.70 ± 3.33	16.29 ± 3.84	26.73 ± 9.71[a]
40 and older	17.73 ± 2.49	16.53 ± 4.69	35.93 ±13.68[b]
Test and p scores	F = .885 *p* = .414	F = 1.160 *p* = .315	F = 5.475 *p* = .005*
Education status			
Literate	17.80 ± 2.62	17.70 ± 2.79	32.50 ± 12.17[a]
Primary school	18.50 ± 3.34	16.63 ± 4.14	28.89 ± 10.37[a]
High school	18.63 ± 2.64	16.72 ± 4.28	27.76 ± 10.43[a]
College	19.41 ± 3.55	16.76 ± 4.22	23.79 ± 9.44[b]
Test and p scores	F = 1.941 *p* = .122	F = .205 *p* = .893	F = 5.306 *p* = .001*
Employment status			
Employed	18.59 ± 2.98	16.62 ± 3.76	26.08 ± 9.51
Housewife	18.80 ± 3.17	16.77 ± 4.33	27.87 ± 10.73
Test and p scores	t = - .575 *p* = .566	t = - .301 *p* = .764	t = -1.502 *p* = .134
Income level			
Income less than expenses	18.27 ± 2.79	15.59 ± 4.26[a]	28.55 ± 9.45[ab]
Income equal to expenses	18.99 ± 3.19	17.39 ± 3.83[b]	26.06 ± 10.14[a]
Income more than expenses	18.60 ± 3.43	16.05 ± 5.05[ab]	31.73 ± 12.94[b]
Test and p scores	F = 2.038 *p* = .132	F = 7.741 *p* = .001*	F = 6.187 *p* = .002*
Gravidity			
Primigravida	19.22 ± 3.09	17.04 ± 4.57	26.51 ± 10.48
Multigravida	18.42 ± 3.09	16.51 ± 3.88	27.96 ± 10.36
Test and p scores	t = 2.490 *p* = .013*	t = 1.206 *p* = .229	t = -1.341 *p* = .181
Planning of pregnancy			
Planned	18.89 ± 3.19	17.09 ± 4.06	27.53 ± 10.57
Unplanned	18.29 ± 2.82	15.64 ± 4.33	26.92 ± 9.99
Test and p scores	t = 1.665 *p* = .097	t = 3.004 *p* = .003*	t = .499 *p* = .618
Hospitalization status during pregnancy			
Yes	19.08 ± 3.55	16.55 ± 4.78	28.01 ± 10.02
No	18.67 ± 3.01	16.76 ± 4.04	27.24 ± 10.51
Test and p scores	t = -1.006 *p* = .315	t = .376 *p* = .707	t = -.555 *p* = .580

SD: Standard deviation, t=Independent Samples t-test, F= One Way ANOVA (post-hoc Tukey HSD), a-b: There is no difference between data with the same letter, BRS: Brief Resilience Scale SWLS: Satisfaction with Life Scale SIWB: Spirituality Index of Well-Being, *p < .05

Discussion

This study examined the resilience, life satisfaction, and spiritual well-being of pregnant women. The findings revealed pregnant women exhibited moderate levels of resilience and life satisfaction with a good level of spiritual well-being. Furthermore, we found a positive correlation between resilience and life satisfaction. Moreover, we determined that resilience was negatively correlated with spiritual well-being.

Resilience is a protector for several problems during pregnancy including stress, anxiety, and depression (Alves et al., 2021; Jin et al., 2021; Tuxunjiang et al., 2023). In this study, we found that the pregnant women had a moderate mean BRS score. Similarly, Yılmaz and Şahin (2019) determined that pregnant women had a moderate level of resilience. Abera et al. (2023) found that 52.7% of pregnant women had moderate resilience. Contrary to our findings, the resilience of pregnant women was found to be higher in some previous studies (Özçetin & Erkan, 2019; Tartıcı & Beydağ, 2022). Resilience can help women get through pregnancy more easily and comfortably. Therefore, interventions to increase resilience should be planned.

We found that pregnant women had a moderate level of SWLS mean score. High life quality scores in pregnant women were reported in the literature (Mazúchová et al., 2018). Additionally, life satisfaction in pregnant women has been reported to be higher than in our study (Yu et al., 2020). Ruseckienė et al. (2021) found that 97.1% of pregnant women were satisfied with their lives. Another study showed that 38% of pregnant women were dissatisfied with their lives (Abujilban et al., 2017). Life satisfaction can be affected by many different variables (Abujilban et al., 2017; Kumcağız, 2016). The different results in the literature may be due to social, economic, and individual differences between the sample groups.

Spiritual well-being can reduce stress and pregnancy anxiety, while increasing psychological well-being (Chehrazi et al., 2021; Rafati et al., 2023). Therefore, it is important to maintain the spiritual well-being of pregnant women. We determined that pregnant women exhibited a good level of mean SIWB score. Some researchers also reported high levels of spiritual well-being among pregnant women (Bilgiç & Bilgin, 2021; Yaylaoğlu & Zengin, 2023). The findings of this study are consistent with existing literature. Additionally, assessing the spiritual well-being of pregnant women from different cultures and traditions may provide further information.

Individuals with high psychological well-being are mostly satisfied with their lives. Conversely, individuals with lower psychological well-being tend to evaluate life events more negatively (Demir et al., 2021). In our study, we observed a weak positive correlation between BRS and SWLS. The results indicate that life satisfaction increases as resilience increases. Consistent with our findings, other researchers also reported a positive correlation between resilience and life satisfaction (Çelik et al.,

2017; Demir et al., 2021). Our findings are consistent with existing literature. The findings emphasize the positive outcomes of supporting resilience on life satisfaction.

In our study, we determined a statistically significant weak negative correlation between SIWB and BRS. Additionally, we did not observe a correlation between SIWB and SWLS . A previous study revealed that the spiritual well-being of pregnant women does not have an impact on their resilience (Karagöz, 2022). Studies involving different samples have demonstrated a positive correlation between resilience and spiritual well-being (Mahdian & Ghaffari, 2016; Ölmez & Karadağ, 2022). Furthermore, life satisfaction in pregnant women was reported to be associated with spiritual well-being (Karagöz, 2022; Niaghiha et al., 2019). The coping strategy chosen by the individual may contribute positively to the psychological health of the individual or it may be detrimental. A review study reported that spirituality can harm mental health through negative religious coping, misunderstanding, and miscommunication (Weber & Pargament, 2014). Positive religious coping positively affects life satisfaction and resilience (Uysal et al., 2017). Conversely, there exists a negative correlation between negative religious coping and both life satisfaction and resilience (Karagöz, 2022; Uysal et al., 2017). However, the present study did not examine the difficulties faced by women and their coping methods. Additionally, the difficulties faced by women and the meaning they attributed to these difficulties may have affected their psychological and spiritual well-being. Moreover, our findings may be influenced by various factors not addressed in this study (such as intimacy with the husband, social support, high-risk pregnancy, prenatal stress, anxiety, etc.). The results obtained in the present study, which contradict existing literature, require further research.

We found that primigravidas had higher BRS scores. Similarly, previous studies determined that women experiencing their first pregnancy exhibited higher levels of psychosocial health compared to multigravida women (Meghil & Busarira, 2022; Özçetin & Erkan, 2019). The resilience levels of women in their second pregnancy (Jin et al., 2021) were mostly lower than those of women experiencing their first pregnancy (Shang et al., 2019). Another study found that women with lower parity exhibited higher levels of resilience compared to those with higher parity (Jafaru & Musa, 2021). Although pregnancy is a transitory process, motherhood leads to definitive changes in a woman's life. Becoming a mother brings new responsibilities and challenges for women, and each woman's transition to motherhood is unique. This unique experience can be affected by many environmental and individual factors. Primigravidas experience many new emotions during pregnancy, which they cannot identify, and may have concerns about their role in motherhood. However, in multigravidas, several factors such as previous adverse pregnancy outcomes and birth experiences, lack of social support, socioeconomic status, advancing age, number of children, and unwanted or unplanned pregnancy may cause psychological problems

and explain low resilience (Jafaru & Musa, 2021; Jin et al., 2021; Meghil & Busarira, 2022). The findings of the present study reveal the necessity of prioritizing efforts to strengthen the resilience of multigravidas.

Difficulties faced during pregnancy can negatively affect life satisfaction. It is known that women experiencing unplanned or unintended pregnancies often encounter elevated levels of stress (Dündar et al., 2019). Our findings indicated that women with planned pregnancies had higher levels of life satisfaction. Similarly, Kumcağız (2016) found that women with planned pregnancies show higher life satisfaction. In addition, we found that life satisfaction scores significantly differ with income level. Abujilban et al. (2017) reported that pregnant women who were younger, better-educated, with high economic levels, and fewer children show higher life satisfaction. Our findings support the literature.

Furthermore, our findings revealed that the mean SIWB score differed significantly with age, education, and income level. In contrast to these findings, existing literature has demonstrated that the spiritual well-being of pregnant women does not differ significantly with age, education level, family structure, number of pregnancies, and having a planned pregnancy (Ruseckienė et al., 2021). A different researcher found that the importance given to spirituality by pregnant women significantly varied based on age, whereas no differences were observed between the importance given to spirituality and several variables such as education, employment status, income, family type, number of pregnancies, and having a planned pregnancy (Şahin, 2019). Spirituality is an essential component of the holistic health of pregnant women. In this regard, further research is needed to examine the factors affecting the spiritual well-being of pregnant women.

Limitations of the Study

This study was limited to a specific province in northern Türkiye and exclusively involved Turkish-speaking women. It's important to note that women residing in different regions of Türkiye might exhibit different levels of life satisfaction, resilience, and spiritual well-being due to distinct sociocultural attributes. This limits the generalizability of the findings. Furthermore, a cross-sectional study was designed. Conducting prospective studies that assess life satisfaction, resilience, and spiritual well-being can provide comprehensive insights.

Suggestions for Future Research

Considering the limitations of this study, it may be advisable to explore resilience, life satisfaction, and spiritual well-being in larger sample groups, including different cultures and populations. Data that can yield more robust and comprehensive

inferences can be obtained through interventional, qualitative, and longitudinal studies conducted with larger populations. Additionally, comparative studies to explore resilience, life satisfaction, and spiritual well-being across different groups (such as primigravida and multigravida, low and high-risk pregnant women, as well as, pregnant and non-pregnant women) can be conducted. Furthermore, future research could test whether resilience, life satisfaction, and spiritual well-being remain consistent across all three trimesters of pregnancy.

We conducted a quantitative study. Therefore, future researchers can use innovative qualitative research methods such as Online Photovoice to gather richer data on the experiences of pregnant women. Also, community-based participatory research can be conducted to understand the experiences of pregnant women and develop solutions to potential problems.

Implications

This research provides valuable insights into the resilience, life satisfaction, and spiritual well-being levels of pregnant women. The results emphasize the importance of focusing on the mental health of women during pregnancy. Additionally, the findings can assist health professionals in protecting and increasing the overall health of pregnant women. One of the important results of this study is the positive correlation observed between resilience and life satisfaction. Programs designed to increase the resilience of pregnant women have the potential to help them cope with the challenges of pregnancy and improve their life satisfaction. Therefore, healthcare providers should be aware of the importance of focusing on factors that will increase resilience during pregnancy.

Although the research findings show a negative correlation between resilience and spiritual well-being, the results may contribute to understanding of factors that may affect pregnant women's well-being and develop effective interventions. Prenatal health care policies and service providers should strive to ensure that pregnant women's psychospiritual care is an integral part of maternal care. Additionally, the evaluation and psychospiritual care of the mental health status of pregnant women, as well as their physical health, should be included in the pre- and post-graduate training curricula of relevant health professionals.

Conclusion

The findings of this study revealed that pregnant women have a moderate level of resilience and life satisfaction with a good level of spiritual well-being. The study identified a positive correlation between resilience and life satisfaction as well as a negative correlation between spiritual well-being and resilience. Considering the

findings of this study, it is recommended that pregnant women's resilience, life satisfaction, and spiritual well-being be evaluated during prenatal follow-ups, and the factors that affect their psychological and spiritual well-being should be determined. Pregnant women's age, education level, income level, planned pregnancy status, and gravida should also be considered in prenatal evaluations. Additionally, psychoeducation and support programs can contribute to strengthening resilience and life satisfaction in pregnant women. These programs should be comprehensive and tailored to the needs of pregnant women.

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Ethical approval. The study adheres to the principles outlined in the Declaration of Helsinki. To carry out the research, approval was obtained from the Social and Human Sciences Research Ethics Committee of Ondokuz Mayıs University (Dated 28.04.2023, Decision no: 2023-383), as well as written permission from the institution where the research was conducted. All participants provided verbal and written informed consent.

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Research Article

Emotional Intelligence and Clinical Empathy among Medical Students: The Conditional Effects of Spirituality and Gender

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Abstract
Clinical empathy (CE) is a crucial component that influences how well patients respond to treatment. This necessitated the examination of the factors that promote CE among undergraduate medical students. Therefore, this study investigated the individual and combined conditional effects of spirituality (SS) and gender on the emotional intelligence (EI) – CE relationship among the medical students at Delta State University, Abraka, Nigeria who have clinical exposure. Participants were 202 undergraduate medical students who have had direct contact with patients. The sample comprises 86 males and 116 females with an average age of 22.52 years. Instruments with proven psychometric qualities were used to collect data on each variable. A regression-based analysis complemented by model 2 of Hayes' PROCESS macro via the IBM-SPSS v25 was utilised for testing the hypotheses and developed model. The direct effect results indicated that EI and SS positively and significantly predicted CE. The moderating effect of SS on the EI-CE relationship was significant while that of gender was not. The combined moderating effects of SS and gender on the EI-CE link was significant and stronger for females with higher levels of SS. These findings led to the conclusion that EI, SS and gender are valuable mechanisms to consider when making policies to improve CE.

Keywords:
Clinical empathy • Emotional intelligence • Gender • Healthcare • Medical students • Spirituality

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Introduction

Clinical empathy (CE) has gained significant interest in the scholarly community. Outside of the medical context, empathy is generally understood to be the capacity to feel with or place oneself in the position of another (Halpern, 2014). In the medical profession, empathy is considered an essential clinical factor that can impact treatment outcomes through the practitioners' cognitive, emotional and behavioural dispositions towards patients (Guidi & Traversa, 2021). Parkin et al. (2014), citing a variety of definitions from the literature, proposed that empathy is the capacity to recognise and comprehend an individual's situation (feelings, ideas, opinions, and perspective), to convey that comprehension to the individual, and carry out beneficial behaviour based on that comprehension. Medical practitioners and students are expected to possess interactive and consulting skills, one of which is the ability to comprehend the feelings and experiences of their patients. The ability to effectively relate to patients is just as important as acquiring a body of knowledge and applying it to diagnose and treat patients. CE is needed for medical students to interact effectively with patients. This attribute encompasses the capacity to empathise with patients and comprehend their experiences and the capacity to introspect or comprehend one's emotions and reactions to patients' emotions and behaviours.

CE has beneficial effects on several levels by fostering mutual understanding, communication, and trust. In professional healthcare service delivery, CE has been linked to positive outcomes for patients and healthcare practitioners. Regarding the advantages for professionals and medical students, studies have shown a relationship between an empathetic treatment approach to job satisfaction and the well-being of healthcare professionals (Lamiani et al., 2020; Lee et al., 2023; Lee & Park, 2021; Li et al., 2021; Waddimba et al., 2021). It has been generally observed that providing compassionate care enhances both clinical outcomes and patient satisfaction (Mercer et al., 2016; Miniotti, 2022; Walsh et al., 2019). Ensuring the clinical competency of tomorrow's healthcare professionals is just as vital as understanding what drives CE. However, there exist uncertainties about possible factors that can be used to improve this crucial behaviour, especially in Nigeria where the attitude of healthcare professionals toward patient care and service delivery are contributing factors to the issues in the healthcare sector (Effiom & Danlami, 2020). While the management of public health institutions emphasizes money and infrastructure problems when it comes to the quality of care, patients frequently voice concerns about the attitudes of personnel in the healthcare sector. It, therefore, becomes necessary to explore factors that can predict CE as these factors can inform policies in the administration of medical education and can also be inculcated into medical training.

Several studies have shown that, despite the benefits of CE in healthcare, it tends to decrease during medical training due to the combination of real-world

experience and the inability of some medical curriculums to capture the essence of empathy in healthcare (Costa-Drolon et al., 2021; Son et al., 2018). Consequently, examining potential contributing variables that can be used to curtail this decline is very important. Literature on the determinant of CE is complex and researchers are exploring more of its antecedents. In the current study, emotional intelligence (EI) is adopted as a predictor of CE while also investigating the conditional effects of spirituality (SS) and gender. Although a few studies have linked EI with the CE of healthcare professionals, the current study aims to address certain knowledge gaps identified in the existing literature.

First, the empirical literature on the EI-CE relationship has been dominated by studies built around practitioners rather than medical students with field or clinical exposure. Therefore, the current study deemed it important to focus on a different cultural setting and sample which may impact the conceptualization of the constructs, modification of data collection instruments, and the relationship among the variables. Hence, examining the CE levels of medical students is crucial as they are considered the future of healthcare in nations across the world. Second, with the understanding that other variables have a role to play as moderators in observed relationships; the researchers provided further insight on the interplay of EI and CE by going beyond existing knowledge built mainly on the direct effect of EI on CE. Currently, there is no conceptual framework incorporating the combined effects of SS and gender as possible strengthening or attenuating factors for the EI-CE relationship in a model controlling for the age and marital status of medical students. A moderation model was proposed to understand when this relationship is likely to occur using two moderators. This moderation model incorporated the effects of SS and gender on the EI-CE relationship specific to medical students. Therefore, to better understand the relationship between EI and CE, SS and gender are utilized as moderator variables in a model that helps understand their individual and combined interaction with EI in predicting CE.

Objectives of the Study

Accordingly, to fill the identified gaps in the literature, efforts are made to address the following research objectives:

1. Examine the predictive relationship between emotional intelligence and clinical empathy among medical students.
2. Examine the predictive role of spirituality on the clinical empathy of medical students.
3. Explore the moderating effect of spirituality in the relationship between emotional intelligence and clinical empathy.

4. Examine the moderating effect of gender (male and female) in the relationship between emotional intelligence and clinical empathy among medical students.

5. Investigate the joint conditional effects of spirituality and gender in the relationship between emotional intelligence and clinical empathy.

Literature Review and Hypotheses Development

Emotional Intelligence and Clinical Empathy

Research has shown that the emotional attributes of healthcare professionals impact how they behave in the presence of patients (Aksu et al., 2023; Mosallanezhad et al., 2023). Making appropriate decisions as a healthcare professional requires some attributes, one of which is EI as it can impact the awareness of oneself and others. It also includes the capacity to guide others and the appropriate use of emotions in interpersonal interactions (Mosallanezhad et al., 2023). This essence is captured by the Bar-On (as cited in McNulty & Politis, 2023) definition of EI, which is defined as a composite of interrelated emotional and social competence, abilities, and facilitators that determine our ability to understand and express ourselves, understand others, form connections with them, and handle daily responsibilities.

EI is a distinct characteristic that can be taught and improved. It can assist healthcare professionals in perceiving, regulating, and providing emotional support to patients during treatment (Wang et al., 2018). EI has been correlated with positive attributes in healthcare such as increased psychological adaptation of healthcare professionals (Halian et al., 2020), resilience in healthcare practice (Chikobvu & Harunavamwe, 2022), and increase in caring behaviour towards patients (Alinejad-Naeini et al., 2023; Nwanzu & Babalola, 2020). These empirical results highlight that higher levels of EI have positive implications for the patient-physician relationship because it improves adaptation to the work environment, resilience in difficult situations, and care for patients. On the other side, stress and exhaustion are associated with low EI (Mosallanezhad et al., 2023). Studies demonstrating the role of EI on medical students' empathy are relatively few in the literature and some have conflicting results. In the first instance, studies have demonstrated the positive role of EI on CE in healthcare (Abe et al., 2018; Deng et al., 2023; Hajibabaee et al., 2018; Rfan et al., 2019). Although, not a popular proposition across empirical studies, the pilot study by Castelino and Mendonca (2023) led to a non-significant EI-CE association among nursing students. Generally, the literature points to the notion that an increase in EI necessitates an increase in CE because medical students and healthcare professionals who are receptive to their emotional needs and understand the emotions of others are more likely to show empathy to their patients. Hence, it is proposed that EI would be a significant predictor of CE among medical students.

Spirituality and Clinical Empathy

There exist empirical studies telling us that believing in something greater than oneself or the supernatural has positive implications for personal health and the way we treat people around us whether in professional or non-professional settings (Shakarian et al., 2021; Güner & Akyüz, 2023). These belief systems are structured around the concepts of religiosity and spirituality. While there are some conceptual similarities between spirituality and religiosity, most academics agree that these are different concepts. Harris et al. (2018) carried out a thorough content analysis of the meanings of religiosity, SS, faith, and the holy in their study of both ideas. While SS is more specifically associated with the search for or contact with the divine, religiosity is often understood to be a culturally sanctioned ritualistic, institutional, or institutionalized spirituality. Cursory analyses indicate that the majority of faiths around the world actively promote associated qualities like empathy, compassion, and mercy as well as prosocial conduct among their adherents (Stewart & Lawrence, 2021).

According to Khorrami-Markani et al. (2015), SS is the essence of human existence and encompasses the immaterial aspect of life, and it is seen via a person's relationships with God, other people, and the natural world. Individuals who possess a high level of SS approach life holistically and approach situations with flexibility and openness (Kleftara & Vasilou, 2016). Most spiritual traditions associate the cultivation of spiritual awareness with attributes like empathy (Huber & MacDonald, 2012). We argue that in the presence of SS, medical students and healthcare professionals would be more receptive and empathetic to the needs of their patients. Even while there are strong theoretical links between spirituality and empathy, there is not always clear-cut actual evidence to back these claims. Any correlation between spirituality and empathy is frequently deduced from related concepts or acts of prosociality or caring behaviour in healthcare. For instance, there is strong evidence that connects spirituality with caring behaviour (Baker et al., 2017), prosocial behaviour (Khalili et al., 2023; Travis et al., 2023), and forgiveness (Raj & Padmakumari, 2023). In a study on the SS-empathy link, Stewart and Lawrence (2021) found a significant correlation between dimensions of spirituality and empathy. According to Thomas et al. (2019), healthcare professionals who identified as spiritual were more likely to exhibit greater levels of both clinical and general empathic compassion. Consequently, it is hypothesised that SS would be a significant predictor of CE among medical students.

Spirituality as a Moderator between EI and CE

The existing nomological network provides the framework for the suggested moderating role of SS linkages (both direct and moderated) examined in this paper. At the direct level of analysis, SS has been found to increase the likelihood that individuals would carry out prosocial behaviour, forgiveness, and exhibit care and

compassion for others (Baker et al., 2017; Khalili et al., 2023; Raj & Padmakumari, 2023; Thomas et al., 2019). Based on the aforementioned, at different levels of SS, the link between EI and CE is expected to change for medical students such that increasing SS will lead to an increase in the EI-CE relationship. At the moderation level, the literature indicates that SS strengthens the nexus between theory of mind and prosocial behaviour (Khalili et al., 2023), religiosity and positive behaviours (Buenconsejo & Datu, 2023). Consequently, it is proposed that SS would moderate the EI-CE relationship such that the relationship would be stronger for medical students with high SS.

Gender as a Moderator between EI and CE

Gender is one of the most researched demographic characteristics in social and behavioural research (Nwanzu & Babalola, 2023). The concept of gender in this study represents the categorisation of people into males or females using biological characteristics. This demographic variable is affected by cultural and social expectations. There exist few studies on gender differences in CE and related behaviour such as caring behaviour and compassion in healthcare. While some studies have observed a non-significant difference in gender and compassion-related behaviour (Edosomwan & Nwanzu, 2023; Jung et al., 2022), the majority of studies in the literature appear to provide support for gender differences in CE and compassion-related behaviours (Deng et al., 2023; Pang et al., 2023). These differences can impact the EI-CE relationship. Hence, as a moderator, the different levels of gender (males and females) can either strengthen or attenuate the EI-CE relationship.

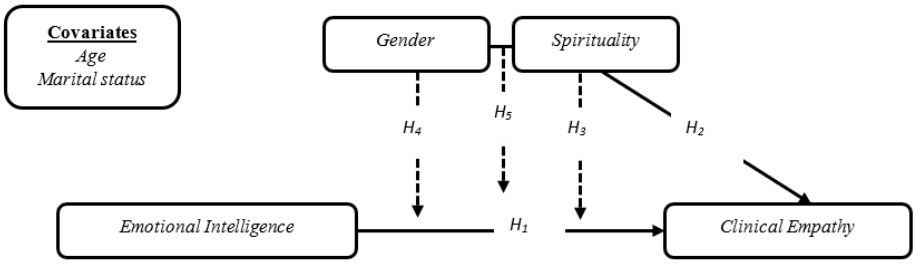
In the theoretical literature, this possibility can be explained using the gender categorisation theory. Gender socialization theory states that due to their disparate upbringings and experiences, males and females behave differently in social settings (Leaper & Farkas, 2015). According to empirical studies, males are associated with aggressive and competitive behaviours, whereas females are associated with caring behaviours (Deng et al., 2023; Kuhnert et al., 2017; Quenneville et al., 2022). The inconsistent findings in gender differences in empathy and other compassion-related behaviour across past studies give credence to the examination of the conditional effect of gender on the nexus between EI and CE. Gender has been found to moderate the link between nurses' optimism and distress tolerance (Falavarjani & Yeh, 2019). Consequently, it is proposed that gender would be a moderator in the EI-CE relationship.

The Combined Moderating Effects of SS and Gender on EI-CE Relationship

Based on earlier research demonstrating the moderating capacity of gender (Falavarjani & Yeh, 2019) and SS (Buenconsejo & Datu, 2023; Khalili et al., 2023), and the positive impact SS has on general empathic compassion (Stewart & Lawrence,

2021; Thomas et al., 2019), we proposed that SS and gender would jointly moderate the EI-CE relationship. The model and hypotheses for the study are shown below:

Figure 1.
Hypothesised model showing the direct and conditional effects



Based on the theoretical and empirical literature reviewed, and in line with the research objectives and tilization model; the researchers proposed five hypotheses:

***H_1*:** Emotional intelligence positively predicts clinical empathy.

***H_2*:** Spirituality positively predicts clinical empathy.

***H_3*:** Spirituality moderates the relationship between EI and CE such that the relationship will be stronger when spirituality is high.

***H_4*:** Gender moderates the relationship between EI and CE such that the relationship will be stronger for females compared to males.

***H_5*:** Spirituality and gender jointly moderate the relationship between EI and CE such that the relationship will be stronger for female participants with high levels of SS.

Method

Participants

The participants comprised 202 undergraduate medical students from Delta State University, Abraka, Nigeria who have had contact with patients either through the student industrial work experience programme or regular medical internship. The sample comprises 86 (42.60%) males and 116 (57.40%) females with an average age of 22.52 years (*SD*= ±2.83). Medical students that were less than 21 years old comprised 22.4% of the sample, those that were 21-28 years old comprised 74.0%, while those greater than 28 years consisted of 3.6% of the sample. The majority of the participants were single, 187 (93.50%), while 13 (6.50%) reported being married.

The questionnaire also elicited responses regarding medical students' contact with patients which was a major inclusion criterion. All the participants reported that they had been in contact with patients. This is possible as only medical students who had been exposed to field work were utilised for the study. The sample size and power analysis were largely considered during the design of the study. Therefore, factors such as effect size, power, significance levels, and type of statistical analysis were used for the sample size determination via the G*power software (v3.1.9.7). The sample size was calculated using a linear multiple regression fixed model and an R^2 deviation of Zero fixed at A-priori. The software generated a minimum sample of 119 participants for the regression model, based on a .15 medium effect size, an alpha of .05, and power fixed at .95. The generated sample size was sufficient to determine statistical power. However, to reduce non-response bias, a larger sample size is often recommended. Consequently, 200 medical students clinically exposed to patient care were sampled to analyse the model developed for the study. According to the recommendation by Verma and Verma (2020) and Kang (2021), the sample size generated by the G*power software was sufficient to determine power and statistical significance, and it met the maximum sample-to-variable ratio of twenty to one.

Procedure

All procedures took into account the most recent updates to the Helsinki Declaration for human research. The Psychology Committee on Research Ethics (Psychology Department, Delta State University, Abraka) gave its approval for this study. The approval was given on February 12, 2023, with reference number 0001827. The research instruments were procured from published articles, which served as their sources, and appropriate measures were implemented to guarantee proper attribution of credit. The three instruments, a sociodemographic questionnaire, and informed consent were then combined in a single document. A statement outlining the goals and theme of the study as well as the fact that participation was completely voluntary was included in the informed consent. Complete confidentiality and privacy of data were assured to the participants. This was disclosed in the informed consent form that was included in the survey. These are the prerequisites for inclusion: verbal consent indicating interest in participating in the study, the student must be enrolled in a full-time medical degree program in any of the university council's recognized medical programs, and must and must have had contact with a patient through the medical industrial work scheme or internship.

The survey's Incompleteness and failure to meet the Inclusion requirements were the exclusion criteria. Surveys with a high percentage of incomplete responses were not used. The data were collected from the students via a convenience sampling method. Procedural controls were put in place to control common method bias. These

include making certain that the criterion variable was shown to participants before the predictor variables, safeguarding participant data confidentiality and privacy, and making sure the questionnaire's items were easy to read, concise, and clear (Kaltsonoudi et al., 2022a; Kaltsonoudi et al., 2022b). After getting their informed consent, research assistants and class coordinators/representatives helped administer the self-report measure (the questionnaires) to the participants who met the inclusion criteria. It took about eight to fifteen minutes to respond to the questionnaire.

Measurement

Socio-demographics such as gender, age, marital status, and contact with patients were collected in the first section of the questionnaire (section A). Section B of the questionnaires contains the instruments used for measuring the other scaled variables in the study. Three unique instruments measured on a 5-point response format with 1 being "strongly disagree" to 5 being "strongly agree" were used in the study. Specifically, each variable was measured with a validated and reliable instrument found in the literature. The instruments adopted for the study were all in their original form and only adapted where necessary to suit the research context.

Clinical Empathy: The Jefferson Scale of Empathy among Healthcare Professionals Student Version (JSEHPS-17) was used to measure empathy among medical students. It was developed to measure the level of empathy among medical students. The scale was developed by Field et al. (2011). The 17-item two-factor structure which describes the significant aspect of empathic behaviour salient to the healthcare profession such as compassionate care and perspective taking was adopted in this study (Williams et al., 2012). Sample items on the JSEHPS-17 include "It is difficult for a healthcare provider to view things from patients' perspective", and "healthcare providers should try to think like their patients to render better care". The total score achieved varies from 1 to 85, where higher values correspond to higher levels of clinical empathy and lower scores correspond to lower levels of clinical empathy among medical students with clinical exposure. The overall scores for the 17-item scale represent the composite construct of CE. The 17-item model produced a good model fit and a satisfactory alpha coefficient of .75 (Williams et al., 2012).

Emotional Intelligence: This was measured by the Brief Emotional Intelligence Scale (BEIS-10) developed by Davis et al. (2010). The scale measures a person's adaptive interpersonal and intrapersonal functioning. The scale comprises 10 items that describe the significant aspects of EI including the appraisal of others and one's own emotions, the regulation of others and one's own emotions, and the tilization of emotions. Sample items on the BEIS-10 include "I know why my emotions change", and "I can tell how people are feeling by listening to the tone of their voice". The overall scores for the 10-item represent the composite construct of EI. Since the scale

was evaluated on a 5-point Likert format, participants' ratings ranged from 1 to 50, where higher values indicate high emotional intelligence and lower values indicate low emotional intelligence among medical students with clinical exposure. Davis et al. (2010) reported good psychometric properties for the scale. The confirmatory factor analysis results yielded a good fit and an acceptable test-retest reliability.

Spirituality: This was assessed with the 11-item Attitude Related to Spirituality Scale (ARES-11) developed by Braghetta et al. (2021). The 11-item scale assesses individuals' belief in something sacred and their general attitude towards prayer, meditation, and spiritual values. Students were the original sample utilized for developing the scale hence making the scale highly appropriate for this study. Examples of items include: "I believe in something sacred or transcendent (God a higher force)", and "My spirituality influences my physical and mental health". The rating or evaluation of participants' scores ranged from 1 to 55, where higher values indicate high spirituality and lower values indicate low spirituality among medical students with clinical exposure. The overall scores for the 11-item represent the composite construct of SS. According to Braghetta et al. (2021), ARES-11 showed satisfactory internal consistency of .98. The scale was described as having a unidimensional structure in the exploratory factor analysis. The scale's fit indices in the unidimensional model showed a good fit.

Design and Statistics

This cross-sectional study investigates the relationship between the moderators (gender and SS), independent (EI), and dependent (CE) variables using a predictive survey model. The researchers obtained data from medical students in a natural setting, free from outside interference, by employing a predictive model. The study's focal variables' zero-order correlation, Cronbach's alphas, and the normal distribution test (skewness and kurtosis) were examined. This is to validate the use of parametric statistics for hypotheses testing and ascertain whether the data satisfies the normal distribution assumptions. Also, a simple regression analysis was used to test the direct relationships while model 2 of the PROCESS modelling tool was used to examine the individual and combined moderation involving SS and gender. The data was managed and analysed using IBM SPSS v25 (complemented by the PROCESS tool v4.2).

Control Variables

Two demographic factors were selected for this study to act as control variables. The choice to include age and marital status as covariates was informed by the literature. In particular, age (the actual age the study's participants reported) and marital status (single = 1, married = 2) were controlled for in the moderation model. Empirical studies have examined the role of gender, age, and marital status and their impact on CE

among medical students. While significant gender differences in empathic behaviour among medical students have been found-with female students showing higher levels of CE (Hegazi et al., 2017), the same cannot be said for age and marital status as most studies have reported insignificant association or difference in empathy across age groups and marital status. Hence, it is important to control for these factors in the moderation model. Accordingly, Cooper et al. (2020) stated that analyzing covariates is crucial because it reduces the bias brought on by missing variables in a model. Age and marital status have also been included as covariates in comparable studies that have been published in the literature (Edosomwan et al., 2024; Edosomwan et al., 2021; Hegazi et al., 2017; Jeffries et al., 2014; Khan et al., 2022).

Results

Common Method Bias and Psychometric Properties of the Instruments

The researchers adopted two statistical techniques as diagnostic tools to assess the presence of common method bias (CMB) in the data set: Harman's single-factor test and the correlation matrix technique. The results of the analyses were within acceptable bounds. As per the test results of the Herman's single-factor test, the first factor explained 16.12% of the variation. According to these figures, CMB is not a problem in the data set, as evidenced by the first factor's inability to explain up to 50% of the overall variation. The second statistical method used for evaluating the presence of CMB in the data was the correlation matrix technique. This method uses correlations between latent variables to evaluate the effect of CMB. According to this technique, a high correlation (r >.90) between the study's major constructs is an indication of the presence of CMB. Therefore, a correlation < .90 signifies the absence of CMB (Tehseen et al., 2017). The correlation values for the variables were moderate and within the normal range further supporting the result of Herman's single-factor test for the absence of CMB in the data set.

After CMB was evaluated in the data set, the data was examined for normal distribution. The values obtained are shown in Table 1. The skewness and kurtosis values fell between -.386 and +2.615, which was sufficient for a sample of 202 or more. According to Hair et al. (2010), the normality assumption is fulfilled when the skewness value is within the range of ±2 and the value for the kurtosis is within the range of ±7. These results were consistent with a normal distribution of the data (Demir, 2022). The instrument's reliability was then verified through internal consistency using Cronbach's coefficient and McDonald's omega. The Cronbach's alpha values demonstrated adequate reliability coefficients for each of the data collection instruments, following the suggestion made by Howitt and Cramer (2017). The values ranged from .790 to .871. According to Francis et al. (2022), McDonald's

ω, which is determined by factor assessment, was also found to be satisfactory, with values ranging from .800 to .879. The inter-scale correlation allowed for convergent validity to be attained. The three primary variables were measured using scales that are already in the literature. This was used to assess content validity, and the inter-item correlation values shown in Table 2 further demonstrated evidence of convergent validity (Field, 2018; Francis et al., 2022).

Table 1.
Report of Normal Distribution and Reliability of the Instruments

	Skewness	*Kurtosis*	*Items*	*Cronbach's alpha*	*McDonald's* **ω**
Emotional Intelligence	-.626	1.461	10	.807	.812
Spirituality	-.849	.426	11	.871	.879
Clinical Empathy	-.386	2.615	17	.790	.800

Descriptive Statistics and Correlations

Based on the values presented in Table 2, EI positively and significantly correlate with CE ($r = .317$, $p < .01$), thus, indicating that an increase in EI scores is associated with an increase in the scores for CE. From the figures in Table 2, SS positively correlate with CE ($r = .165$, $p < .05$), with the statistics showing that an increase in the scores for SS necessitates an increase in the scores for CE. Also, SS correlate positively and significantly with EI ($r = .365$, $p < .01$) indicating that an increase in the scores for SS leads to an increase in scores for EI. Additionally, for the demographic characteristics, the researchers used as covariates in the moderation model, marital status was found to have a significant negative relationship with SS ($r = -.146$, $p < .05$). The data did not exhibit any problems with multicollinearity because all of the variables had modest correlation values < .80. These values also provided support, using this benchmark, for the correlation matrix technique used in survey studies to evaluate CMB (Tehseen et al., 2017).

Table 2.
Descriptive statistics and correlation coefficients

		M	*SD*	*1*	*2*	*3*	*4*	*5*
1	Gender	1.574	.495					
2	Age	22.526	2.835	-.212**				
3	Marital Status	1.075	.316	-.050	.149*			
4	Emotional Intelligence	4.030	.562	-.039	.008	-.128		
5	Spirituality	4.408	.573	.044	.041	-.146*	.365**	
6	Clinical Empathy	3.445	.549	-.026	-.079	.044	.317**	.165*

Note: * < .05; ** < .01; Gender was coded as 1 = male, 2 = female; marital status coded as 1 = single, 2 = married, Age was coded in years.

Testing the Research Propositions: Direct and Conditional Effects

The independent effect of EI and SS on CE are presented in Table 3. The statistics supported hypotheses 1 and 2. For the first hypothesis, EI has a positive significant

effect on CE (*B*= .309, 95% CI [.180, .438], $t = 4.721$, $p < .01$). According to the *B*-statistics, there is a.309 rise in CE for every unit increase in EI. The R^2 statistics indicate that EI accounts for a 10% variance in CE and also indicate that the effect on CE is small. The analysis of variance (ANOVA) statistics, $F(1,200) = 22.288$, $p < .01$, showed evidence of statistically significant regression, and this indicates CE can be predicted from EI. The first hypothesis (H_1) was accepted. For hypothesis 2, SS has a positive and significant effect on CE (*B*= .158, 95% CI [.026, .290, $t = 2.369$, $p < .01$). The *B*-values indicate that a one-unit increase in SS leads to a .158 unit increase in CE. The R^2 statistics indicate that SS accounts for a 2.7% variance in CE and also indicate that the effect of SS on CE is of a small magnitude. The values for analysis of variance (ANOVA) statistics, $F(1,200) = 5.610$, $p < .01$, showed a significant regression, indicating that CE can be predicted from SS. Hence, the second hypothesis (H_2) was accepted. The tolerance values and variance inflation factor obtained were within the normal range showing that the data set has no issues with multicollinearity (Field, 2018).

Table 3.
Simple regression analysis on the effect of EI and SS on CE

	B	*SE*	***β***	*t*	*P*	*95% CI*		R^2	*Adj* R^2	*F*
						Lower Limit	*Upper Limit*			
Constant	2.199	.267		8.251	.000	1.674	2.725			
EI	.309	.066	.317	4.721	.000	.180	.438	.100	.096	22.288
Constant	2.749	.297		9.272	.000	2.165	3.334			
SS	.158	.067	.165	2.369	.019	.026	.290	.027	.022	5.610

Note: EI = emotional intelligence; SS = spirituality; CE = clinical empathy

Table 4 displays the outcomes of the different relationship and moderation pathways that were tested. Model 2 of the Hayes PROCESS Macro tool for moderation analysis was utilized for testing the individual and joint effects of SS and gender on the EI-CE relationship. The model's confidence interval was computed using a bootstrapped CI based on 5000 samples. The model containing all the variables (dependent, independent, covariates, and moderators) was significant, $R = .387$; $R^2 = .149$; $F = 4.566$; $p < .001$. The R^2 value indicates that the variables in the model account for a 15% variance in medical students' CE. The results showed that after controlling for age and marital status, EI significantly and positively predicted CE, $b = .261$, 95% CI [.108, 414], $p = .000$.

Table 4.
Moderation analyses of the individual and combined interaction effects

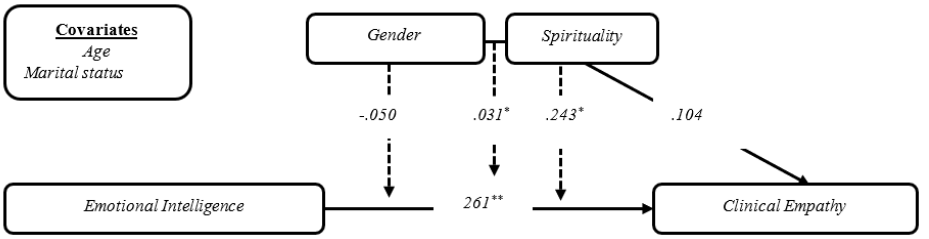
	B	*Se*	*t*	*95% CI*		R^2 *Change*	*F*	*P*
				Lower Limit	*Upper Limit*			
Constant	3.737	.322	11.560	3.095	4.369			.000
Emotional intelligence	.261	.077	3.367	.108	.414			.000
Spirituality	.104	.072	1.437	-.038	.246			.152

Interaction_1 (EI*SS)	.243	.110	2.194	.024	.463	.022	4.817	.029
Gender	-.050	.079	-.633	-.207	.106			.527
Interaction_2 (EI*Gender)	.283	.158	1.782	-.030	.596	.015	3.177	.076
EI*SS*Gender						.031	3.283	.039
Model Summary	$R = .387$, $R^2 = .149$, $F = 4.566$, $p < .001$							

Note: EI = emotional intelligence; SS = Spirituality

On average, a unit increase in medical students' EI leads to a .261 increase in their CE for patients. In the model, SS did not significantly predict CE after controlling for age and marital status, $b = .104$, 95% CI [-.038, .246], $p = .152$. This is different compared to the significant result obtained from the simple regression analysis. The results further indicated that SS moderate the relationship between EI and CE, $b = .243$, 95% CI [.024, .463], $p = .029$. The interaction term between EI and SS was significant hence indicating that SS moderated the relationship between EI and the CE of medical students. Consequently, the third hypothesis (H_3) was accepted. Gender did not moderate the relationship between EI and CE, $b = -.050$, 95% CI [-.207, .106], $p = .527$. Consequently, the fourth hypothesis (H_4) was rejected. Further, the overall combination of both interactions have a significant effect on the relationship between EI and CE, $F(2, 200) = 3.283$, $p = .039$, R^2 *Change* = .031. Hence both moderators jointly moderates the relationship between EI and CE. Consequently, the fifth hypothesis (H_5) was accepted.

Figure 2.
Statistical output for the hypothesised model



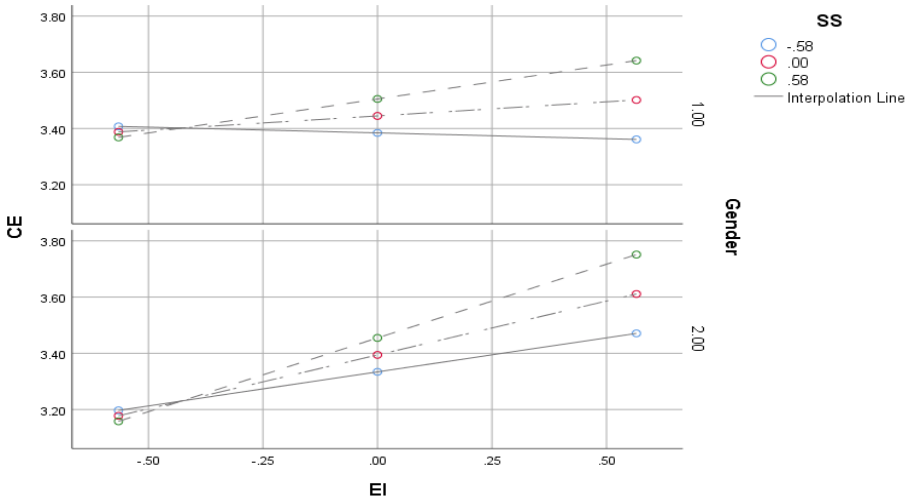
Note: * < .05; ** < .01

Table 5.
Conditional effects of EI on CE at values of SS and gender

Spirituality	*Gender*	*Effect*	*Se*	*t*	*P*	*Lower Limit CI*	*Upper Limit CI*
-.5801	1	-.040	.159	-.255	.798	-.356	.274
-.5801	2	.242	.095	2.539	.011	.054	.430
.0000	1	.242	.137	.729	.466	-.171	.371
.0000	2	.383	.084	4.550	.000	.217	.549
.5801	1	.241	.143	1.682	.094	-.041	.524
.5801	2	.524	.115	4.535	.000	.296	.753

Further analysis depicted in Table 5 shows the conditional effect of EI on CE at values of the moderators: -1 standard deviation below the mean (low), at the mean value (medium), and +1 standard deviation above the mean (high). Specifically, it depicts the conditional effects of low SS at low (males) and high (females) levels of gender and their implications for the nexus between EI and CE. The conditional effect was significant and more substantial for female participants at the mean, b = .383, 95% CI [.217, .549], t = 4.550, p < .001, and high levels of SS, b = .524, 95% CI [.296, .753], t = 4.535, p < .001. The conditional effect further supported Hypothesis three (H_3) and Hypothesis five (H_5). There were no significant conditional effects at levels of SS when the participants were male. These are shown in the plot below.

Figure 3.
Interaction effects of EI, SS and gender in predicting CE



Discussion

This study examined EI and its relationship with clinical empathy in a sample of medical students. The study also examined the individual and combined moderating roles of SS and gender in the relationship between EI and CE. The study examined five hypotheses using a regression-based analysis. One may infer the following conclusion by contrasting the findings of this investigation with those of earlier ones. The first hypothesis which stated that EI would positively predict CE was supported. Hence, an increase in EI necessitates an increase in clinical empathy. This further affirms the literature on the idea that the emotional attributes of healthcare personnel affect how they respond and behave in the presence of patients (Mosallanezhad et al., 2023). This result is similar to studies that have examined the role of EI on compassion and care-related behaviours (Abe et al., 2018; Deng et al., 2023; Hajibabaee et al.,

2018; Rfan et al., 2019; Wang et al., 2018). Therefore, medical students must acquire emotional skills to improve their perception and expression, and control of their emotions to improve patient care and collaborate effectively with colleagues.

In the model analysis (controlling for age, marital status and other variables in the model) outside the direct connection between SS and CE, the results indicated a non-significant relationship between SS and CE but the result for the second hypothesis (H_2) using simple regression analysis showed that SS positively predict CE among medical students; therefore supporting the notion that SS promote CE. Empathic behaviour can be strengthened by SS. This is consistent with the studies that posited that SS has positive implications for personal health, individual flexibility and openness, and individuals' behaviour and attitude towards others (Shakarian et al., 2021; Güner & Akyüz, 2023; Kleftara & Vasilou, 2016). The result is also in line with studies that have established a relationship between SS and attributes such as forgiveness, prosocial, compassion, and caring behaviour (Baker et al., 2017; Khalili et al., 2023; Raj & Padmakumari, 2023; Thomas et al., 2019; Travis et al., 2023).

Accordingly, the result of the third hypothesis showed that SS moderated the EI-CE relationship. This is an indication that at different levels of SS, there is likely going to be an attenuation or increase in the EI-CE relationship. This is in agreement with studies that have used SS as a moderator and found significant conditional effects in the theory of mind and prosocial behaviour relationship, religiosity and positive behaviours (Buenconsejo & Datu, 2023; Khalili et al., 2023). For the fourth hypothesis, gender was not a significant moderator in the EI and CE relationship. In the model, at different levels of gender after controlling for age and marital status, gender had no individual conditional effect on the relationship between EI and CE. Although the result is not consistent with Falavarjani and Yeh (2019) whose findings showed a moderating role of gender on the link between nurses' optimism and distress tolerance, the inconsistencies in gender differences in empathy and other compassion-related behaviour in past studies give credence to the current findings (Edosomwan & Nwanzu, 2023; Jung et al., 2022).

The fifth and final hypothesis examined the combined moderating effect of SS and gender on the EI-CE relationship. When gender interacted further with levels of SS, a significant combined moderating effect was found such that the relationship between EI and CE was pronounced for medical students who were females and with higher levels of SS. This result is supported by studies in the literature. This is attributed to earlier studies showing the moderating capacity of SS (Buenconsejo & Datu, 2023; Khalili et al., 2023), and gender (Falavarjani & Yeh, 2019) and the positive connection between SS on compassion and caring behaviour (Stewart & Lawrence, 2021; Thomas et al., 2019). This result also agrees with the gender socialisation

theory which explains that due to differences in upbringing, males and females tend to display differences in behaviour across social settings (Leaper & Farkas, 2015). Higher levels of SS among female medical students might have interacted with EI to predict higher levels of CE because females are often expected to show care and compassion for others (Deng et al., 2023; Kuhnert et al., 2017). These social and cultural expectations explain the reason CE was high when SS and gender (female medical students) interacted with EI. On the other hand, no significant conditional effects at different levels of SS were observed in the EI-CE relationship when the participants were male medical students. This result rests on the notion that males are often expected to show masculine traits such as self-affirmation, aggression, dominance and sometimes lack of consideration for the feelings of others (Deng et al., 2023; Quenneville et al., 2022).

These gender role expectations are largely embedded in the Nigerian culture and other similar cultures around the world. Hence, this could be the defining factor behind the results obtained for the combined moderating roles of gender and SS on the EI-CE relationship. Therefore, while it is important to encourage a sense of spirituality and a deep calling to life and the medical profession; medical school administrators and instructors must also emphasise the importance of cultivating certain emotional skills that are necessary for medical students to conduct themselves as medical professionals irrespective of the environmental and cultural expectations surrounding their gender. This is important because the results reflected a significant change in the combined effects of gender and SS in the EI-CE relationship. This change was pronounced and significant for female medical students. Therefore, recognising the need to remove the impediments posed by gender expectations is important to foster patient positive experiences in clinical settings. Patients deserve quality care regardless of the gender of the medical professional responsible for their care management. This is achievable through a structured clinical curriculum centred on the need for compassion and empathy in medicine.

Conclusion

In conclusion, the findings of this study give greater insights into the effect of EI, SS, and gender on CE among medical students. The results showed that the presence of EI – the capacity to understand one's and others' emotions and react to events in the environment based on this understanding – enhances the tendency of medical students to show CE towards patients. This is because through EI, medical students develop a sense of awareness, and emotional regulations, and have the social skills necessary to react perceptively to patients' demands. Also, the attachment and belief systems structured around SS – a meaningful connection to something greater than oneself – facilitated the act of CE among medical students. In addition, SS moderated the

EI-CE relationship while gender did not. In the combined interaction effects model, SS and gender both moderated the EI-CE relationship such that the relationship was stronger for female medical students with higher levels of SS.

Accordingly, the roles of EI, SS, and gender expectations in this context cannot be overemphasised. The understanding of the salient roles of these predictor and moderator variables can help in designing interventions at the individual levels and through the enhancement of the medical curriculum to capture the essence of care and the roles of empathy in the patient-physician relationship and the treatment process. As a result, the study suggests that medical school administrators and policymakers should create a system that promotes factors that facilitate empathic behaviour among medical students.

Limitations and Avenues for Further Studies

There are certain limitations in the study. First, a university in Nigeria provided the sample for the research. There are still some geographic limitations in the data. The fact that the students were recruited from a single geographic location may have limited the results' generalizability. To derive a more comprehensive conclusion, future research should look at medical students from different parts of Nigeria and across the world. Given that the current study was conducted at a single university site, future research on this topic should be multi-centre and incorporate the data of medical students from multiple educational institutions. Additionally, it is important to conduct a multi-level analysis that takes into consideration specific demands and needs based on geographic locations, sociodemographic factors, and other individual factors that may likely impact the tendency to be empathetic towards patients. The second limitation is that the study relied solely on self-report measures, or self-rating scales, which may have introduced recall bias into the evaluation of EI, SS, and CE. Respondent bias may have arisen as a result of social desirability. In questionnaire-based research, it is typically challenging to control for socially desirable responses, even though the study's design included procedural controls for CMB. As such, objective evaluations are a preferable method of measuring the constructs.

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Authors' contribution. The authors contributed equally to this manuscript.

Peer-review. This research was rigorously evaluated by two or more experts in the field, and the study was refined based on their recommendations.

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Research Article

Investigating the Mediating Roles of Hopelessness and Psychological Distress in the Relationship between Psychological Vulnerability and Well-Being among Married Individuals*

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Abstract

The well-being of married individuals is shaped by various psychological factors, among which psychological vulnerability, hopelessness, and psychological distress play critical roles. This study investigates how psychological vulnerability impacts well-being through the mediating effects of hopelessness and psychological distress. The sample comprised 522 married individuals aged 23 to 67 (M = 36.70, SD = 10.77). Data were collected using the Psychological Vulnerability Scale, Patient Health Questionnaire-4, Beck Hopelessness Scale, and Mental Health Continuum Short Form. Internal consistency reliability coefficients and composite reliability of the variables were calculated. Pearson Correlation analysis was employed to examine the relationships between variables, and Structural Equation Modeling (SEM) was used to test the mediating roles. The significance of direct and indirect relationships was assessed using the bootstrap method. The analysis revealed significant correlations among the variables. SEM results indicated that psychological vulnerability positively and significantly predicted hopelessness and psychological distress, while hopelessness and psychological distress negatively predicted well-being. Additionally, the serial mediation of hopelessness and psychological distress in the relationship between psychological vulnerability and well-being was found to be significant. These findings suggest that psychological vulnerability can adversely affect the well-being of married individuals through the serial mediation of hopelessness and psychological distress. This study may contribute valuable insights to the literature and offers practical implications for couple and family counseling.

Keywords:
Psychological vulnerability • Hopelessness • Psychological distress • Well-being • Married individuals

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Introduction

Marriage has an important place in individuals' lives and can have both positive and negative psychological effects. The well-being of married individuals is shaped by the quality of the marital relationship and individual psychological factors. Furthermore, the psychological health of each spouse directly impacts the stability and quality of the marital relationship, the parenting experience of couples, child development, and overall family harmony (Kiecolt-Glaser & Newton, 2001). Previous studies have emphasized that marriage is often associated with higher physical health, subjective and psychological well-being, and financial stability (Carlson, 2012; Diener et al., 1999; Grover & Helliwell, 2017; Purol et al., 2020; Stanley et al., 2012). However, explaining individuals' well-being solely based on the marriage factor would be insufficient (Grover & Helliwell, 2017; Olson et al., 2019). Each married individual's experience and how they are affected by this experience can vary. Therefore, it is important to examine the factors that may influence the well-being of married individuals.

Alongside the various benefits that marriage brings, individuals also encounter unique stress factors such as balancing family responsibilities, raising children, financial difficulties, managing household chores, adapting to the stages of the family life cycle, and meeting the expectations of their spouse (Gladding, 2018). Individuals who can effectively cope with these stressors tend to have higher levels of well-being and, consequently, higher levels of marital adjustment (Karney & Bradbury, 1995). However, individuals with high levels of psychological vulnerability may experience greater stress due to these marital duties and responsibilities (Kiecolt-Glaser, 2018). As a result of social relationships, individuals may develop negative cognitive schemas in response to various expectations, making them more vulnerable (Sinclair & Wallston, 1999). Psychological vulnerability, which is associated with negative affect, low stress tolerance, depressive symptoms, and a predisposition to mental health problems, can increase hopelessness and psychological distress, thereby negatively impacting individuals' well-being (Sinclair & Wallston, 2004). Lower levels of well-being in individuals can lead to increased conflicts between couples and lower relationship and marital satisfaction. Therefore, examining how psychological vulnerability affects the well-being of married individuals and the role of factors influencing this relationship can offer significant contributions to the literature and the practice of couple and family counseling. Consequently, this study will investigate the mediating roles of hopelessness and psychological distress in the relationship between psychological vulnerability and well-being among married individuals.

Psychological Vulnerability and Well-being

Psychological vulnerability, which refers to having negative cognitive schemas that make individuals more susceptible to stress, can be defined as a cognitive belief

in self-worth that is dependent on success or the approval of others (Sinclair & Wallston, 1999). This vulnerability, which denotes the difficulty and susceptibility individuals face in coping with emotional and psychological challenges, can weaken their capacity to manage stress (Sinclair & Wallston, 2004). In the context of married individuals, psychological vulnerability can be exacerbated by factors such as conflicts between spouses, lack of support, and communication issues. Those who are more vulnerable to marital stressors may be at risk of experiencing depression, anxiety, and other psychological problems (Ingram & Price, 2010). Vulnerable individuals tend to withdraw more quickly when faced with challenging life experiences (Levine, 2004) and experience more negative emotions (Lyubomirsky & Lepper, 1999). Individuals with high levels of psychological vulnerability need constant approval from others to feel good about themselves, feel devastated when confronted with criticism or failure, and struggle to cope with uncertainties, stressors, or negative experiences (Sinclair & Wallston, 1999).

Research has shown that psychological vulnerability can increase the risk of depression, anxiety, and other mental health issues (Cox et al., 2001; Ingram & Luxton, 2005) and is negatively associated with positive affect, life satisfaction, subjective happiness, and optimism (Satıcı & Uysal, 2017; Sinclair & Wallston, 1999; Uysal, 2015). Psychological vulnerability can lower individuals' levels of life satisfaction and the quality of their social relationships (Karney & Bradbury, 1995). Additionally, individuals with high psychological vulnerability may experience negative emotions more frequently, have weaker relationships, and face significant challenges in maintaining their well-being (Hankin, 2008; Sinclair & Wallston, 1999).

Psychological vulnerability plays a significant role in influencing individuals' levels of well-being (Satıcı, 2016; Satıcı & Uysal, 2016; Yelpaze et al., 2021). Well-being in married individuals is a comprehensive concept comprising psychological, emotional, and social dimensions. Psychological well-being encompasses how individuals perceive themselves positively, find purpose in life, experience personal growth, nurture positive relationships, maintain independence, and effectively manage their environment (Ryff, 1989). Seligman's (2011) PERMA model delineates psychological well-being through five key components: Positive emotions, engagement, relationships, meaning, and accomplishment. Emotional well-being focuses on individuals' management of negative emotions, enhancement of positive emotional experiences, and their frequency and intensity (Diener, 1984; Fredrickson, 2001; Lyubomirsky et al., 2005). Social well-being centers on the quality of social experiences, contributions to society, and the strength of social bonds (Keyes, 1998). Collectively, these dimensions significantly influence the quality of life and marital satisfaction among married individuals.

Hopelessness and Psychological Distress as Mediators

Psychological vulnerability, often closely linked with negative emotional states and susceptibility to stress, can lead individuals to experience hopelessness (Haeffel, 2010; Haeffel et al., 2008; Ingram, 2003; Ong et al., 2018; Satıcı & Uysal, 2017). Hopelessness can be described as the absence of positive emotions and expectations about the future, lacking a positive and predictable outlook (Beck et al., 1974). It is largely associated with a decrease in positive expectations (Donaldson et al., 2000; Marchetti, 2018) and is linked with high vulnerability to psychopathology and mood disorders, as well as depression and poor psychological functioning (Beck et al., 1975; Ong et al., 2018). When individuals feel hopeless, they may struggle to find meaning and purpose in life, thereby reducing their overall well-being. A study conducted with unemployed adults (Lynd-Stevenson, 1997) found that hopelessness mediated the relationship between vulnerability factors and depression. In a study by Satıcı and Uysal (2017) with university students, hopelessness was found to mediate the relationship between psychological vulnerability and subjective happiness. Another study (Satıcı, 2016) found a meaningful mediating role of hope in the relationship between psychological vulnerability and subjective well-being. Therefore, hopelessness can act as a mediator, explaining how psychological vulnerability reduces individuals' levels of well-being.

Hopelessness can lead to increased levels of psychological distress, including depression and anxiety (Marchetti et al., 2016; Palacio-Gonzalez & Clark, 2015). It can predict rises in depressive mood immediately following negative outcomes linked to psychological vulnerability (Abela & Seligman, 2000). Hopelessness may mediate the relationship between various stress factors and psychological distress (e.g., depression and anxiety) (Manne & Glassman, 2000). Research has identified hopelessness as a significant factor influencing individuals' psychological well-being, with a positive correlation between hopelessness and psychological distress (Parwez & Rahim, 2022). Psychological distress is associated with psychological vulnerability, which can be impacted by various stress factors (Almeida & Kessler, 1998; Cox et al., 2001). Individuals with psychological vulnerability may experience heightened levels of psychological distress (Nogueira et al., 2017; Sinclair & Wallston, 1999). Psychological distress includes intense experiences of depression and anxiety, significantly affecting individuals' overall mental health (Kroenke et al., 2009). Daily stress factors, particularly within marriage, can heavily influence psychological distress (Almeida & Kessler, 1998). Moreover, psychological distress, shaped by factors such as coping strategies, hope, and social support, plays a crucial role in mental health outcomes and can negatively impact well-being (Huda et al., 2021; Wang & Wang, 2019).

The Present Study

Previous studies have highlighted the negative relationship between psychological vulnerability and well-being (Anjum & Aziz, 2024; Satıcı, 2016; Satıcı & Uysal, 2017; Yelpaze et al., 2021). However, the relationships between psychological vulnerability and well-being among married individuals have not been sufficiently examined. These relationships among married individuals can be complex and multifaceted. The mediating roles of hopelessness and psychological distress may help to understand the relationship between psychological vulnerability and well-being among married individuals. Understanding these connections could be crucial for developing interventions and support systems aimed at enhancing the mental health and overall well-being of married individuals. In the literature, the relationship between psychological vulnerability and well-being has not been examined with the mediating roles of hopelessness and psychological distress together. Therefore, investigating how psychological vulnerability affects the well-being of married individuals and the role of factors influencing this relationship could contribute significantly to the literature and to couple and family counseling practices. Hence, this study aims to examine the relationships among psychological vulnerability, hopelessness, psychological distress, and well-being among married individuals. Additionally, the mediating roles of hopelessness and psychological distress in the relationship between psychological vulnerability and well-being are also examined. The following hypotheses were tested in line with the objectives of the study:

H1. Psychological vulnerability is positively associated with hopelessness and psychological distress.

H2. Psychological vulnerability is negatively associated with well-being.

H3. Hopelessness and psychological distress are negatively associated with well-being.

H4. Hopelessness and psychological distress mediate the relationship between psychological vulnerability and well-being.

Method

Participants and Procedure

The participants of the study consisted of 522 married individuals selected through convenience sampling methods, comprising 270 (51.72%) females and 252 (48.28%) males. Their mean age was 36.70 years (SD = 10.27, range = 23—67). Among the participants, 142 (27.20%) did not have children, while the remaining participants had at least one child. Regarding education, 269 participants (51.53%) were

university graduates. In terms of employment status, 340 participants (65.13%) were employed in some capacity, while 118 (22.61%) were unemployed or homemakers. Demographic data of the participants are presented in Table 1.

Table 1
Participants' demographic characteristics

Variable	Grup	N (Mean, SD)	% (range)
Age		36.70 ± 10.27	23—67
Gender	Female	270	51.72
	Male	252	48.28
Number of children	0	142	27.20
	1	107	20.50
	2	181	34.67
	3+	92	17.63
Education Level	Primary School	75	14.368
	Middle School	36	6.897
	High School	142	27.20
	University Graduates	269	51.53
Socioeconomic Status	Low	164	31.41
	Medium	259	49.62
	High	99	18.97
Employment Status	Unemployed	118	22.61
	Employed	340	65.13
	Retired	64	12.26

The data were collected through Google Forms, which were distributed via the researcher's social media accounts. Participation was limited to individuals aged 18 and older who were married. Informed consent was obtained from all participants, and the consent form provided details about the study's purpose, assurance of confidentiality for personal information, the use of data solely for research purposes, participants' right to withdraw from the study at any time, and the voluntary nature of participation.

Measures

Psychological Vulnerability

Psychological vulnerability levels of the participants were assessed using the Psychological Vulnerability Scale (PWS), adapted into Turkish by Akın and Eker (2011) from the scale developed by Sinclair and Wallston (1999). The scale consists of 6 items rated on a 5-point Likert scale (1 = Not at all like me, 5 = Exactly like me). Sample items include "I need approval from others to feel good about myself." Scores on the scale range from 6 to 30, with higher scores indicating higher levels of psychological vulnerability. The internal consistency coefficient (Cronbach's α) for the scale was found to be .75 (Akın & Eker, 2011). In the current study, the reliability coefficients for the scale were also found to be good (α = .748, ω = .751).

Hopelessness

Participants' levels of hopelessness were measured using the Beck Hopelessness Scale (BHS; Beck et al., 1974), adapted into Turkish by Durak and Palabıyıkoğlu (1994). The scale consists of 20 items divided into three factors (feelings about the future, loss of motivation, expectations about the future). Each item is scored as either true (1 point) or false (0 points). Sample items include "I might as well give up because I can't make things better for myself." Scores on the scale range from 0 to 20, with higher scores indicating higher levels of hopelessness. The reliability coefficients for the subscales of the scale range from .72 to .78 (Durak & Palabıyıkoğlu, 1994). In the current study, the reliability coefficients for the BHS were high (α = .864, ω = .870).

Psychological Distress

Participants' levels of psychological distress (depression and anxiety) were assessed using the Patient Health Questionnaire-4 (PHQ-4; Kroenke et al., 2009). The scale consists of 4 items rated on a 4-point Likert scale (0 = Not at all; 3 = Nearly every day). PHQ-4 includes items such as "Feeling nervous, anxious, or on edge" and "Little interest or pleasure in doing things." The Turkish version of PHQ-4 was translated by Demirci and Ekşi (2018). Scores on the scale range from 0 to 12, with higher scores indicating higher levels of psychological distress. Confirmatory factor analysis for the one-factor model yielded good fit indices (SRMR = .008, RMSEA = .000, CFI = 1.00, TLI = 1.00). The Cronbach's α coefficient for PHQ-4 was found to be .83 (Demirci & Ekşi, 2018). In the current study, the reliability coefficients for PHQ-4 were also found to be good (α = .807, ω = .816).

Well-being

Participants' levels of well-being were assessed using the Mental Health Continuum Short Form, adapted into Turkish by Demirci and Akın (2015) from the scale developed by Keyes et al. (2008). The scale consists of 14 items divided into 3 subscales (emotional well-being, social well-being, psychological well-being) and is rated on a 6-point Likert scale (0 = Never, 5 = Every day). Sample items include "I felt that my life had a direction and purpose." Scores on the scale range from 0 to 70, with higher scores indicating higher levels of well-being. The scale demonstrated good fit indices in previous research (χ^2/df = 3.26, RMSEA = .079, NFI = .96, IFI = .97, CFI = .97, GFI = .92, SRMR = .049). The reliability coefficient for the total score of the scale was found to be .90 (Demirci & Akın, 2015). In the current study, the reliability coefficients for the scale were also found to be high (α = .913, ω = .913).

Data Analysis

Firstly, descriptive statistics, tests of normality assumptions, and internal consistency coefficients were calculated for the variables. In order to meet the normality assumption,

skewness and kurtosis values between -1.5 and +1.5 are recommended (Tabachnick & Fidell, 2013). Pearson product-moment correlations were conducted to examine relationships between variables. Cronbach's α and McDonald's ω coefficients were computed to assess the reliability levels of the variables.

Structural equation modeling (SEM) was used to test the mediating role of psychological distress and hopelessness in the relationship between psychological vulnerability and well-being (Kline, 2015). In SEM analysis, the measurement model was first evaluated, followed by the analysis of the structural model. Fit indices such as root-mean-square error of approximation (RMSEA), standardized root-mean-square residual (SRMR), goodness of fit index (GFI), comparative fit index (CFI), and normed fit index (NFI) were examined to assess model fit. RMSEA and SRMR values below .08, and GFI, CFI, NFI, and IFI values above .90 indicate acceptable model fit (Hu & Bentler, 1999; Kline, 2015). Additionally, to reduce measurement errors in single-factor measurements, a parceling technique was used (Little et al., 2002). Therefore, the single-dimensional PVS was divided into two parcels. Bootstrap analyses with 5000 resamples and 95% confidence intervals were conducted to provide additional evidence regarding the significance of direct and indirect effects of the variables in the tested models (Preacher & Hayes, 2008). In Bootstrap analysis, an effect is considered significant when its confidence interval does not include zero. Data were analyzed using IBM SPSS Statistics 22 and AMOS 24 software programs.

Results

Preliminary Analysis

The analysis results (Table 2) indicated that the variables' kurtosis and skewness values were within the range of -1.5 to 1.5, demonstrating normal distribution of the data. Correlation analysis results showed that psychological vulnerability was positively associated with hopelessness ($r = .468$, $p < .001$) and psychological distress ($r = .378$, $p < .001$), and negatively associated with well-being ($r = -.321$, $p < .001$). Psychological well-being was negatively correlated with hopelessness ($r = -.570$, $p < .001$) and psychological distress ($r = -.350$, $p < .001$). Furthermore, a positive correlation was found between hopelessness and psychological distress ($r = .423$, $p < .001$).

Table 2
Descriptive statistics, reliability coefficients, and correlation values

Variables	Mean	SD	Skew.	Kur.	CR	AVE	α	ω	1	2	3
(1) PV	17.79	5.48	0.03	-0.71	.764	.618	.748	.751	—		
(2) Hopelessness	5.44	4.48	1.08	0.46	.808	.586	.864	.870	.468*	—	
(3) PD	4.90	2.66	0.68	0.23	.783	.644	.807	.816	.378*	.423*	—
(4) Well-being	41.96	13.43	-0.28	-0.12	.830	.619	.913	.913	-.321*	-.570*	-.350*

Note. PV= psychological vulnerability, PD = psychological distress, SD= standart deviation, Skew.= Skewness, Kur.= Kurtosis, CR = composite reliability, AVE = average variance extracted, α = Cronbach's alpha, ω = McDonald's omega, * $p < .001$

Measurement Model

Before testing the hypothesis model, the measurement model was first evaluated. The measurement model includes four latent variables (psychological vulnerability, hopelessness, psychological distress, and well-being) and ten observed variables. The analysis results indicated that the measurement model had acceptable fit indices (Table 3). Additionally, composite reliability (CR), average variance extracted (AVE), and reliability coefficients (Cronbach's α and McDonald's ω) were examined to assess the convergent validity of the constructs in the measurement model (see Table 2). The analysis results showed that CRs were above .70 and AVEs were greater than .50, indicating that the measurement model demonstrated convergent and discriminant validity (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Cronbach's alpha reliability coefficients of the variables ranged from .748 to .913, while McDonald's omega coefficients varied between .751 and .913.

Structural Equation Modeling

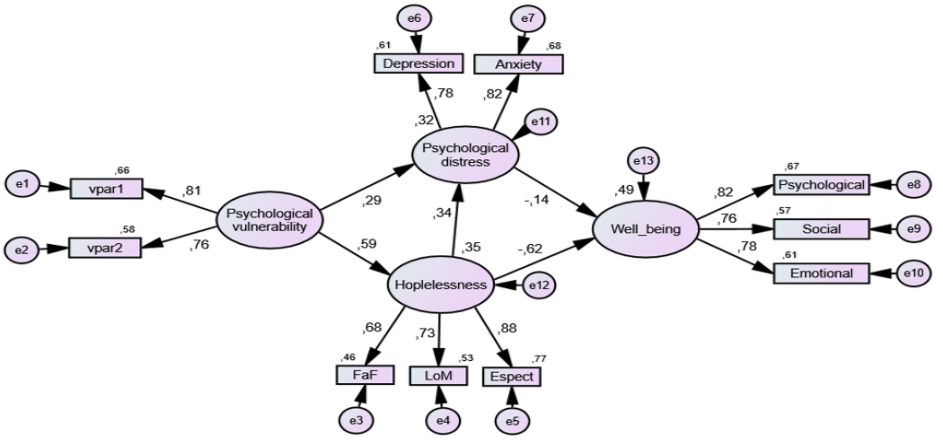
The study utilized SEM to examine the mediating role of hopelessness and psychological distress in the relationship between psychological vulnerability and well-being. Three different structural models were tested (Table 3). Initially, Model 1 explored the partial mediating role of psychological distress and hopelessness in the relationship between psychological vulnerability and well-being, revealing that the model had acceptable fit indices. However, it was found that the direct path coefficient from psychological vulnerability to well-being was not significant. Subsequently, Model 2 investigated the full mediating role of psychological distress and hopelessness, demonstrating acceptable fit. Finally, considering modification suggestions from Model 2, Model 3 was tested by adding a path from hopelessness to psychological distress. Model 3 exhibited good fit indices. Upon examination, Model 3 showed better fit indices and smaller AIC and ECVI values compared to the other tested models. Fit indices for the tested models are presented in Table 3. Standardized path coefficients for accepted Model 3 are shown in Figure 1.

Table 3
Fit indices for the measurement model and alternative structural models

Models	$\chi 2$	df	GFI	CFI	NFI	IFI	SRMR	RMSEA	AIC	ECVI
Measurement Model	180.48	29	.94	.93	.92	.93	.049	.080	232.490	.446
Model 1	203.43	30	.93	.92	.91	.92	.064	.100	253.43	.486
Model 2	204.35	21	.93	.92	.91	.93	.062	.085	252.35	.484
Model 3	180.79	30	.94	.94	.93	.93	.050	.078	230.79	.432

Figure 1.

Standardized values for the mediating role of hopelessness and psychological distress in the relationship between psychological vulnerability and well-being. (Note. vpar = psychological vulnerability parcell, FaF = feeling about future, LoM = loss of motivation, Expect =expectation.)



When analyzing the results, it was found that psychological vulnerability positively predicted hopelessness (β = .59, p < .001) and psychological distress (β = .29, p < .01). Hopelessness positively predicted psychological distress (β = .34, p < .001) and negatively predicted well-being (β = -.62, p < .001). Psychological distress also negatively predicted well-being (β = -.14, p < .05). Additionally, the direct effect of psychological vulnerability on well-being was non-significant; however, its indirect effect through hopelessness and psychological distress on well-being (β = -.43, 95% CI [-.50, -.37]) was significant. Together, the dependent and mediating variables accounted for 49% of the variance in well-being scores. Bootstrap analysis results regarding direct and indirect effects between variables are presented in Table 4.

Table 4

Bootstrap analysis results regarding standardized direct and indirect effects.

				CI %95	
Paths			Coefficients	LB	UB
Direct effects					
PV	→	PD	.290	.134	.435
PV	→	Hopelessness	.593	.512	.668
Hopelessness	→	PD	.344	.182	.494
Hopelessness	→	Well-being	-.615	-.738	-.496
PD	→	Well-being	-.140	-.287	-.079
Indirect effects					
PV	→	PD	.204	.109	.301
Hopelessness	→	Well-being	-.048	-103	-.012
PV	→	Hopelessness + PD → Well-being	-.434	-.501	-.366

Note. CI = confidence interval, LB = lower bound, UB = upper bound, PV= psychological vulnerability, PD = psychological distress. Number of bootstrap samples for percentile bootstrap confidence intervals: 5.000

Discussion

This study sheds light on the relationships between psychological vulnerability and well-being among married individuals. The results emphasize that psychological vulnerability plays a critical role in influencing well-being through the mediation of hopelessness and psychological distress. The research findings can contribute to a more comprehensive understanding of the psychological mechanisms underlying well-being among married individuals.

This study underscores the negative relationship between psychological vulnerability and well-being. However, in the tested model, the direct effect of psychological vulnerability on well-being was not significant. This might be due to its full mediating role through hopelessness and psychological distress. These results confirm that psychological vulnerability is a significant determinant of well-being and aligns with previous research highlighting its association with various negative psychological outcomes (Ingram & Price, 2010). For instance, several studies conducted with university students have demonstrated the negative relationship of psychological vulnerability with subjective well-being (Satıcı, 2016; Satıcı, 2019), subjective happiness (Satıcı & Uysal, 2017), and flourishing (Uysal, 2015). Psychological vulnerability can affect individuals' psychological, physiological, and social functioning by creating stress and anxiety, ultimately leading to mental health problems (Rogers, 1997). These findings suggest that individuals with high psychological vulnerability are at a higher risk of experiencing lower levels of well-being due to increased sensitivity to stressors and negative emotions.

The results showed that psychological vulnerability positively predicted hopelessness, and hopelessness negatively predicted well-being. This finding is consistent with previous research (Eraslan-Capan, 2016; Haeffel et al., 2008; Ingram, 2003; Satıcı, 2016; Satıcı & Uysal, 2017). Additionally, this finding emphasizes the importance of cognitive assessments associated with psychological vulnerability. Hopelessness, linked to negative expectations about the future and a pessimistic outlook, can reduce well-being by contributing to various psychological distresses, particularly depression (Beck, 1967).

The results indicated that hopelessness not only contributes to psychological distress but also mediates the impact of psychological vulnerability on well-being. Previous studies have also emphasized the mediating role of hopelessness. For example, in a study by Satıcı and Uysal (2017) with university students, hopelessness was found to play a full mediating role in the relationship between vulnerability and subjective happiness. Another study with university students found that hope mediated the relationship between psychological vulnerability, resilience, and subjective well-being (Satıcı, 2016). In another study, the mediating role of hopelessness was confirmed in

the relationship between social connectedness and flourishing (Eraslan-Capan, 2016). Lynd-Stevenson (1997), in a study with unemployed adults, observed that hopelessness mediated the relationship between vulnerability factors and depression. These findings suggest that interventions aimed at reducing hopelessness could be effective in mitigating the negative effects of psychological vulnerability on well-being."

This study indicated that psychological distress, including symptoms of depression and anxiety, mediates the relationship between psychological vulnerability and well-being. These findings indicate that individuals with high psychological vulnerability are more likely to experience greater distress in response to stressors (Lazarus & Folkman, 1984). Consistent with these findings, previous research has demonstrated the positive relationship between psychological vulnerability and depression and anxiety, suggesting increased risk for other mental health issues (Cox et al., 2001; Ingram & Luxton, 2005; Nogueira et al., 2017; Struijs et al., 2018). Higher levels of psychological distress may negatively impact the well-being of married individuals. A longitudinal study with cancer patients found that psychological distress and life satisfaction predict each other in the adaptation process to cancer (Hou & Lam, 2014). The results of this study further indicate that psychological distress could exacerbate the negative impact of psychological vulnerability on well-being. A study with adolescents found that depression mediates the relationship between stressful life events and subjective well-being (Ouyang et al., 2021). Thompson et al. (2005) examined the mediating roles of depression, anxiety, and hopelessness in predicting suicidal behavior among high school students, revealing that depression and hopelessness directly affect suicidal behaviors in males, while hopelessness plays a direct role in females. In a study with cardiovascular disease patients (Mei et al., 2021), depression and anxiety were found to fully mediate the relationship between life satisfaction and quality of life. The mediating role of psychological distress underscores the importance of addressing both emotional and cognitive factors in interventions aimed at enhancing well-being.

One of the most original findings of this study is the serial mediation of hopelessness and psychological distress in the relationship between psychological vulnerability and well-being. This serial mediation model demonstrates that psychological vulnerability predicts hopelessness, hopelessness predicts psychological distress, and in turn, this predicts lower levels of well-being. Hopelessness can trigger the development of depressive symptoms, thus negatively impacting well-being (Lynd-Stevenson, 1997). A study with young adults found that hopelessness and depression serially mediate the relationship between loneliness and life satisfaction. Tan Dat et al. (2023) showed in their study with university students that psychological distress and hopelessness serially mediate the relationship between self-esteem and suicidal ideation. The serial mediation of hopelessness and psychological distress highlights

the complex and multifaceted nature of psychological processes affecting the levels of well-being among married individuals. These findings provide important clues for effective psychological counseling interventions aimed at supporting the well-being of married individuals. For instance, interventions targeting the simultaneous reduction of hopelessness and psychological distress could be the most promising approach to support well-being in vulnerable individuals.

Limitations and Future Research

While our study provides valuable insights, it also has several limitations. Due to its cross-sectional nature, strong causal inferences cannot be made. Experimental and longitudinal studies would be necessary to determine the directionality of relationships. The participants in the study were exclusively Turkish married individuals, limiting the generalizability of findings to other populations or cultural contexts. Future research could replicate the model tested in this study in different cultural contexts to enhance the generalizability of the results. Additionally, the study's model could be tested comparatively between married and unmarried adults.

This study focused on the levels of well-being among married individuals in terms of risk factors. Future research could yield more comprehensive results by examining the mediating roles of personality traits, coping styles, social support, resilience, and other factors in the relationship between psychological vulnerability and well-being. Moreover, experimental studies are needed to test the effectiveness of strategies aimed at reducing hopelessness and psychological distress in improving the well-being of psychologically vulnerable individuals. Finally, qualitative research designs could be beneficial in obtaining more in-depth information about maladaptive schemas, life experiences, and coping strategies among individuals with high psychological vulnerability.

Conclusion

This study can make a significant contribution to the literature by demonstrating how psychological vulnerability diminishes well-being among married individuals. The research reveals that increased hopelessness and psychological distress mediate the impact of psychological vulnerability on well-being. These findings offer valuable insights for couple and family counseling practices, guiding interventions aimed at enhancing marital satisfaction and mental health.

In conclusion, addressing hopelessness and psychological distress is crucial for improving well-being among married individuals. Interventions focusing on cognitive and emotional processes can help mitigate the adverse effects of psychological vulnerability, leading to better psychological outcomes. This study enriches the well-being literature and provides valuable insights for counseling and preventive

interventions. Future research should further explore the complex relationships between psychological factors and well-being to develop more effective interventions.

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Ethical approval. The study protocol has been approved by the Human Research Ethics Committee of Sinop University (No: 2024/127; Date: 02.05.2024). Informed consent was obtained from all participants.

Peer-review. This research was rigorously evaluated by two or more experts in the field, and the study was refined based on their recommendations.

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Review Article

Integrating Spirituality in Psychological Counseling: Historical Insights and Contemporary Applications

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Abstract
This article explores the close relationship between spirituality and psychology, carefully examining how definitions of spirituality have evolved over time in the psychological domain. It highlights the important distinctions between organized religion and spirituality, emphasizing how the latter is more individualized and transcends religious boundaries. Furthermore, it examines various counseling techniques that incorporate spirituality, such as methods centered on concentration, prayer, forgiveness, and contemporary applications such as mindfulness meditation. These approaches equip counselors with valuable tools to effectively address the spiritual aspects of their clients' lives. In essence, this article provides a holistic view of integrating spirituality into psychological counseling, highlighting the necessity of a strategy that is all-encompassing and sensitive to the particular needs of each individual.

Keywords:
Spirituality in Psychology • Counselor Competencies • Counselor Education • Counseling and Spirituality

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Introduction

There are numerous reasons why individuals may choose to seek counseling and/or psychotherapy. A pervasive sense of feeling lost or disconnected is often articulated. The confusion, indecisiveness, and loss of confidence that often accompany this reveals a need for understanding and support on a deeper level. Kenneth Pargament, who has conducted many important studies on the role of spirituality and religious belief in coping with stress and trauma, says the following about the role of negative life events in our lives:

> There is a deeper dimension to our problems. Illness, accidents, interpersonal conflicts, divorce, layoffs, and death are more than "significant life events." They raise profound and disturbing questions about our place and purpose in the world; they point to the limits of our powers, and they underscore our finitude… These deep questions seem to call for a spiritual response (Pargament, 2007, p. 11).

Empathizing with individuals requires understanding how they make sense of their world, or, in other words, their meaning systems (Slattery & Park, 2011). Through these meaning systems, people assign attributes to situations or objects, such as pleasant or unpleasant, which in turn produce emotional and/or behavioral effects, shape behavioral goals, and guide their pursuit (Park, 2005). The role of one's spirituality and/or religious beliefs in this process is so pervasive that it often goes unnoticed. For numerous individuals, spirituality and religion hold significant value in their understanding of life's meaning, often serving as the primary lens through which they interpret and make sense of the world (McIntosh, 1995). For instance, Çarkoğlu and Kalaycığlu (2009) showed that approximately 93% of respondents in Turkey believe in the existence of God without any doubt, and 90% think that life has meaning because God exists. Furthermore, research has also demonstrated that a significant proportion of nonreligious people continue to believe in God or a higher power. For example, approximately 37% of Americans identify themselves as spiritual but not religious, according to a survey by the Pew Research Center (2012). In recent decades, a novel form of spirituality has also surfaced in Turkey. A minority of individuals now identify as spiritual, acknowledging belief in a single God without affiliating themselves with any particular religion. However, due to a lack of research in the literature, the precise number of such individuals remains unknown (Altınlı-Macić, 2021). These data confirm the importance of these factors in the everyday lives of individuals.

The place of spirituality in human life dates back to the earliest times of humanity. Examining Indian, Central Asian, and Turkish-Mongolian cultures, shamanism emerges as a framework for understanding the bond between humans and the universe (Mandaloğlu, 2011). According to Singh (1999), spirituality forms the very foundation of this belief system, symbolizing the lively vigor of life. The term

shaman uncovers a shared spiritual healing tradition across ancient societies as an individual with dual roles as physician and clergyman (Winkelman, 2011). In ancient belief systems, healing is believed to stem from a state of balance and integration. The ideal state of physical and mental health involves harmony among biological, social, psychological, environmental, and cosmic factors (Singh, 1999). As such, spirituality has existed for as long as humans have been on the planet and remains one of the most fundamental concepts that comprise human beings' meaning systems across all ages.

Spirituality can also be considered a value for understanding human experience. According to Maslow (1971), self-actualization, the most elevated level of the hierarchy, encompasses the spiritual development of human beings, emphasizing an understanding of profound life aspects, including beauty, truth, unity, and the divine. In a similar vein, based on the works of Maslow (1971), Jung (1933), and many others, Elkins et al. (1988) defined nine universal spiritual values. They listed them as follows: having confidence in life's meaning and purpose, having a sense of duty or responsibility in life, believing in the sanctity of life, having a balanced view of material values, developing an altruistic attitude towards others, having a vision of making the world a better place and an awareness of the painful side of life, and living these values with discernible effects in relation to oneself, others, nature, and greater power. This perspective posits that spirituality is a universal and distinct concept that goes beyond traditional religious expressions and belongs to all of humanity. As Benner (1991) contended, all individuals are inherently spiritual beings. The differences stem from variations in awareness and response to self-transcendence, integration, and deep striving for identity. In this regard, spirituality can be conceptualized as an internal compass that guides individuals throughout their lives.

Spirituality Defined in Psychology

The field of psychology has long been engaged in understanding the distinctions and connections between spirituality and religion. Scholars have made numerous attempts to define these concepts; some have focused on the similarities between spirituality and religion, while others have preferred to focus on the characteristics that distinguish these two concepts. The study of modern psychology reveals that religion has been understood as both a subjective occurrence and an organized institution (Daniels & Fitzpatrick, 2013; Hill & Pargament, 2003). However, with the emergence of secularism in the 20th century (Turner et al., 1995), combined with sociocultural trends such as sociodemographic change and individualization (Pargament, 1999), the concept of religion has shifted to represent an outward and public display of faith, while the concept of spirituality has evolved to encompass the experience of a transcendent and personal power that encompasses all aspects

of life (Koenig et al., 2001). For instance, as described by Shafranske and Sperry (2005), religiosity involves a formal tie to a religious organization and following specific beliefs, while spirituality involves a personal, inherent, and principle-driven connection with a higher power, independent of conventional religious structures. The word spirituality has its roots in Latin. Signifying the essence of life or life force, the Latin word *spiritus* means to *breathe*. This definition's comprehension of spirituality fosters creative energy, motivation, and a connection with others. According to Clinebell (1995, as cited in Fukuyama & Sevig, 1999), spirituality entails the search for meaning and purpose, accompanied by a desire to connect with something greater than human consciousness. Similarly, Becker argued that spirituality forms the basis of the deepest aspects of human experience. Kelly (1995) described spirituality as a personal sense of connection to something beyond ourselves that transcends the universe. Shafranske and Gorsuch (1984) suggested that spirituality involves bravery in self-reflection, trust, and a profound admiration for boundless possibilities. Elkins et al. (1988) defined spirituality as a state of existence characterized by an awareness of a higher realm and a commitment to specific principles. These definitions highlight the human pursuit of a reality that extends beyond physical limitations, emphasizing the quest for profound and enduring life significance. Hence, it can be inferred that ideas of significance, transcendence, and dedication are intrinsic to human spiritual comprehension. May (1982) posited that spirituality compels individuals to seek and uncover significance beyond the material aspects of life, offering an intensely personal journey that fosters inner tranquility even amidst challenging situations. According to Piedmont (1999), transcendence entails a personal search for a connection with a higher power. A detachment from time and space enables individuals to observe life from a more comprehensive, objective viewpoint.

Comparing Psychological Views on Religion and Spirituality

Zeiger and Lewis (1998) have identified two typical approaches that psychology uses to deal with spiritual and religious issues. The first of these approaches is the explanatory approach applied by the most influential scholars, such as Sigmund Freud, John B. Watson, and B. F. Skinner. This approach considers religion as an outcome of external influences affecting the person, and how the person reacts to their surroundings leads to beliefs and actions that might not seem rational (Miller, 2003). Therefore, a negative perspective on religion and spirituality is the most basic feature of the explanatory approach. According to Freud (1927/1964), the founder of psychoanalytic theory, religion is an illusion or an expression of neurosis. The need for religion consists of the client's infantile and neurotic impulses. Watson, the founder of behaviorism, also adopted a negative view of spirituality, claiming that humans are no different than machines controlled by external factors. As such, the inner world of individuals, including their spiritual understanding, has no place in

understanding human behavior (Krasner, 1962). Likewise, another important figure in behaviorism, Skinner (1953), criticized religion for its use of negative reinforcement and threat of punishment, although he recognized that religion may be essential for some individuals (Wulff, 1996). Lastly, in the 1950s, Albert Ellis, the founder of rational-emotive behavior therapy, also regarded religion as irrational and outside the realm of science (Bergin, 1991).

The second approach put forward by Zeiger and Lewis (1998) is the descriptive approach, which has been adopted by many important prominent psychologists such as William James, Carl Jung, and Erik Fromm (Wulff, 1996). The core emphasis within this approach centers on the advantageous aspects that religion bestows upon the individual, coupled with the conviction that internal experiences play a transformative role in one's personal development (Miller, 2003). An illustration of this perspective can be traced back to the work of William James (1985), who stands as one of the earliest psychologists to underscore the indispensability of religion in human existence. According to James (1985), there exist two types of religion: first-hand religion, which aligns with the present definitions of spirituality, and second-hand religion, which matches the contemporary understanding of religion. Carl Jung (1933) argued that spiritual functioning has equal importance with physical, emotional, and mental functioning and that all the problems that individuals experience are essentially of spiritual origin. Further, Erich Fromm (1950), one of the prominent figures of humanistic psychology, believed that religion is beneficial for individuals, arguing that people need guidance and dedication to cope with the realities of loneliness and death. In Fromm's view, similar to James's, there are two different types of religion. Fromm described the first type of religion as humane with the above qualities, which focus on the development of one's potential, and the second type of religion as authoritarian, which hinders one's potential. In parallel to Jung's ideas, Victor Frankl (1956), the founder of logotherapy, claimed that the human being is a physical, mental, and spiritual entity. For Frankl (1956), worrying about the meaning of life is not necessarily a sign of illness or neurosis, and the correct diagnosis can only be made by those can see the spiritual side of the individual. Further, similar to Frankl, Emmy van Deuzen (2011) has handled the human being as a multidimensional entity that also includes the spiritual (*Überwelt*) dimension along with the physical (Umwelt), social (*Mitwelt),* and psychological (*Eigenwelt*) dimensions. According to van Deuzen and Adams (2011), the spiritual dimension is human contact with the unknown; therefore, it is where the individual creates a sense of the ideal world and a personal value system and finds meaning and purpose in life through introspection.

The Development of the Spiritually-Sensitive Counselor

Counseling and psychotherapy fields have placed great importance on the concepts of multiculturalism and cultural sensitivity, especially in the last forty years, with the influence of constructivist (Kelly, 1970; Mahoney, 1995) and social constructivist (Guterman, 1994; Lynch, 1997) approaches. The constructivist approach argues that there is no absolute truth or reality; people create their own realities through their personal structure systems and change by reconstructing their personal stories in the counseling process (Kelly, 1970; Vinson & Gliffin, 1999). The alternative approach known as social constructivism extends this idea even further, underscoring the influence of all cultural and social factors in the process of constructing people's subjective realities (Guterman, 1994). In other words, the emphasis on individuality that is present in almost all traditional approaches has been replaced by a more social and relational emphasis. The multicultural approach regards culture, sexual identity, age, gender, socio-economic status, education level, spiritual understanding, religious beliefs, and practices as integral parts of the client's identity and contributes to their strengths and growth areas. Considering the basic principles of the aforementioned constructivist approaches, the harmony and complementarity between the culturally sensitive perspective, which is described as the fourth power in the field of counseling, and constructivist approaches draw attention. Indeed, Zinnbauer and Pargament (2000) argued that the constructivist approach is one of the most flexible and sensitive approaches for people from different spiritual understandings and backgrounds. Similarly, Cottone (2007) pointed out that the basic principles of the constructivist approach support multiculturalism and cultural sensitivity in counseling and emphasized the importance of the social constructivist approach to the inclusion of spiritual understanding in counseling practices.

Spirituality has been defined by the Association for Spiritual, Ethical, and Religious Values in Psychological Counseling (ASERVIC), affiliated with the American Psychological Counseling Association (ACA), as a "capacity and tendency that is innate and unique to all persons. This spiritual tendency moves the individual toward knowledge, love, meaning, peace, hope, transcendence, connectedness, compassion, wellness, and wholeness" (p. 1, 2010). If one examines the most recent agreed-upon definition of counseling as "a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (Kaplan et al., 2014, p. 368), it is noticeable that all the aforementioned qualities of spirituality are in harmony with the main purposes of counseling. From this point of view, it is believed that the expansion of counseling to include spiritual understanding will create a holistic process in which the client will feel accepted in all aspects.

Since the 2000s, there has been extensive discussion in academic circles about the necessity of integrating spiritual dimensions into psychological counseling (Ağılkaya-Şahin, 2024; Karaırmak, 2004; Özdemir, 2023). Scholars emphasize that

without acknowledging spirituality, counseling might not fully comprehend the roots of human anxieties, hopes, and struggles and will lack the basic elements necessary to address how individuals interpret their identity, life purpose, and overall sense of meaning (Matise et al., 2017; Powers, 2005; Richards & Bergin, 2004; Stewart-Sicking et al., 2017; Ybañez-Llorente & Smelser, 2014). The view that providing sensitivity and awareness regarding spiritual understanding and religious beliefs is an integral part of a holistic approach to human and cultural sensitivity has begun to be accepted in the field (Robertson, 2010). Numerous scholars (e.g., Morrison et al., 2009; Steen et al., 2006; Young et al., 2007) have underscored the broad significance of spiritual comprehension and religious beliefs in the lives of individuals seeking counseling, showcasing the beneficial outcomes attained through integrating these aspects into the psychological counseling journey. Vader (2006) emphasized the significance of recognizing a person's spiritual understanding as a valuable asset for health professionals during treatment and coping strategies. Likewise, Heitink et al. (2008) highlighted the importance of integrating spirituality into counseling and psychotherapy, aiming to address existential needs alongside psychological or psychiatric diagnoses such as depression. They emphasized the significance of addressing uncertainties related to one's connection with a higher power beyond conventional social relationships.

Moreover, within the framework of psychological counseling, the well-being model formulated by Myers et al. (2000) recognizes spirituality as a fundamental component. Similarly, Engel's biopsychosocial approach, originally significant across various health domains, has evolved to encompass the spiritual aspect of human existence, now termed the biopsychosocial-spiritual approach (King, 2000; Saad et al., 2017). This model proposes that psychological disorders arise through a complex interplay of various factors—psychological, emotional, behavioral, cognitive, social, familial, genetic, and biomedical. Notably, it also acknowledges the significance of the spiritual aspect in understanding, treating, and safeguarding against these disorders (Brown et al., 2011). Furthermore, a study exploring clients' openness to addressing spiritual matters in counseling indicated that around 55% of participants expressed a desire to incorporate these topics into their sessions, considering them appropriate for counseling discussions (Rose et al., 2001, 2008). Similar research (e.g., Bannister et al., 2015; King & Bushwick, 1994; Lyon & Wimmer, 2005; Post et al., 2014) has consistently shown clients' interest in discussing spiritual concerns across various counseling contexts, encompassing individual, group, marriage, and family counseling settings.

Due to a growing consensus in the field, ASERVIC organized a summit in 1994 to discuss the significance of spiritual and religious matters in psychological counseling. This led to the establishment of qualification standards for counselors to effectively

address spiritual and religious values within their professional scope (Miller, 1999). These competencies, reassessed and endorsed in 2009, outline the essential knowledge, skills, and sensitivity required for counselors to appropriately navigate these issues in therapy (ASERVIC, 2009; Cashwell & Young, 2011). The 2014 edition of the ACA Code of Ethics acknowledged spirituality in its guidelines, complementing ASERVIC's competency standards. Notably, in Section E.8 on Multicultural Issues/Diversity in Assessment, it emphasizes counselors' awareness of how spirituality and religion influence test administration and interpretation. Furthermore, the Counseling and Related Education Programs Accreditation Council (CACREP) incorporated spiritual competence as a distinct area in its 2009 and 2016 accreditation standards. In Section F.2.g, focusing on Social and Cultural Diversity, CACREP highlights the necessity of addressing "the impact of spiritual beliefs on clients' and counselors' worldviews" within accredited program curricula (CACREP, 2016, p. 31).

In a related vein, an online survey involving 341 registered clinical counselors in British Columbia aimed to explore therapists' perspectives on integrating spirituality and religion into their practice. The survey inquired about their education and training in this area, as well as their perceived abilities, comfort levels, and competence when dealing with religious and/or spiritual matters. Findings indicate that while spirituality holds significance for both participants personally and in their work with clients, the integration of spirituality into practice was reported by less than half of the respondents (Plumb, 2011). Additionally, research by Vieten et al. (2016) revealed that between 73.0% and 94.1% of respondents agreed that psychologists should receive training and demonstrate competence in spiritual and religious competencies. Despite this consensus, the majority (52.2%–80.7%) reported receiving little or no training in these competencies, with between 29.7% and 58.6% indicating no training at all. These findings underscore the gap between the recognized importance of spiritual and religious competencies and the current state of training received by psychologists and counselors.

Applications in the Counseling Process

Given the current emphasis on incorporating spirituality into counseling, there is a need to determine the most effective ways to teach this topic to counselor candidates and to train counselors who are competent in working with spirituality. This places an increasing responsibility on counselor educators to teach counselor candidates techniques that have been empirically demonstrated to be effective, as well as to determine the extent to which revised counseling programs are beneficial (Burke et al., 1999; Sexton, 2000; Whiston & Coker, 2000). On this basis, Curtis and Glass (2002) conducted a pilot study to examine whether there was any change in the level of confidence of counselor candidates in bringing spirituality together

with the counseling process after taking the *Spirituality and Counseling* course given by the second author. As expected, the findings of the study showed that the course significantly increased counselor candidates' confidence levels in integrating spirituality into the counseling process (Curtis & Glass, 2002). A crucial component of the stated course was to teach counselor candidates certain methods that they can use when working with spiritual issues. The techniques that were determined by taking into consideration the criteria of addressing the spiritual dimension of the individuals, being inclusive of different beliefs and understandings, and being easily usable by counselors who are new to the field were (a) the focusing method, (b) the prayer wheel, (c) forgiveness, and (d) meditation.

The Focusing Method

The experiential focusing method developed by Hinterkopf (2005) is defined as the process of directing one's attention to something ambiguous in one's experience and allowing new, clear meaning, understanding, or insight to emerge. With this technique, the client learns to examine the subtle but concrete bodily sensations that are an important part of spiritual exploration and growth. The technique consists of six steps. The first step involves trying to put aside the problems and the feelings that accompany them. In the second step, the counselor encourages clients to consider a problem holistically. In other words, the counselor helps the client pay attention to where and how they feel the problem in their body. In the next step, clients find words that best describe what they are feeling. These words help clients stay in touch with the vague feeling. The fourth step is where clients review the words they found in the previous step and decide whether they are the words that best describe what they are feeling in the present moment. Here, clients are allowed to add or change, if needed, different words to best describe their feelings and emotions. The fifth step involves asking questions. Clients are encouraged to ask open-ended questions about their feelings and emotions. Asking questions may lead the client to find new meanings or answers. In this process of searching for new meanings, clients continue to focus their attention on their feelings and emotions. In the sixth and final step, the counselor helps clients accept the changes that occur in their bodies and the new meanings they find, in other words, to integrate these parts.

Prayer Wheel

The prayer wheel, a technique developed by Rossiter-Thornton (2000), consists of eight components. These components include: (a) reflecting on moments of gratitude: individuals jot down things they appreciate or are thankful for each day; (b) engaging with melodies of affection: individuals are prompted to sing, hum, or listen to calming, comforting tunes; (c) seeking guidance and safeguarding: individuals

request protection from their own and others' pessimistic thoughts and behaviors; (d) extending forgiveness to oneself and others: individuals compose letters granting forgiveness to themselves and others for previous mistakes. It is emphasized that forgiveness does not mean turning a blind eye or forgetting, but rather remembering, letting go, and moving on so as not to burden oneself anymore; (e) claiming one's needs: clients are encouraged to express everything they need in life; (f) asking to be filled with love and inspiration: clients reflect on the positive qualities they would like to have in their lives and express them in a few sentences. The aim here is for clients to focus on positive, constructive, and inspiring thoughts and feelings; (g) listening with a pen in hand: clients sit quietly with a pen in hand and note any feelings, thoughts, or images that arise. This is intended to put clients in touch with their inner-selves and listen to them without making any judgments; (h) your desire is my desire: clients are encouraged to "*let go*" and trust that whatever they need most at this time will come to them. In other words, this is the stage of surrender. Rossiter-Thornton (2002) described this stage with the following words: *"The truth is, we are not all-powerful, no matter how much money, knowledge, or power we possess. So here we have the opportunity to ally ourselves with The Maker of Life and acknowledge that while we may know what we want, we do not know what we need"* (p. 27).

According to Rossiter-Thornton (2000), the prayer wheel serves as an effective therapeutic tool for multiple reasons. Initially, it offers clients a structured yet adaptable approach to prayer. It's crucial to note that the term *prayer* here is not tied to worship but is derived from the Latin word *prarius*, signifying a complete acquisition or earnest request (Rossiter-Thornton, 2002). Secondly, the initial phase assists clients in gaining a clearer awareness of the positive aspects already present in their lives. Lastly, individuals practicing this method often discover solutions to their concerns and issues that previously seemed unsolvable. Therefore, the prayer wheel often has empowering potential for clients, as they realize that they can find answers to many of their problems.

Forgiveness

According to the forgiveness models developed by Enright, and the Human Development Study Group (1991), and Fitzgibbons (1998), the forgiveness process consists of four stages. These stages are (a) uncovering; (b) decision-making; (c) working; and (d) finalization. The first stage is where clients embark on an inner journey into the past and identify the situations or people they need to focus on for forgiveness. Asking the client questions about their biggest disappointments or regrets facilitates this stage. The second stage, or decision stage, is where clients examine the consequences of being still held captive to past sufferings caused by themselves or others. The third stage is where clients share all the thoughts, images,

and feelings that go through their mind while thinking about forgiveness. The final stage, the concluding stage, is where clients, together with the counselor, create a ritual that aims to end the process. For instance, clients might engage in activities like composing a letter, subsequently discarding it through burning, or envisioning a scenario where they grant forgiveness to themselves or others mentally. At this stage, counselors should emphasize that forgiveness is a gradual journey and may demand a specific duration for completion. Nevertheless, participating in a symbolic ritual representing the intent to forgive and release can assist clients significantly throughout this process.

Meditation

Meditation, which has a significant place, especially in Eastern culture, and has attracted considerable attention all over the world in recent years, derives from the Latin root *meditari*, which means *deep thought* (Hussain & Bhushan, 2010). Meditation, which has emerged as a difficult concept to reach consensus on, has been conceptualized by many researchers in different aspects. For instance, Manocha (2000) described meditation as a distinct and clearly defined encounter characterized by a state of thoughtless awareness or mental silence, minimizing mental activity while remaining attentive. Alternatively, Walsh and Shapiro (2006) defined meditation from a cognitive and psychological viewpoint as a set of self-regulation techniques directed at consciously controlling mental processes through deliberate attention and awareness. Other basic definitions of meditation include other components such as relaxation, concentration, suspension of logical thinking processes, and maintaining a self-observing attitude (Craven, 1989).

Curtis and Glass (2010) utilized the relaxation response method developed by Benson et al. (1974) within the scope of the course that was the subject of their study. This method, which is similar to the *Breathing Space Practice* in mindfulness, involves clients sitting in a comfortable position in the first step and then paying attention to their breath and silently repeating a word, an expression that makes sense to them (e.g., peace), with each breath. The second step of the method is to gently return the focus to the present moment, ignoring any thoughts or body sensations that may be passing through their mind at the time. Curtis and Glass (2010) suggest that integrating meditation at the start of counseling sessions can aid clients in feeling at ease, fostering a more profound level of personal expression. Moreover, assigning meditation as homework can assist clients in unwinding and discovering innovative approaches to address their challenges.There are many different types of meditation practiced today. However, according to Hussain and Bhushan (2010), it is possible to classify all meditation practices under two main categories: concentration meditation and mindfulness/insight meditation. Concentration meditation aims to achieve higher

awareness by focusing on a single point (any sound, image, sensation, etc.). Mindfulness mediation, on the other hand, involves constantly opening oneself to and being aware of passing thoughts, images, emotions, and bodily sensations, like clouds in the sky, without identifying with them. In other words, rather than narrowing the focus as in concentration meditation, during mindfulness/insight meditation, one expands one's attention to include the entire field of consciousness (Hussain & Bhushan, 2010). The *Sounds and Thoughts Meditation*, the *Three-Minute Breathing Space Practice*, and the *Body Scan Meditation* (Atalay, 2018) are examples of mindfulness practices that can be used for this purpose in the psychological counseling process (Brown et al., 2013). Throughout history, the essence of mindfulness has woven its way into various cultural and philosophical traditions worldwide. It resonates deeply with principles found in ancient Greek philosophy, existentialism, and humanism, mirroring similar beliefs ingrained in the teachings of Mevlana Celaleddin Rumi, a prominent Anatolian Sufi from the 13th century (Uzun & Kral, 2021). This suggests that mindfulness holds a universal presence, evident in its alignment with diverse philosophical and spiritual systems, as observed in the foundation of Turkish sophism by Rumi and his scholarly contributions. Many researchers (e.g., Kabat-Zinn, 1994; Martin, 1997) argue that this simple practice, which involves accepting and observing the experience without judgment, is effective in the development of a strong and healing state of non-emotional reactivity.

Discussion

This study discusses the integration of the concept of spirituality into the field of psychological counseling. The focus is on how it has been defined by prominent figures in the history of psychology and how it differs from the often confused concept of religion. The historical context and the shift in the psychological community from viewing spirituality as a taboo topic to acknowledging its importance are then presented. Finally, various methods and practices that psychological counselors can use in their sessions are covered.

An effective counseling process should address not only the body and mind but also the spiritual dimension of the individual (Corey, 2006). However, it took a long time for the field of counseling to realize and accept that the problems and concerns related to the spiritual dimension of human beings are also within the scope of the counseling process. Today, there is a growing interest in the role of spirituality in different stages of the counseling process, from assessment to intervention. Evidence of this growing interest can be seen in the numerous books and articles that have been published since the late 20th century. Numerous scholars (e.g., Ağılkaya-Şahin, 2024; Karaırmak, 2004; Morrison et al., 2009; Özdemir, 2023; Steen et al., 2006; Young et al., 2007) have highlighted the significant role of spirituality in clients' lives, demonstrating the

beneficial outcomes attained through integrating these aspects into the counseling journey. The role of multiculturalism and culturally sensitive perspective, which has been called the fourth force in psychological counseling today, is undeniably great in this process, with the effect of postmodern thought and constructivist approaches developed along with it (Fukuyama & Sevig, 1999).

Leading professional bodies highlight the importance of incorporating spirituality within the counseling process. The spiritual competencies defined by ASERVIC, a division of the ACA, underscore that spirituality is an integral aspect of the human experience and should be included in psychological counseling. This view suggests that addressing spiritual issues in therapy is meaningful, ethically appropriate, and beneficial for counseling practice in a scientifically grounded manner that remains independent of any specific religion. However, unlike in the USA, similar professional organizations in Turkey have not yet established regulations on spiritual competencies. In Turkey, spirituality and religion are often discussed together, with less recognition that spirituality can be a personal phenomenon independent of religion. As a result, many individuals perceive spirituality as solely a domain of religion, typically within the professional boundaries of religious officials. Indeed, a study by Altınlı-Macić and Coleman III (2015) found that a significant portion of Turks in their sample (41.8%) view spirituality as a religious concept. Therefore, it is essential for psychological counselors to have the knowledge, skills, and sensitivity to address spirituality-related issues that clients may bring into the psychological counseling process regardless of any specific religion. Additionally, having comprehensive theoretical frameworks can help guide the integration of spirituality into counseling for clients' benefit.

Acceptance and Commitment Therapy (ACT; Hayes, 2005) serves as a profound spiritual intervention in counseling by integrating core values resonating with many spiritual traditions. It encourages acceptance of thoughts and feelings without judgment, akin to spiritual surrender and embracing reality. The practice of cognitive defusion fosters detachment and mindfulness, recognizing the transient nature of thoughts. Being present, a central tenet of ACT, aligns with the spiritual emphasis on living in the moment. ACT's principle of self-as-context mirrors the spiritual concept of an enduring self or soul, providing inner peace and stability. Additionally, values clarification in ACT helps individuals identify and commit to their personal values, infusing their lives with purpose and meaning, much like living in accordance with one's deeper truths. Finally, committed action, guided by these values, parallels the spiritual pursuit of integrity and right action. Through these elements, ACT offers a holistic approach that nurtures both psychological and spiritual well-being (Santiago & Gall, 2016).

Spirituality-sensitive counseling requires an understanding of the client's worldview—the values and beliefs that form their system of meaning. Therefore,

developing local perspectives and theoretical frameworks based on the cultural background and spiritual understandings of Turkish society can be particularly useful. Additionally, it is believed that studies like the one conducted by Curtiss and Glass (2002) on methods and practices in psychological counseling can guide how to handle spirituality in the counseling process, especially for professionals at the beginning of their careers.

Finally, it is generally recognized that as individuals progress to higher stages of spiritual development, they tend to adopt more inclusive and unifying worldviews. Instead of viewing the world through a dualistic framework, they begin to perceive the interconnectedness of all things. This shift away from all-or-nothing thinking typically leads to greater tolerance, acceptance, and open-mindedness. The experience of increased connectedness results in greater compassion for others, ultimately leading to social action. In this context, counselors may consider engaging in advocacy efforts to promote understanding and respect for diverse beliefs. This could involve participating in educational activities at schools or higher education institutions to raise awareness about the multifaceted impacts of oppression and intolerance. By fostering a culture of diversity and providing a safe space for individuals to explore their spirituality, counselors can contribute to creating an inclusive environment that respects the beliefs and values of all clients.

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Research Article

Validation of a Short Form Three Facet Mindfulness Questionnaire (TFMQ-SF) in Pregnant Women

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Abstract
This study aimed to adapt the Three Facet Mindfulness Questionnaire-Short Form (TFMQ-SF) into Turkish. The sample of the methodological research consisted of 302 pregnant women. The data were collected between May and August 2022 using the Personal Information Form, TFMQ-SF, and Tilburg Pregnancy Distress Scale. There are 12 items in the TFMQ-SF. Validity analysis of the data, content validity index, exploratory factor analysis, confirmatory factor analysis, and reliability analysis were performed with Cronbach's alpha reliability coefficient. Ethics committee approval was obtained. The content validity index of the scale was 0.93. As a result of confirmatory factor analysis, χ^2: 1178.445 (df: 66), χ^2/df: 2.407, and RMSEA: 0.068 were found, and the model indicated a good/excellent fit. The item means of the scale ranged from 2.34 ± 1.20 to 2.99 ± 1.15, the item factor loads ranged from 0.59 to 0.82, and the relationship between the scale items and the sub-dimensions was statistically significant ($p < 0.05$). The total Cronbach's alpha coefficient of the scale was 0.84. These results showed that the TFMQ-SF is a valid and reliable measurement tool.

Keywords:
Pregnancy • Mindfulness • Nursing • Validation • Reliability

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Introduction

Mindfulness is based on directing attention to the present moment and observing momentary experiences without judgment and with acceptance. It is a mind-body practice involving voluntarily focusing attention on momentary experiences and observing inner experiences (Kabat-Zinn & Hanh, 2009). Mindfulness is based on repetitive observation of all bodily sensations (Davidson et al., 2003).

The level of awareness varies according to the relationship between one's response, perception, and expectation of the process and responses to the transition (Meleis, 2010). Mindfulness can be gained by assuming that one is an impartial witness to one's experience. For an individual to develop awareness as a result of his/her experiences, he/she should be aware of the possibility of stepping back when he/she judges himself/herself and not seeing things as they are. When an individual begins to pay attention to activities related to the mind, he or she begins to explore, and the experience of his or her judgments should not be forgotten. Everything perceived is coded and categorized by the mind. Coding is made by the mind according to the meanings individually attributed to everything experienced. In some situations, people and events are judged as "good" when they make the individual feel good for some reason and as "bad" when they make the individual feel bad. Everything outside these that does not make the individual feel anything and that the individual is indifferent to is considered "neutral." Neutral things, events, and people are thrown out of the consciousness of individuals. Individuals generally do not find them worthy of attention (Kabat-Zinn & Hanh, 2009).

Although pregnancy is a physiological process for women, it is a period in which important biological and psychosocial changes are experienced, and the risk of encountering factors that may cause stress and anxiety is high (Taşkın, 2019). Mindfulness enables a person to react less to emotional distress and approach life, disrupted by physical and mental problems, in a more accepting way (Eyles et al., 2015). In addition, teaching pregnant women how to cope with anxiety, fear, and stressors, how to regulate their attention, and how to maintain calmness in stressful times provides them with self-confidence and improves their ability to regulate their emotions by increasing their level of well-being (Beattie et al., 2017; Dunn et al., 2012; Vieten & Astin, 2008; Yazdanimehr et al., 2016). Practices in this context strengthen the ability to cope with and adapt to the physiological and psychological symptoms of stress by focusing on emotions, sensations, and thoughts, ensuring flexibility and balance, developing problem-solving and decision-making skills, and developing the ability to recognize the effects of thoughts and beliefs on emotions (Dimidjian et al., 2015, 2016; Matvienko-Sikar & Dockray, 2017; Muthukrishnan et al., 2016).

In studies, it has been determined that as the mindfulness levels of pregnant women increase; depression, anxiety, and stress scores decrease (Yüksel et al., 2020); they notice their thoughts, emotions, and bodily sensations better and respond to them more consciously; they can better manage negative emotions, such as anger and frustration and better cope with the difficulties they face in life (Dunn et al., 2012); their negative affect levels decreased (Vieten & Astin, 2008), and their overeating behaviors decreased (Vieten et al., 2018).

Pregnant women with high levels of mindfulness experienced less emotional distress during their pregnancy. In addition, compared to children of mothers with low levels of mindfulness, their children showed fewer negative social-emotional behaviors. Moreover, interventions to increase mindfulness levels may provide a safe alternative to medication to combat the harmful effects of pregnancy-related stress, anxiety, and depression on the health of both mothers and their children (Braeken, 2017). In light of this information, measuring pregnant women's mindfulness levels during pregnancy and planning appropriate interventions at an early stage may contribute to protecting and improving maternal and infant health.

Purpose

Since no measurement tool measures the level of mindfulness of pregnant women in Türkiye, this study aimed to validate and the reliability of the Three Facet Mindfulness Questionnaire-Short Form (TFMQ-SF) and adapt it to Turkish.

Research Questions

- Is the Three Facet Mindfulness Questionnaire-Short Form a valid instrument for Turkish society?
- Is the Three Facet Mindfulness Questionnaire-Short Form a reliable instrument for Turkish society?

Method

Research Design

This was a validity and reliability study for adapting the Three Facet Mindfulness Questionnaire-Short Form (TFMQ-SF) based on a questionnaire.

Study Population and Sample

The study population consisted of 20-29 week-old pregnant mothers living in Konya province. TFMQ-SF has 12 items. It is stated that the sample size for

exploratory factor analysis for scale validity can be taken as 5–10 times the number of items (Çokluk et al., 2012). Therefore, 120 pregnant women (12*10=120), 10 times the number of scale items for exploratory factor analysis and five times the number of scale items (12*50=60) for confirmatory factor analysis, constituted the sample group. It is stated that 50 is very poor, 100 is poor, 200 is average, 300 is good, 500 is very good, and 1000 is excellent for the sample size for exploratory factor analysis. In determining the sample size, it is suggested that a size that will meet at least two of the criteria given in the literature should be taken (Çokluk et al., 2012). The number of scale items in our research was 12, so at least 120 people should be taken. Since it is stated in the literature that at least 300 people should be taken for the sample number to be at a good level, the sample number for our study was 300. Considering the possible loss of sample, 330 people were invited to this study. The present study was completed with 302 pregnant women. In the sampling method of this study, the criterion sampling method was used (to identify situations that meet certain criteria).

Inclusion Criteria

- 20–29 weeks of pregnancy (calculated taking into account the date of the last menstrual period)
- No communication problems
- No psychiatric diagnosis (self-report)

Exclusion Criteria

- Psychologically disturbed (self-report)
- Risky pregnancy
- Incomplete answers to survey questions

Measures

Personal Information Form, TFMQ-SF, and Tilburg Pregnancy Distress Scale (TPDS) were used to collect the data. The data were collected online from pregnant women who were members of social media groups (Facebook, Whatsapp, Instagram) between May and August 2022 and met the inclusion criteria. Data collection tools were organized in an online format and shared using Google Forms. As a prerequisite of the questionnaire page, it was accepted that the participants who ticked the box at the beginning of 'I Agree' to the statement "If you have read the above information and participate in this study completely voluntarily, please tick the box below with X" gave written consent. After the participants' consent was obtained, the online Google form was filled out.

Personal information form. It consists of 13 questions, including the socio-demographic characteristics of pregnant women, created by reviewing the literature (Subaşı et al., 2021; Yüksel et al., 2020). Sociodemographic data included age, pregnancy educational status, pregnancy employment status, partner age, employment status of the partner, income level, family type, number of children, duration of marriage, evaluation of the relationship with the spouse, smoking, number of pregnancies, and gestational week.

Three Facet Mindfulness Questionnaire-Short Form (TFMQ-SF). It is a 5-point Likert-type scale (1: never/very rarely true, 2: rarely true, 3: sometimes true, 4: often true, 5: very often/always true) containing 12 items developed and validated by Truijens et al. (2016). The scale measures the awareness levels of pregnant women at 20–29 weeks. When scoring the scale, items 2, 4, 5, 7, 8, 9, 11, 12 are reverse scored. The scale has three subscales. These are acting with awareness (5, 8, 11, 12), non-judging (2, 4, 7, 9), and non-reacting (1, 3, 6, 10). The score obtained from the scale is between 12-48, and high scores indicate that the awareness levels of pregnant women are good. The Cronbach's alpha values of the scale subscales were 0.87 for the subscales of acting with awareness, 0.84 for the subscales of non-judgment, and 0.80 for the subscales of non-reaction (Truijens et al., 2016). In this study, the Cronbach's alpha values were 0.79 for the acting with awareness subscales, 0.73 for the non-judgement subscales, 0.75 for the non-reaction subscales, and 0.84 for the total scale.

Tilburg Pregnancy Distress Scale (TPDS). It was developed by Pop et al. (2011) to determine distress (depression, anxiety, stress) during pregnancy. Çapik and Pasinlioglu (2015) adapted it into Turkish. The scale consists of 16 items and is graded on a 4-point Likert scale ranging from "very often" (0 points), "quite often" (1 point), "occasionally" (2 points), and "rarely or never" (3 points). Items 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 16 in the scale are reverse coded. The lowest score that can be obtained from the total scale is 0 and the highest score is 48 points. The scale has two subscales: "Negative Affect" and "Spouse Involvement."The negative affect subscale has 11 items (3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 16.) and the lowest score is 0, and the highest score is 33 points. Spouse Involvement Subscale consists of five items (1,2,4,8 and 15.). The lowest score is 0, and the highest score is 15 points. According to the cut-off point, a total score of 28 and above on the scale enables the diagnosis of pregnant women who are at risk for distress. Cronbach's alpha coefficients (total scale = 0.83, spouse involvement = 0.72, negative effect = 0.83) were adequate (Çapik & Pasinlioglu, 2015). In this study, Cronbach's alpha coefficients were (total scale = 0.78, spouse involvement = 0.79, negative affect = 0.84).

Statistical analysis

In the study, SPSS 25 (IBM Corp. Released 2017, IBM SPSS Statistics for Windows, Version 25.0. Armonk, NY: IBM Corp.) package program was used

for the analysis. Descriptive statistics (mean, standard deviation, minimum value, maximum value, number, and percentile) were given for the variables in this study. In addition, the normality assumption, one of the prerequisites of parametric tests, was examined with the "Shapiro-Wilk" test. The relationships between the two scales were evaluated with the Pearson correlation coefficient because it met the parametric test assumptions. $p<0.05$ level was considered statistically significant.

Ethics

Written permission was obtained from Sophie EM Truijens using e-mail, and the original scale was requested for the adaptation of the scale into Turkish. Ethics committee approval was obtained from the Pharmaceutical and Non-Medical Device Research Ethics Committee of a University on 17.06.2022 with decision number 2022/006. Pregnant women who met the criteria for participation in this study were informed about the present study, and consent was obtained.

Results

Table 1
Descriptive Statistics of Demographic Characteristics of The Participants (N=302)

Variables	X±SD / n(%)
Age (year)	
Mean±SD	27.28±5.42
M (min-max)	26 (17-43)
Gestation Period (weeks)	
Mean±SD	25.4±6.28
M (min-max)	25 (2-40)
Duration of Marriage (months)	
Mean±SD	64.85±58.05
M (min-max)	48 (1-300)
Partner Age (year)	
Mean±SD	30.48±5.73
M (min-max)	30 (20-49)
Pregnancy Education Level	
Primary School	38 (%12.5)
Middle School	98 (%32.5)
High School and Above	166 (%55.0)
Pregnancy Employment Status	
Yes	54 (%17.9)
No	248 (%82.1)
Partner Employment Status	
Yes	294 (%97.3)
No	8 (%2.7)
Family Type	
Nuclear family	260 (%86.1)
Extended family	42 (%13.9)
Income Level	

Table 1
Descriptive Statistics of Demographic Characteristics of The Participants (N=302)

Variables	X±SD / n(%)
Low	41 (%13.6)
Moderate	237 (%78.5)
High	24 (%7.9)
Number of Children	
1	214 (%70.9)
2	61 (%20.2)
3 and above	27(%8.9)
Relationship Status	
Good	256 (%84.8)
Moderate	46 (%15.2)
Number of Pregnancies	
1 (first)	123 (%40.7)
2	77(%25.5)
3 and above	102(%33.8)
Smoking	
Yes	31 (%10.3)
No	271 (%89.7)

***** Abstract statistics are given as mean ± standard deviation and Median (minimum, maximum) for numerical data and Number (Percentage) for categorical data.

Validity Results

Language, content, and construct validity methods were used to ensure the validity of the scale.

Language Validity

To ensure linguistic equivalence between the Turkish translation of the TFMQ-SF and the English original and to adapt it to Turkish society, the Turkish translation of the scale was carried out independently by three experts who have a good command of the English language. A common text was obtained after being evaluated by the researchers. The obtained scale was then back-translated into English by an English expert (back-translation method), and it was evaluated that the scale expressions were compatible with the original scale. After completion of the language validity by ensuring the integrity of meaning, a pilot study was conducted with 10 people outside the sample in terms of Turkish readability and comprehensibility.

Content Validity

Content validity is used to evaluate the extent to which the measurement tool covers the basic elements of the construct to be measured (Acar, 2014; Byrne, 2013; Erefe, 2002). Expert opinions were obtained for the content validity of the scale. Experts were asked for their opinions on the way the items in the scale were expressed and

whether the expressions were clear and understandable. For this purpose, opinions were obtained from five experts in Obstetrics and Gynecology Nursing. Experts were asked to score each scale item using the Content Validity Index (CVI) technique. 1 point is 'needs a lot of change (as I suggested);' 2 points is 'needs little change (as I suggested);' 3 points is 'appropriate;' 4 points is 'very appropriate.' As a result of the expert evaluations, CVI ratios were calculated using the following formula (Polit & Beck, 2006).

CVI: Number of experts who rated the items as Appropriate and Very Appropriate/ Number of Experts

The fact that the experts evaluated 80% of the items between 3-4 points and that the scale received a CVI score of 0.80 and above indicates that the content validity of the scale is sufficient. It is recommended that item CVI values should not be below 0.78 (Erdoğan et al., 2015; Gözüm, 2003; Polit & Beck, 2006). In this study, five experts evaluated 12 items. Four items (items 1, 2, 8, 9) had a CVI value of 0.80, and the other items (items 3, 4, 5, 6, 7, 10, 11, 12) had a CVI value of 1.00. The total CVI ratio of the scale was 0.93, and the CVI value found was considered sufficient because it was higher than 0.80.

The results of the evaluation of the expert opinions and the Kendall W Concordance analysis performed with the IBM SPSS program showed that the opinions of the experts were compatible ($p > 0.05$).

Measure Related Validity

To evaluate the criterion-related validity of TFMQ-SF, TPDS was applied to the participants, and the relationship between them was analyzed using Pearson Product Moment Correlation Analysis. The level of the relationship was classified using the Pearson correlation coefficient as follows: '< 0.30 = small/negligible,' '0.30 - 0.50 = low,' '0.50 - 0.69 = moderate,' '0.70 - 0.90 = high,' and '> 0.90 =very high.' According to the scale data, the correlation analysis between TFMQ-SF and the parallel form TPDS total scores revealed a weak but significant negative relationship between the forms ($r = -0.22$, $p \leq 0.001$, Table 2).

Table 2
Correlation Between TFMQ-SF and TPDS

	Negative Affect	Spouse Involvement	TPDS
Acting With Awareness	**r =-0.364 p<0.001**	**r=0.183 p=0.001**	**r=-0.240 p<0.001**
Non-Judgement	**r=-0.126 p=0.029**	r=-0.102 p=0.077	**r=-0.164 p=0.004**
Non-Response	r=-0.078 p=0.176	r=-0.102 p=0.076	**r=-0.121 p=0.035**
TFMQ-SF	**r=-0.244 p<0.001**	r=-0.001 p=0.991	**r=-0.222 p<0.001**

r: Pearson Correlation Coefficient; p: Significance value (p<0.05); 0.00: no relationship; 0.01 - 0.29: low-level relationship; 0.30 - 0.70: moderate relationship; 0.71 - 0.99: high-level relationship; 1.00: perfect relations

Construct Validity

Construct validity shows the ability of the scale to measure the entire concept or conceptual structure. It is the process of understanding what the scores obtained from a scale mean (Gözüm, 2003). Construct validity is of primary importance for psychological scales (Westen & Rosenthal, 2003). Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used to evaluate construct validity (Erdoğan et al., 2015).

Bartlett's test of sphericity was used to statistically test the correlation between variables in the data matrix (Bartlett, 1950). In the Bartlett sphericity test, it was tested whether the matrix created between the questions was an identity matrix. In addition, the Kaiser-Meyer-Olkin (KMO) criterion, obtained using correlation and partial correlation coefficients, was also evaluated for the suitability of the data for factor analysis. A KMO value greater than 0.5 is considered sufficient (Cerny & Kaiser, 1977) n. The Bartlett's test result was obtained as 1178.445 ($p<0.05$), and the KMO value was 0.856 (Table 3). These results show the suitability of the scale's assumptions. When the results obtained were examined, it was seen that the factor loadings were above 0.30, the factor loadings ranged between 0.59 and 0.82, the measurement tool consisted of a three-factor structure, and this three-factor structure explained 59.58% of the total variance (Table 3). These results show that the scale is a valid measurement tool.

Table 3
Three Facet Mindfulness Questionnaire-Short Form (TFMQ-SF) Validity and Reliability Results (N=302)

Factor	Item No.	Factor Loading			Total Correlation	Explained Variance %	Cronbach's Alpha
		1	2	3			
Acting With Awareness	5	0.729			0.456	12.40	0.792
	8	0.591			0.565		
	11	0.829			0.530		
	12	0.818			0.524		
Non-Judgement	2			0.682	0.539	19.37	0.736
	4			0.680	0.421		
	7			0.696	0.630		
	9			0.699	0.524		
Non-Response	1		0.689		0.435	18.81	0.750
	3		0.681		0.476		
	6		0.739		0.524		
	10		0.747		0.587		
					Scale	59.58	0.849
KMO=0.856 DF=66 χ^2=1178,445 p<0.001							

KMO: Kaiser–Meyer–Olkin test; Df: Degree of Freedom

Exploratory Factor Analysis

In exploratory factor analysis, the dimensions obtained as a linear combination of observed variables are called factors. Factors are hypothetical variables formed

by observed variables (Rencher, 2002). In evaluating the suitability of the data for factor analysis, the correlation matrix should be examined. If a significant portion of the coefficients in the correlation matrix is not greater than 0.30, the application of factor analysis will probably not be appropriate (Hair et al., 1998). Bartlett's test of sphericity is used to statistically test the correlation between the variables in the data matrix (Bartlett, 1950). Bartlett's test of sphericity tests whether the matrix formed between the questions is a unit matrix (Büyüköztürk, 2002, 2018). Rejection of the null hypothesis indicates that the variables are suitable for factor analysis. In addition, the Kaiser-Meyer-Olkin (KMO) criterion, obtained using correlation and partial correlation coefficients, is important in evaluating the suitability of the data for factor analysis. KMO, the sample adequacy criterion, takes a value between 0 and 1. If the KMO value is less than 0.5, the data set in question is not suitable for factor analysis (Cerny & Kaiser, 1977)a. In the present study, the principal components method was used to obtain the factors. In determining the appropriate number of factors, factor selection criteria considered the number of eigenvalues greater than one. In addition, factor rotation was performed to clarify the variables contributing to the formation of each common factor. The varimax method was applied to this process. Confirmation factor analysis was also applied to test the conformity of the factors obtained by exploratory factor analysis to hypothetical or theoretical factor structures. Exploratory factor analysis is usually applied before the scale development and construct validity testing processes. Translating a scale into a new language requires translating it in terms of language and evaluating it as a language, culture, and psychological whole (Van de Vijver & Tanzer, 2004). It is necessary to reveal the possible structural differences that may occur with the help of EFA. Structures that cannot be noticed as a result of CFA can be discovered thanks to EFA (Bandalos and Finney, 2010).

Table 3 shows that the TFMQ-SF consisted of 12 questions. Factor analysis results showed that the scale items were clustered in three facets. In scale adaptation studies, the explained variance ratio of 30% or more is taken as a criterion (Büyüköztürk, 2018). As shown in Table 3, this three-factor structure explained 59.58% of the total variance. The reliability of the whole scale and its dimensions was also high. The scale dimensions consisted of acting with awareness, non-judgment, and non-reaction.

Confirmatory Factor Analysis

Confirmatory factor analysis is used to confirm the structure or the theoretical factor structure obtained from explanatory factor analysis (Brown, 2015). In exploratory factor analysis, the appropriate number of factors to define the basic structure is determined based on the data matrix, while in confirmative factor analysis, the number of factors is known a priori.

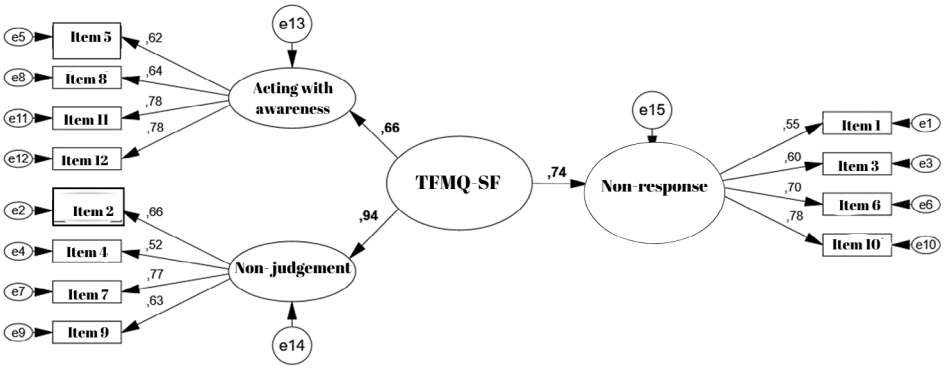
Adequate model fit can be assumed with a CFI ≥ .80, NFI ≥ .80, and RMSEA ≤ .05 for good fit and ≤.08 for adequate fit (Browne, 1993; Hu & Bentler, 1999). In the confirmatory factor analysis of the TFMQ-SF, $\chi 2/df$, root mean square of prediction errors (RMSEA), goodness of fit index (GFI), root mean square of standardized error squares (SRMR), comparative fit index (CFI), excess fit index (IFI), and Turker-Lewis index (TLI) showed that the model was acceptable (Table 4). The model is presented visually in Figure 1.

Table 4
TFMQ-SF Model's Fit Values

Measure	Good Fit	Acceptable Fit	Model's Fit Index Values
(χ^2/sd)	≤ 3	≤ 4-5	2,407 **
RMSEA	≤ 0.05	0.06-0.08	0.068 *
SRMR	≤ 0.05	0.06-0.08	0.054 *
IFI	≥ 0.95	0.94-0.90	0.937 *
CFI	≥ 0.95	0.94-0.90	0.937 *
GFI	≥ 0.90	0.89-0.85	0.934 **
TLI	≥ 0.95	0.94-0.90	0.918 *

* Acceptable Fit; ** Good Fit; The comparative fit index (CFI), normed fit index (NFI), Tucker–Lewis Index (TLI), and the root mean square error of approximation (RMSEA)

Figure 1
TFMQ-SF Path Diagram



Reliability Results

Reliability is the basic feature that every measurement tool should have. This feature ensures that the data from the measurement tool are collected correctly and are reproducible (Erefe, 2002). " Cronbach's Alpha Correlation Analysis" and "Item Total Score Correlation" can be used to determine the reliability, inter-observer agreement, and internal consistency of a measurement. Consistency is defined as the agreement between the results of repeated observations and measurements by the same observer on the same people under the same conditions. Cronbach's alpha technique, which is proposed to test the reliability of Likert-type scales, measures the internal consistency of the items in the measurement tool (Çapık et al., 2018). Cronbach's alpha values for the scale and its subscales are given in Table 5.

Tablo 4
TFMQ-SF Item-Total Score Correlation

	X±*SD*	*M* (*min-max*)	Acting with awareness	Non-judgement	Non-response	TFMQ-SF
Acting With Awareness	10,25±3,93	10 (4-20)	**1**			
Non-Judgement	12,14±3,57	12 (4-20)	**r=0,450 p<0,001**	**1**		
Non-Response	11,34±3,53	11 (4-20)	**r=0,392 p<0,001**	**r=0,549 p<0,001**	**1**	
TFMQ-SF	33,73±8,83	34 (12-60)	**r=0,784 p<0,001**	**r=0,824 p<0,001**	**r=0,796 p<0,001**	**1**

Table 5
TFMQ-SF Cronbach's Alpha Reliability Coefficients for Total and Subscales

Subscales and Total Scale	Cronbach's Alpha
TFMQ-SF	0.849
Acting with awareness	0.792
Non-judgement	0.736
Non-response	0.750

Cronbach's alpha internal consistency coefficient should be at least 0.70, and a coefficient between 0.81-1.00 is interpreted as highly reliable (Aslan, 2018; Kartal & Bardakçı, 2018). The explanatory factor analysis showed that the scale was a valid and reliable measurement tool. Items 5, 8, 11, and 12 were included in the subscales of acting with awareness. Items 2, 4, 7, and 9 were included in the non-judgement subscales. Items 1, 3, 6, and 10 were included in the non-reacting subscales. The scale and subscales were obtained by summing the scores obtained from the questions. It is thought that there is a difference between the original scale and the results of this study due to the social and social differences of the participants.

Discussion

This study examined the validity and reliability analyses of the TFMQ-SF. The results showed that TFMQ-SF has acceptable values in terms of language, content, content validity, and reliability analyses and can be used in Turkish culture.

Reliability Analysis

For the reliability of the measurement model, Cronbach's α values of the factors were analyzed. Cronbach's alpha value of ≥0.80 is accepted as a highly reliable scale (Karakoç & Dönmez, 2014). In this study, since the total Cronbach's alpha value of the scale was 0.849, the Cronbach's alpha value of the acting with awareness subscales was 0.79, the Cronbach's alpha value of the non-judgment subscales was 0.73, and the Cronbach's alpha value of the non-reaction subscales was 0.75, it can be said that the reliability of the scale is relatively high. In the study of Truijens et al. (2016), it was observed that the Cronbach's alpha value of the subscales of

acting with awareness was 0.87, the Cronbach's alpha value of the subscales of non-judgement was 0.84, and the Cronbach's alpha value of the subscales of non-reaction was 0.80. In the study of Bohlmeijer et al. (2011), it was found that the Cronbach's alpha value of the subscales of acting with awareness was 0.83, the Cronbach's alpha value of the subscales of non-judgment was 0.83, and the Cronbach's alpha value of the subscales of non-reaction was 0.75 (Ernst Bohlmeijer et al., 2011). It can be said that these values are similar to the results of the present study. The TFMQ-SF, adapted to Turkish culture and similar to the original version, is a three-dimensional assessment tool: acting with awareness, non-judgment, and non-reaction. Although there are measurement tools that measure various mindfulness levels, there is no form that evaluates these three facets. Therefore, the TFMQ-SF is the first known scale in Türkiye to assess the mindfulness levels of women during pregnancy in three facets.

Validity

In the studies on the validity of the questionnaire, other questionnaires whose validity has been accepted as the gold standard and which are all or some of which are relevant to the subject are used to evaluate the questionnaire whose validity will be investigated. For this assessment, we used TPDS scales. The 12-item TFMQ-SF showed a negative and significant correlation with distress scores, suggesting that greater mindfulness is associated with reduced pregnancy-related distress. These findings are consistent with previous research indicating that mindfulness is inversely associated with stress (E. Bohlmeijer et al., 2011; de Bruin et al., 2012).

Truijens et al. (2016) reported that the scale formed a three-factor structure (Truijens et al., 2016). In this study, it was observed that a three-factor structure was formed, similar to the original form of the scale. The factor loading of an item to a factor should be >0.30 (Li, 2016). TFMQ-SF factor loadings varied from 0.59 to 0.81. This study had a high factor loading since both factor loadings and common loadings were above 0.30. In the original form of the scale, factor loadings ranged from 0.53 to 0.89 (Truijens et al., 2016). After the EFA, the three-factor structure of the scale in the Turkish sample was confirmed by the CFA. It was observed that the fit index values showed an acceptable and good fit, and it can be said that the established model is compatible (DeVon et al., 2007; Hair et al., 2014). Factor load values were found acceptable. The fit index values in the CFA showed that the model was a good fit (Topuz et al., 2011). In other words, each factor accurately represents the questions that constitute it. In cases where it is shown to be important in large samples in general, the ratio of the chi-squared value to degrees of freedom and fit indices is a method used to determine acceptable fit (Meydan & Sesen, 2011).

Consequently, the findings of this study can be applied in clinical practice using the brief mindfulness instrument as a rapid screening tool. By screening for self-reported

mindfulness, pregnant women with low scores on the mindfulness questionnaire (indicating lower levels of mindfulness) could be offered a mindfulness training program. Additionally, there is a growing interest in experimental research with pregnancy-specific mindfulness interventions, which underscores the significance of a mindfulness questionnaire that has been specifically validated in pregnant women (Guardino et al., 2014)

Limitations

Personal, sociocultural, and environmental differences may affect the awareness levels of individuals. Another limitation is that the data were obtained based on participants' self-reports, were collected online, and no observations were made. The possibility that participants might have given the answers expected within the framework of social norms for various reasons, such as the situation they were in while answering the questions, time, may have caused bias. Despite these limitations, the TFMQ-SF can be used as a measurement tool to assess the awareness levels of pregnant women (20-29 weeks) because of the high validity and reliability of the measurement values, according to the results obtained.

Conclusion and Suggestions

The results of this study showed that the TFMQ-SF, which assesses the awareness levels of pregnant women, is a valid, reliable, three-dimensional, and clinically appropriate measurement tool for the Turkish population. Therefore, TFMQ-SF can be used in clinical practice and scientific research. Since there is no validated measurement tool to assess the awareness levels of pregnant women in our country, Türkiye, this study will a significantly contribute to the literature on measuring the awareness levels of pregnant women (20-29 weeks). It can also be used as a screening tool for nurses and other healthcare providers to determine what kind of supportive behaviors are necessary or missing to increase the awareness levels of pregnant women.

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Ethical approval. For the adaptation of the scale into Turkish, written permission was obtained from Sophie EM Truijens via e-mail and the original scale was requested. Ethics committee permission was obtained from KTO Karatay University Drug and Non-Medical Device Research Ethics Committee dated 17.06.2022 and decision number 2022/006. Pregnant women who met the criteria for participation in the study were informed about the study and consent was obtained. The research was conducted in accordance with the principles of the Helsinki Declaration.

Authors' contribution. Idea/Concept: K.A, H.D.T; Design: K.A, H.D.T; Data Collection and/or Processing: K.A, H.D.T; Analysis and/or Interpretation: K.A, H.D.T; Literature Review: K.A., H.D.T; Article Writing: K.A., H.D.T; Critical Review: K.A., H.D.T.

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Research Article

Relationship between Religious Coping, Acceptance of Illness and Diabetes Self-Efficacy in Patients with Type 2 Diabetes

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Abstract
This study aimed to determine the relationship between religious coping, acceptance of illness and diabetes self-efficacy in patients with Type 2 diabetes. This descriptive and cross-sectional study was conducted between 15/08/2022 and 15/03/2023 with 606 patients with Type 2 diabetes who attended Family Health Centers in a province center in eastern Türkiye. Model fits were found to be at satisfactory levels (x^2/df=2.529, RMSEA=0.05, CFI=0.91, GFI=0.91, AGFI=0.88, IFI=0.91). Positive religious coping positively affected negative religious coping (β_0=0.123, p=0.012). Negative religious coping positively affected diabetes self-efficacy (β_0=0.099, p=0.039). Diabetes self-efficacy positively affected the level of acceptance of illness (β_0=0.430, p=0.001). It was determined that religious coping, acceptance of disease and diabetes self-efficacy were related in Type 2 diabetes patients. Longitudinal studies on factors affecting patients with Type 2 diabetes are recommended.

Keywords:
Type 2 diabetes • Religious coping • Acceptance of illness • Self-efficacy

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Introduction

Diabetes poses an escalating global public health challenge, representing a chronic and advancing condition that places strain on healthcare systems. It is prevalent across all age groups, leading to adverse health outcomes and significantly impacting quality of life (Saeedi et al., 2019; Tomlin & Sinclair, 2016). In 2019, 463 million people worldwide were diagnosed with diabetes. The data forecasts a growth trend, with the estimated figure expected to reach 578 million by 2030. Furthermore, projections anticipate a subsequent increase, reaching 700 million by the year 2045 (Saeedi et al., 2019).

When they experience illness, people may feel helpless and distressed (Ayten et al., 2012). Religious beliefs can be a haven for people by increasing their resilience in the face of feelings of fear and helplessness that arise in difficult times (Karakaş & Koç, 2014). In these difficult times, the most frequently used coping method is religious coping (Ayten et al., 2012). Religious coping is recognized as a factor that promotes adherence to disease management and treatment among individuals with chronic illnesses (Sousa et al., 2017). Religious coping involves the intentional use of one's religious beliefs or practices as a means to confront and overcome the challenges that life presents, aiming to find solace and alleviate emotional distress (Larbi et al., 2017). In essence, it entails an individual's endeavor to establish a spiritual connection, seek support, or collaborate with God in problem-solving. The role of religious coping can manifest both positively or negatively in terms of accepting an illness. Positive religious coping methods include prayer, positive thinking, establishing a secure relationship with a creator figure, making sense of life and believing in this creator's help. Negative religious coping methods include belief in abandonment by the creator, withdrawal and divine punishment (Fincham et al., 2018; Shamsalinia et al., 2016). As such, it is advisable to assess the impact of religious and spiritual beliefs on patients before incorporating them as a treatment tool (Sousa et al., 2017).

The most important factor that facilitates coping is that individuals accept their illness and maintain their sense of autonomy. This pivotal acceptance of illness is integral to disease management, as it prompts individuals to implement crucial changes in their self-care practices and lifestyles. Accepting the illness reduces the negative emotions experienced by individuals, improves their quality of life, and increases protective and curative health behaviors (Besen & Esen, 2011). Previous studies have indicated that the degree of illness acceptance in individuals with diabetes notably influences their life satisfaction and overall quality of life (Lewko et al., 2012; Rogon et al., 2017).

Self-efficacy is a psychological concept that refers to an individual's belief in their own capacity to successfully execute a specific behavior or task. It is rooted in one's confidence and perceived competence, serving as a crucial determinant in approaching

challenges and persistence in achieving goals. Considered a fundamental aspect of an individual's capabilities, self-efficacy is distinct and should be recognized as an independent factor in terms of a person's basic skills. It significantly influences motivation, effort and resilience, shaping the individual's overall ability to navigate and succeed in various endeavors (Williams et al., 2014). Self-efficacy is one of the significant factors that contribute to the control of diabetes and the success of personal care. Previous studies have indicated that self-efficacy is a viable concept that can be used to understand and predict patients' self-care behaviors in the treatment of diabetes (King et al., 2010; Sarkar et al., 2006). For individuals with diabetes, maintaining an adequate level of self-efficacy is crucial for effectively managing the complexities of diabetes treatment and care (Mankan et al., 2017).

In this context, the patient's acceptance of the disease, religious coping and self-efficacy may have a critically important role in controlling the disease (Besen & Esen, 2011; Mankan et al., 2017; Sousa et al., 2017). In addition, self-efficacy is an important motivational resource in the management of chronic diseases (Karadayi Kaynak, 2022). Determining the relationship between religious coping, illness acceptance and self-efficacy in diabetes will guide future studies in this area. No analogous studies exist in the current literature. The primary objective of this research was thus to investigate the relationships between religious coping, acceptance of illness, and diabetes self-efficacy in individuals diagnosed with Type 2 diabetes.

Research Hypotheses:

H_1: There is a significant correlation between positive religious coping and negative religious coping.

H_2: There is a significant correlation between positive religious coping and diabetes self-efficacy.

H_3: There is a significant correlation between positive religious coping and acceptance of illness.

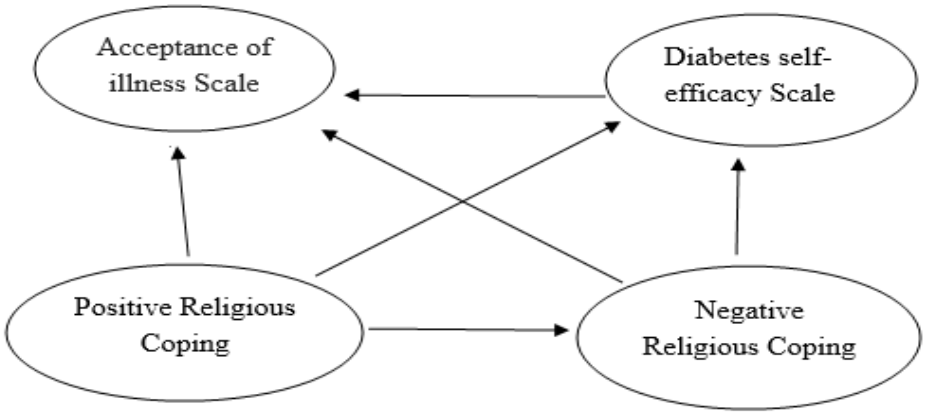
H_4: There is a significant correlation between negative religious coping and diabetes self-efficacy.

H_5: There is a significant correlation between negative religious coping and acceptance of illness.

H_6: There is a significant correlation between diabetes self-efficacy and acceptance of illness.

The structural equation model predicted between religious coping, acceptance of illness, and diabetes self-efficacy is given in Figure 1.

Figure 1.
Structural Equation Model Predicted Between Religious Coping, Acceptance of Illness, and Diabetes Self-Efficacy



Method

This study is a descriptive and cross-sectional study. It was conducted between 15/08/2022 and 15/03/2023 with 606 Type 2 diabetes patients who attended Family Health Centers (FHCs) in a provincial capital in the east of Türkiye.

Universe of the Study and Sampling

The population of the study consisted of all Type 2 diabetes patients who attended Family Health Centers located in the center of a provincial capital in eastern Turkey. The minimum sample size for the study was determined using the formula for an unknown population (n:384). Post hoc power analysis is a statistical analysis performed after the data collection phase of a study. This analysis evaluates the power of a hypothesis test based on the sample obtained. Power analysis is used to understand how much a study's sample size, level of interaction and variance affect the success rate of a hypothesis test. In the post hoc power analysis, 606 participants were found to be sufficient (Cohen, 1988). The STROBE guide aims to guide researchers in reporting their work with greater integrity and transparency. In this way, readers can access more comprehensive and reliable information about the design, conduct and results of research. The STROBE guideline was used in the reporting of this research article (Vandenbrouckel et al., 2007).

Inclusion and Exclusion Criteria

All patients who voluntarily agreed to participate in the study, were able to understand and complete the research forms, had been diagnosed with diabetes for at least six months, and were 18 years of age or older were included in the study. Those who filled out the data collection form incompletely were not included in the study.

Data Collection Tools

Personal Information Form

A Personal Information Form is a document used to collect a person's individual characteristics, demographic information and general research parameters. This form is used to create a background of the participants and to give researchers the opportunity to analyze specific demographic groups. This type of information collection tool allows researchers to better understand the participants and assess the overall context of the research. The Personal Information Form used in this study was prepared by the researchers and consisted of questions about the participants' age, gender, marital status, education and income.

Religious Coping Scale (RCS)

The Religious Coping Scale (RCS) was developed by Ekşi and Sayın (2016). It is a research tool that measures how individuals use their religious beliefs to cope with the difficulties and stressful situations they experience. The scale consists of a total of 10 items and two sub-dimensions. The sub-dimensions are positive religious coping (seven items) and negative religious coping (three items). The RCS is a four-point Likert-type scale. The original Cronbach's alpha internal consistency coefficient for the positive religious coping subscale was .91, while the original Cronbach's alpha internal consistency coefficient for the negative religious coping subscale is .86 (Ekşi & Sayın, 2016). In our study, the Cronbach's alpha value was .73 for the positive religious coping subscale, while it was .87 for the negative religion coping subscale.

Acceptance of Illness Scale (AIS)

The Acceptance of Illness Scale (AIS) is a Likert-type scale developed by Felton and Revenson (1984) in the United States and created by quoting Linkowski's Sickness Impact Scale. The validity and reliability study for Turkish society of the scale was carried out by Besen and Esen (2011). The AIS consists of eight items. The scale score represents the overall measure of disease acceptance. Disagreements with the statements used in the scale items are evaluated with a high score (5 points) indicating the absence of negative feelings about the disease and the presence of acceptance of illness (Besen & Esen, 2011). The original Cronbach's alpha internal consistency coefficient of the scale was 0.79. In our study, the Cronbach's alpha internal consistency coefficient of the scale was found to be 0.78.

Diabetes Self-Efficacy Scale (DSES)

The Diabetes Self-Efficacy Scale (DSES) was developed by Lorig et al. (2009). The scale was adapted to Turkish by Mankan et al. (2017). It is a research tool used

to assess individuals' levels of self-efficacy in coping with diabetes. The scale aims to measure people's beliefs in certain diabetes-related skills, treatment practices and lifestyle changes. It is often used to determine individuals' level of confidence in their own diabetes management and to assess their potential to adhere to treatment plans and improve health outcomes. The scale usually includes a series of statements or situations and participants respond to these statements to assess their level of confidence in their own diabetes-related abilities. The Likert-type scale consists of eight items. The Cronbach's alpha coefficient of the scale developed by Lorig et al. was 0.89 (Lorig et al., 2009). The Cronbach's alpha was later found to be 0.86 (Mankan et al., 2017). In this study, the Cronbach's alpha was found to be 0.81.

Reliability Analysis of Scales

Structural Equation Modeling (SEM) usually includes a set of statistical measures used to assess the reliability of the variables used in the measurements and the structural model. These measures determine the level of error in the measurements and provide information about the reliability of the measurement instruments and the model. In the study, the reliability of the variables was confirmed by determining the Cronbach's alpha coefficient (>0.60) values of the scales (Hu & Bentler, 1999; Karagöz, 2019).

Data Analysis

Data analysis was conducted using statistical software packages, including the SPSS 22.0, AMOS V 24.0, and G*Power 3.1. These software tools are commonly employed in the field of statistics and research to perform various analyses and tests. The combination of SPSS, AMOS, and G*Power indicates a comprehensive approach to data analysis, including descriptive statistics, SEM and consideration of statistical power. These tools collectively assist researchers in exploring relationships, testing hypotheses, and ensuring the robustness of their findings. In the study, SEM was used to analyze the data. The AMOS V 24.0 program was used in this analysis. SEM is a statistical method often used in the social sciences, psychology, economics and other disciplines to understand complex relationships and structures. This modeling technique is used to understand the relationships between observed variables and the underlying structures behind these variables.

Ethical Principles of the Study

The research was approved by the Scientific Research and Publication Ethics Committee of a University (Date: 01.03.2022, Number: 42261). The researcher provided information about scales face-to-face to the patients who were going to participate in the research. To safeguard individual rights throughout the study,

adherence to the Helsinki Declaration on Human Rights was strictly maintained. This declaration is an ethical document published by the World Medical Association (WMA). It was first adopted in Helsinki in 1964 and has been updated several times since then. It sets out ethical rules and guidance for researchers regarding the participation of people in clinical research (Rickham, 1964).

Results

Table 1
Characteristics of Participants (n=606)

Demographic Characteristics		**n**	**%**
Gender	Male	279	46.0
	Female	327	54.0
Marital Status	Married	469	77.4
	Single	137	22.6
Educational status	Illiterate	185	30.5
	Only literate	88	14.5
	Primary school	144	23.8
	Secondary school	123	20.3
	Higher education	66	10.9
Monthly income status	Income less than expenditure	117	19.3
	Income equal to expenditure	457	75.4
	Income more than expenditure	32	5.3
Years of diabetes	0-5 years	204	33.7
	6-10 years	199	32.8
	11-15 years	126	20.8
	16-20 years	55	9.1
	21 years or more	22	3.6
	$\bar{x}$ ± Standard Deviation		
Age (Years)	52.38 ± 12.24		

It was determined that 54.0% of the individuals who participated in the study were female and 77.4% were married. When the educational status of the participants was analyzed, it was found that 30.5% were illiterate, 14.5% were only literate, 23.8% had primary education, 20.3% had secondary education and 10.9% had higher education. It was determined that 75.4% of the participants had an income was equal to their expenditure, 19.3% had an income less than their expenditure and 5.3% had an income more than their expenditure. It was found that 33.7% of the participants had had diabetes for 0-5 years, 32.8% had had it for 6-10 years, 20.8% had had it for 11-15 years, 9.1% had had it for 16-20 years, 3.6% for 21 years or more, and the mean age of the individuals was 52.38±12.24 (years) (Table 1).

Structural Equation Modeling (SEM)

Fit indices of the scales were calculated with SEM.

Assumption Analysis

Before using SEM, some basic requirements need to be considered. These requirements are important for the model to be implemented correctly and for the results to be reliable. All the assumptions required for SEM analysis were verified. The study ensured an ample sample size, verified that variables exhibited multi-normal distributions, confirmed the absence of multicollinearity among variables, and identified the absence of outliers (Collier, 2020; Gürbüz, 2019).

Validity Analysis of Scales

Fit indices are statistical measures used in SEM to assess how well the model fits the observed data set. These indices are used to assess the fit of the model with its theoretical framework and to understand how well the model explains the observed data. Various fit indices in data analysis results are used to assess how well SEM explains the data. Fit indices are used to guide researchers in assessing and improving how well the model fits. For the RCS, the fit indices were determined as $x^2/df=4.065$, RMSEA=0.07, CFI=0.94, GFI=0.95, AGFI=0.92, IFI=0.94 and TLI=0.94. For the AIS, the fit indices were determined as $\mathbf{x^2}/df=2.677$, RMSEA=0.05, CFI=0.98, GFI=0.98, AGFI=0.96, IFI=0.98 and TLI=0.96. For the DSES the fit indices were determined as $\mathbf{x^2}/df=3.948$, RMSEA=0.07, CFI=0.96, GFI=0.97, AGFI=0.94, IFI=0.96 as TLI=0.94. The construct validity of the scales was thus confirmed (Karagöz, 2019).

The fit indices are used to assess the fit of the SEM. To summarize: χ^2/df is an index that evaluates the fit of the model. A value of 2.529 indicates that the model is a good fit to the data. RMSEA is an index that evaluates the fit of the model. A low value of 0.05 indicates that the model fits the observed data well. CFI is an index that assesses the fit of the model and a value of 0.91 indicates that the model provides a reasonable fit. GFI is an index that assesses the fit of the model with the observed data. A value of 0.91 indicates that the model provides a good fit. AGFI assesses the fit of the model in a similar way to GFI but corrected for degrees of freedom. A value of 0.88 can be considered an adjusted measure of fit. IFI is a similar index to CFI and a value of 0.91 indicates that the model provides a good fit. In general, low RMSEA and high CFI, GFI, AGFI, IFI values indicate that the model provides a good fit (Karagöz, 2019).

As a result of the model:

H_1: $H_1$was accepted: "Positive religious coping positively affects negative religious coping" (Figure 2; Table 2).

H_2: "There is a significant relationship between positive religious coping and diabetes self-efficacy" was not confirmed ($p>0.05$) and H_2 was rejected (Table 3).

H_3: "There is a significant correlation between positive religious coping and acceptance of illness" was not confirmed ($p>0.05$) and H_3 was rejected (Table 3).

H_4: H_4 was accepted: "Negative religious coping positively affects diabetes self-efficacy" (Figure 2; Table 2).

H_5: "There is a significant correlation between negative religious coping and acceptance of illness" was not confirmed ($p>0.05$) and H_5 was rejected (Table 3).

H_6: H_6 was accepted. "Diabetes self-efficacy positively affects the level of acceptance of illness" (Figure 2; Table 2).

Table 2
Relationships Between Individuals' Religious Coping, Acceptance of Illness and Diabetes Self-Efficacy

Independent Variable	Dependent Variable	β0	β1	S.E.	C.R	*p*
Positive Religious Coping Scale	Negative Religious Coping Scale	0.123	0.241	0.095	2.527	**0.012**
Negative Religious Coping Scale	Diabetes Self Efficacy Scale	0.099	0.115	0.056	2.067	**0.039**
Diabetes Self Efficacy Scale	Acceptance of Illness Scale	0.430	0.301	0.044	6.842	**0.001**

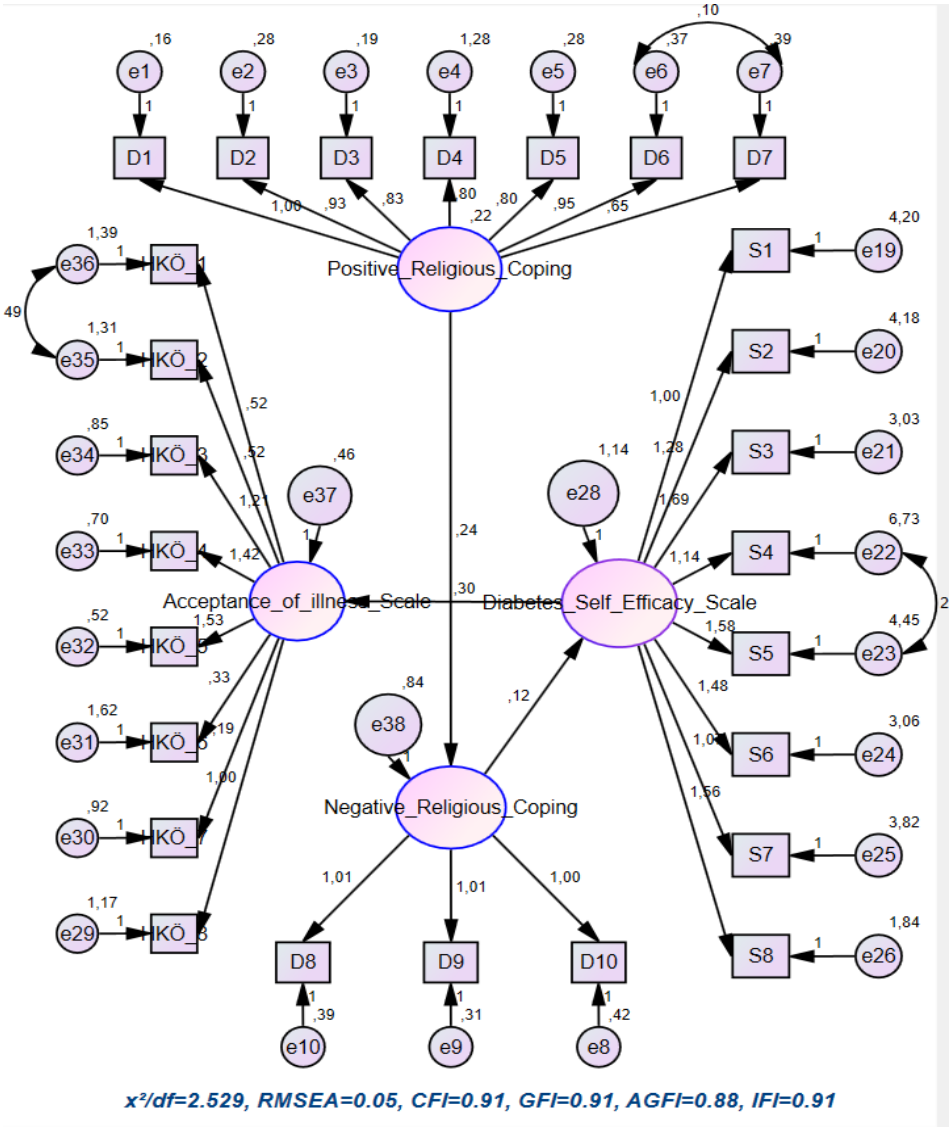
β0= *Standardized regression coefficient; β1= Non-standardized regression coefficient.*

Table 3
Relationships Between Individuals' Religious Coping, Acceptance of Illness, and Diabetes Self-Efficacy

Dependent Variable	Independent Variable	*B*	S.E.	β	*t*	*p**
Acceptance of Illness Scale	Constant	14.256	2.002		7.256	**0.001**
	Positive Religious Coping	0.032	0.075	0.016	0.422	0.673
	Negative Religious Coping	0.001	0.084	0.000	0.007	0.994
	Diabetes Self-Efficacy	0.188	0.019	0.375	9.865	**0.001**
	R=0.376; R^2=0.142; Adjusted R^2=0.137; F=33.10; p=0.001					
Diabetes Self-Efficacy Scale	Constant	42.370	3.909		10.839	**0.001**
	Positive Religious Coping	0.136	0.160	0.035	0.848	0.397
	Negative Religious Coping	0.462	0.179	0.106	2.589	**0.010**
	R=0.117; R^2=0.014; Adjusted R^2=0.010; F=4.156; p=0.016					
Negative Religious Coping	Constant	3.397	0.880		3.860	**0.001**
	Positive Religious Coping	0.140	0.036	0.156	3.887	**0.001**
	R=0.156; R^2=0.024; Adjusted R^2=0.023; F=15.110; p=0.001					

Figure 2

SEM Diagram Showing the Relationships between Religious Coping, Acceptance of Illness, and Diabetes Self-Efficacy



Discussion

This section provides comprehensive analysis of our study's findings in relation to the current literature in the field.

In our study positive religious coping positively affected negative religious coping ($p<0.05$). In the literature, a positive relationship was found between religious coping strategies in the study conducted by Doğan and Karaca (2021). Similarly, in the study of Çetin and Güzeoloğlu, it was determined that positive and negative religious coping strategies were positively related (Çetin & Güzeloğlu, 2022). These results can be considered as showing that when long-term use of positive religious coping strategies fail to help individuals with Type 2 diabetes, they may then turn to negative religious coping. The religious behaviors exhibited by individuals with type 2 diabetes may change due to the duration over time of their disease and individuals may even use both positive and negative forms of coping at the same time. In this context, it can be interpreted as a natural process that the coping behaviors of individuals living under constant intense anxiety may change.

In the current study, negative religious coping positively affected diabetes self-efficacy ($p<0.05$). In the literature, it has been found that negative religious coping is positively related to maladaptive emotional regulation and this leads to distressing emotional states (Fatima et al., 2022). In the context of diabetes, individuals who used avoidance-focused coping, a form of negative coping, showed negative diabetes self-care activities (Hapunda, 2022). Negative religious coping has been associated with decreased self-esteem and increased depressive symptoms (Park et al., 2018). Negative religious coping usually refers to situations where an individual processes difficult situations in a negative way through their religious beliefs, for example, seeing bad events as punishment from God. This type of coping can often increase stress and anxiety and reduce one's sense of control over the situation. It may be that people who use negative religious coping seek additional ways to cope with the stress and difficulties they experience and, in the process, begin to feel more competent. For example, religious struggles may prompt them to seek more information, join support groups or become more active in diabetes management. This is thought to indicate the complexity of individuals' inner worlds and the ways available to them of coping with external influences.

In the study, as the level of diabetes self-efficacy increased, the level of acceptance of illness also increased. Diabetes self-efficacy significantly affects the acceptance of the disease in individuals with diabetes. The study showed that self-efficacy has a direct effect on diabetes self-care practices (Devarajooh & Chinna, 2017). Individuals with higher levels of self-efficacy show better compliance with self-care behaviors, leading to improved disease management. Moreover, self-efficacy is positively

associated with disease acceptance in various populations, including pregnant women with hyperglycemia (Iwanowicz-Palus et al., 2020). In addition, self-efficacy is closely related to self-care attitudes in patients with diabetes (Permatasari, 2019). Patients with greater self-efficacy are more likely to engage in proactive self-care behaviors, ultimately improving disease management and potentially increasing levels of disease acceptance.

The findings of the current study are similar to those in the literature. There is a significantly strong negative correlation in all or some of the self-care activities of individuals with no acceptance of illness (Saleh et al., 2014; Smalls et al., 2014). Schmitt et al. identified a robust negative correlation among individuals exhibiting low diabetes acceptance across various self-care activities. Their research revealed that low acceptance was inversely linked to critical diabetes outcomes, encompassing diminished self-care practices and suboptimal glycemic control (Schmitt et al., 2014). High acceptance of the illness leads to increased self-care behaviors and better results in coping strategies (Lindholm-Olinder et al., 2015). Low acceptance of the illness, on the other hand, leads to low adherence to diabetes management and has a negative effect on glycemic control (Melton, 2016). Since diabetes is a lifelong disease that requires behavior change, the adaptation of the individual is essential in ensuring optimal diabetes control. Individuals with diabetes should be assisted in their path towards accepting the illness in order to provide effective diabetes management and self-care activities. Numerous studies have concluded that practices related to behavior change are beneficial (Bertolin et al., 2015; Hayes et al., 2013; Melton, 2016).

Limitations and Generalizability of the Study

The findings of a cross-sectional study may be specific to the particular time period and geographical location where the study was conducted. Therefore, it is difficult to generalize the results to different time periods or geographical regions. Cross-sectional studies cannot capture changes or trends over time. This is a limitation, especially for research that wants to examine long-term changes or developments. In cross-sectional studies, the simultaneous measurement of the presence of the condition or factor and the outcome leads to the problem of not being able to determine which came first. This can lead to misleading conclusions about the causes of a particular health condition, especially in health research. Cross-sectional studies may be insufficient to determine cause-and-effect relationships because data collection takes place at a single point in time. These studies can only observe the relationships between variables and cannot provide conclusive results on whether these relationships are causal or not.

Conclusion

In the current study, it was found that the increase in the level of positive religious coping increased the level of negative religious coping. It was determined that the increase in the level of negative religious coping of individuals with Type 2 diabetes increased the level of diabetes self-efficacy. It was determined that the increase in the level of diabetes self-efficacy of individuals positively affected the level of acceptance of the disease. The factors of religious coping strategies, self-efficacy and disease acceptance should be considered in individuals with Type 2 diabetes. This will guide nurses in determining which factors are most effective in increasing diabetes self-efficacy in Type 2 diabetic patients. In particular, nurses should make more accurate assessments of the level of disease acceptance and should consider the effects of the religious factors that may affect the individual positively or negatively while receiving care. Further longitudinal studies on factors affecting patients with type 2 diabetes are recommended.

Acknowledgement. We thank all the patients who participated in the study.

Ethical approval. The study was approved by Scientific Research and Publication Ethics Committee of Muş Alparslan University (Approval no: 42261). This study conforms to the ethical guidelines of the1975 Declaration of Helsinki.

Authors' contribution. Study conception and design: M.Y. and N.Ç., Data collection: N.Ç., Literature search: M.Y. and N.Ç., Data analysis and interpretation: M.Y., Writing Manuscript: M.Y. and N.Ç., Critical revision of the article: M.Y. and N.Ç.

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Data Availability Statements. The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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