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Research Article

The Relationship Between Spiritual Well-Being, Quality of Life and Health Protective Behaviors in Women with Chronic Diseases

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Abstract

Objective: This study was conducted to determine the relationship between spiritual well-being, quality of life and health protective behaviors in women with chronic disease.

Methods: The sample of our descriptive and cross-sectional study consisted of 626 women with chronic diseases. Personal Information Form, SF-12 Quality of Life Scale, Spiritual Well-Being Scale and Health Protective Behavior Scale were used to collect data in the study. Data were analyzed using SPSS 22.0, G*Power 3.1.

Results: In the research, it was determined that there is a moderate positive relationship between spiritual well-being, quality of life and health protective behaviors ($p<0.000$). It was determined that the spiritual well-being levels of women with chronic diseases were above the medium level, their quality of life was at a medium level and their health protection behaviors were below the medium level.

Conclusion: In our study, as the spiritual well-being levels increased, quality of life and health protective behavior were found to increase. Determining the spiritual well-being and health-protective behavior levels of women with chronic diseases may facilitate the development of interventions aimed at improving patients' quality of life.

Keywords: Chronic Disease, Women, Health Protective Behavior, Spiritual Well-Being, Quality of Life

1. Introduction

Chronic diseases are defined broadly as conditions that persist for a minimum of one year and necessitate ongoing medical intervention or limit activities of daily living, either independently or in combination (1). Chronic diseases develop over time and are influenced by the underlying physiological and pathological factors. They lead to permanent alterations and necessitate ongoing management and treatment throughout a person's life. Additionally, chronic diseases are a difficult situation for patients and caregivers to manage (2). Chronic diseases affect the individual and their family negatively in physical, social, and economic terms as a result of increasing cost due to both complications and long disease duration (3). Chronic diseases are major cause of dying and becoming ill worldwide (4). Cardiovascular diseases are the leading cause of death in women worldwide, accounting for approximately one-third of all deaths (5). Other chronic diseases that affect women's health are hypertension, diabetes, obesity, osteoporosis, depression and other mental illnesses (4). Most of the deaths from chronic diseases can be explained by an unhealthy lifestyle that includes preventable risk factors (6).

Spiritual well-being strengthens the psychological state of the person and his harmony with life. It ensures a close relationship between the person themselves, God, society and surroundings by providing stability, peace and coordination in life. Spiritual well-being serves as a powerful barrier against psychological distress during times of crisis (7). Spiritual well-being plays a crucial role in establishing meaning and purpose, mitigating disease symptoms, and enhancing physical and mental

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health outcomes (8, 9). Furthermore, spiritual well-being contributes to an improved quality of life by influencing the acceptance of current illness, treatment-seeking motivation, and decision-making processes regarding the illness (8).

According to the World Health Organization (WHO), quality of life is "how an individual perceives their life within the culture and value system in which they live." (10). In other words, "it is the individual's way of perceiving their situation in the whole context of the culture and value judgments in which they live, connected with their goals, expectations, standards, and concerns" This definition underscores the subjective nature of quality of life as it is deeply intertwined with personal and cultural values, and the individual's aspirations and life circumstances (11). Furthermore, quality of life encompasses the overall sense of well-being and life satisfaction as experienced by the individual. Chronic diseases often lead to a decline in a patient's overall well-being, restrict their ability to function and be productive, and contribute to higher healthcare expenses (12). Individuals with chronic disease were stated to have lower quality of life (13).

Health behavior encompasses all the actions and practices that a person adopts and follows to maintain their health and prevent illness (14). Positive health behavior comprises conscious effort of the individual to actively protect their own health and the health of others (15). Behaviors developing and protecting health are important lifestyle behaviors to both prevent and manage chronic diseases (3). If preventive and health-promoting behaviors are routinely performed, the current state of health can be brought to a better level along with the continuation of the state of being healthy (16).

Research on women with chronic diseases is of paramount importance due to the significant gaps in evidence and understanding of conditions that disproportionately affect women across their lifespan (17). Women experience disadvantages in numerous societies due to discrimination stemming from sociocultural factors (18). A study conducted in Australia revealed that women are diagnosed with chronic diseases at earlier ages compared to men and are disproportionately affected by these conditions (19). Women-specific conditions and gender-specific researchs may help address key knowledge gaps in chronic diseases (17).

In the existing literature, there appears to be a gap in research exploring the correlation between spiritual well-being, quality of life, and health-protective behavior among women with chronic diseases. This research seeks to illuminate how these variables interact and potentially influence each other, contributing to a deeper understanding of holistic health management in women with chronic conditions.

1.1. Questions of the study

1) Is there a significant relationship between spiritual well-being and quality of life in women with chronic illness?

2) Is there a significant relationship between spiritual well-being and health promoting behaviours in women with chronic diseases?

3) Is there a significant relationship between the quality of life of women with chronic diseases and health-protective behaviours?

2. Methods

2.1. Type and time of the study

The study was designed as cross-sectional descriptive type. The study was conducted between 15 August 2022 and 30 April 2023.

2.2. Universe and sample

The study population comprised women with chronic diseases who sought care at a state hospital located in a provincial center in eastern Türkiye. The minimum number of individuals to be included in the sample of the study was calculated as 384 at a 95% confidence interval (d=0.05), t=1.96, p=0.5, q=0.5, using the formula for a population of unknown size (n=t 2.p.q/d 2). The study was completed with 626 participants. Post hoc power analysis based on the data from these 626 participants indicated that the study achieved a 99% power at a 95% confidence level with a medium effect size (20). The research adhered to STROBE guidelines for reporting (21).

2.3. Inclusion criteria

Women who volunteered to participate in the study, were 18 years of age and over, and had been diagnosed with a chronic disease for at least six months were included in the study.

2.4. Exclusion Criteria

Data from individuals who either dropped out of the study or failed to complete the questionnaire and scale items were not included in the analysis.

2.5. Dependent variables

In this study, dependent variables include age, body mass index (BMI), marital status, education level, employment status, having children, being religious, having a chronic disease and perceived income status.

2.6. Independent variables

In this study, SF-12 Quality of Life Scale (SF-12), Spiritual Well-Being Scale (FACIT-Sp), and Health Protective Behavior Scale (HPBS) were used as independent variables.

2.7. Data collection tools

''Personal Information Form, (SF-12), (FACIT-Sp), and (HPBS) '' were used as data collection tools.

2.7.1. Personal information form

This form includes questions about age, body mass index (BMI), marital status, education level, employment status, having children, being religious, having a chronic disease, and perceived income status. BMI is calculated by dividing a person's weight in kilograms by their height (squared) in centimetres. The recommended values are based on the WHO global recommendation of 18.5-24.9 as a normal BMI. BMI below 18.5: Underweight, 18.5–24.9: Normal weight, 25.0–29.9: Pre-obesity, above 30.0: Obesity (22).

2.7.2. Spiritual well-being scale

Peterman and et al. developed this measurement tool to assess Spiritual Well-Being Scale (FACIT-Sp) (23). Subsequently, its validity and reliability were examined for the Turkish population by Aktürk et al. This evaluation ensures that the scale is culturally appropriate and accurately measures spiritual well-being in the specified groups within the context of Turkish society (24). The scale consists of 12 items and utilizes a 5-point Likert-type scale, with responses ranging from 0 to 4. This structure allows for a total possible score ranging from 0 to 48 across the scale. It is divided into three distinct subscales which focus on different aspects of spiritual well-being: the "Meaning" subscale includes items 2, 3, 5, and 8; the "Peace" subscale is composed of items 1, 4, 6, and 7; and the "Faith" subscale encompasses items 9, 10, 11, and 12. A higher score on the scale indicates greater spiritual well-being, suggesting that the individual perceives a stronger sense of meaning, peace, and faith in their life. In the Turkish validity and reliability study, Cronbach alpha values were calculated as 0.87 for the whole scale, 0.78 for the meaning subscale, 0.81 for the peace subscale and 0.93 for the faith subscale (24). In this research, the

Cronbach alpha values were found to be 0.81 for the meaning subscale, 0.75 for the peace subscale, 0.85 for the faith subscale and 0.89 for the total scale.

2.7.3. SF-12 Quality of life scale

The SF-12 Quality of Life Scale (SF-12), was developed by Ware, Kosinski (25). The SF-12 is a widely-used health survey that includes 12 items grouped into 8 subscales: Physical Functioning, Physical Role, Body Pain, General Health, Energy, Social Functioning, Emotional Role, and Mental Health. Responses to items related to physical and emotional roles are dichotomous (yes/no), while other items use a Likert-type scale ranging from 3 to 6 points. The SF-12 provides a comprehensive assessment of both physical and mental health. The physical component summary (FCS-12) score is obtained from the subscales of general health, physical functioning, physical role and body pain, while the energy, social functioning, emotional role and mental health subscales mental component summary (MCS-12) score is obtained. Both FCS-12 and MCS-12 scores range from 0 to 100, where higher scores indicate better quality of life. In this study, the Turkish version of the SF-12, which has been validated and assessed for reliability by Soylu and Kütük, was utilized. This ensures that the SF-12 is culturally appropriate and valid for assessing health-related quality of life among Turkish populations (26). The Cronbach's alpha values of the scale, which was adapted into Turkish, were found to be 0.73 for the FCS-12 and 0.72 for the MCS-12 (26). The Cronbach alpha values were found to be 0.83 for the PCS-12, 0.78 for the MCS-12 and 0.87 for the scale total points in this study.

3.5.4. Health protective behavior scale

The Health Protective Behavior Scale (HPBS) was developed by Ping, Cao (27) with Turkish validity and reliability studied by Ödek, Savaş (28) The Turkish version of the HPBS has subscales of interpersonal support (items 1-7), general and nutrition behavior (items 8-16), health care (items 17-22) and personal knowledge (items 23-28). Each subscale on the HPBS may be calculated separately or as total points. In this study, the interpersonal support, general and nutrition behavior and health care subscales were used. The HPBS is a 5-point Likert scale comprising 28 items. The scale does not include any inverse items. High points obtained from the HPBS show the health protective behavior of the individual is increased, while low points indicate lower health protective behavior levels (28). Cronbach's alpha values were found to be 0.73 for interpersonal support, 0.73 for general and nutritional performance, 0.67 for health care, and 0.82 for the total scale (28). In this study, Cronbach's alpha values were found to be 0.75 for interpersonal support, 0.75 for general and nutritional behavior, 0.82 for health services, and 0.83 for the total scale.

2.8. Data collection

The data for this study were gathered through face-to-face interviews conducted by researchers with women who have chronic diseases and visited a state hospital. Participants who accepted the study read and answered the study questions themselves while waiting their turn for examination in the polyclinic waiting rooms. To adhere to data confidentiality principles, all participant information was collected only after obtaining informed consent from each individual. women participating in the study were required to read and sign a consent form, which explained the study's purpose, the use of the data, and their rights, before any data collection began. This process ensures that participants were fully informed and agreed to their participation in the study under clearly stated terms.

2.9. Procedures

In this study, the conformity of the data to a normal distribution was assessed using measures of skewness and kurtosis. The analysis revealed that the skewness and kurtosis values for the spiritual well-being scale (FACIT-Sp) were -.537 and .045, respectively, suggesting a normal distribution. Similarly, the quality-of-life scale (SF-12) demonstrated a skewness of .080 and a kurtosis of -1.39, while

the (HPBS) showed a skewness of -.347 and a kurtosis of .030, all indicating that the data were normally distributed. To determine the strength of the correlations in this study, specific ranges were used as benchmarks: a correlation coefficient (r) from 0 to 0.29 was considered weak or low, from 0.30 to 0.64 was moderate, from 0.65 to 0.84 was strong, and from 0.85 to 1.0 was classified as very strong. These thresholds are instrumental in interpreting the relationships between different variables within the study, enabling a structured analysis of how closely various aspects of health and well-being are related in the context of women with chronic diseases. This methodical approach helps to clearly delineate the magnitude of correlations, providing a precise measure of the interconnectedness of the variables under investigation (29).

2.10. Ethical approval

Approval for the study was granted by the Scientific Research and Publication Ethics Committee of a State University, with the approval dated and recorded on 04.07.2022 under the reference number 55502. Following this ethical clearance, the necessary permissions were obtained from the institution where the research was to be conducted. Before data collection began, each participant was thoroughly briefed by the researcher on several key aspects of the study. This included an explanation of the study's purpose, the methods to be used, the expected time commitment, and assurances that participation would pose no risk to them. Furthermore, it was emphasized that their participation was entirely voluntary, underlining their right to withdraw from the study at any time without consequence. To ensure the protection of the participants' rights throughout the research process, the principles outlined in the Helsinki Declaration of Human Rights were rigorously followed. This commitment to ethical standards safeguarded the well-being and rights of the women involved, providing a strong ethical foundation for the conduct of the study.

3. Results

When the distribution of personal information of the participating women was analyzed, the age average of the participants was 44.29 ± 13.47 years, 65.5% were married, 36.4% were literate or primary school, 78.0% were unemployed, 61.7% had children, 24.4% hypertension 62% perceived their income as Middle and 49.4% were overweight. The rate of participants describing themselves as religious was 73.5% (Table 1).

Table 1. Participants' Characteristics (n=626)

Variables	Number	%
Marital status		
Single	216	34.5
Married	410	65.5
Educational level		
Literate or Primary school	228	36.4
High school	179	28.6
Graduate or higher	219	35.0
Occupation		
Employed	138	22.0
Unemployed	488	78.0
Perceived income		
Bad	190	30.3
Middle	388	62.0
Good	48	7.7
Has children		
Yes	386	61.7
No	240	38.3
Chronic disease		
Cardiovascular diseases	83	13.2
Diabetes mellitus	142	22.6

Hypertension	153	24.4
Table 1 (Continued)		
Respiratory system diseases	85	13.5
Musculoskeletal system diseases	77	12.3
Other	146	23.3
Body Mass Index		
Underweight	43	6.9
Normal	171	27.3
Pre-obesity	309	49.4
Obese	103	16.4
Sees themselves as religious		
Yes	460	73.5
No	166	26.5
Age (Year) *(Min, Max- Medyan, Ss)*	18-76	44.29±13.47

When results of the FACIT-Sp, SF-12, and HPBS were examined, it was determined that total mean score for FACIT-Sp-12 was 29.26 ± 9.00, SF-12 was 49.49±23.30 and HPBS was 77.50±11.14 (Table 2).

Table 2. Total Score and Mean Scores for FACIT-Sp-12, SF-12 and HPBS (*n*=626)

Scales	**Min-max**	**X±SD**
(FACIT-Sp)		
Meaning	0-16	9.88±3.42
Peace	0-16	8.78±3.26
Faith	0-16	10.59±3.96
Total	0-48	29.26±9.00
(SF-12)		
FCS-12	0-100	50.69±28.14
MCS-12	0-100	48.30±23.33
Total	0-100	49.49±23.30
(HPBS)		
Interpersonal support	7-35	22.72±4.49
General and nutrition behavior	9-45	30.19±5.94
Health care	9-30	24.59±4.57
Total	44-110	77.50±11.14

Min; minimum, Max; maximum.

When the correlations between the quality of life, spiritual well-being and health protective behavior points for women with chronic disease aged 18 years and older were investigated, there were moderate positive correlations identified between total mean points for spiritual well-being with quality of life (r= 0.356) and health protective behavior (r= 0.338) (p<0.000). There was a moderate and positive correlation between the quality of life total mean points of participants with total mean points for health protective behavior (r=0.513, p<0.000). In this study, as the spiritual well-being levels of women with chronic disease aged over 18 years increased, the quality of life and health protective behavior levels were identified to increase (Table 3).

Table 3. Correlations Between the FACIT-Sp, SF-12 and HPBS (*n*=626)

Scales	FACIT-Sp	SF-12	HPBS
FACIT-Sp	1	*r* = 0.338 ***p* = 0.000**	*r* = 0.513 ***p* = 0.000**
SF-12	*r* = 0.338 ***p* = 0.000**	1	*r* = 0.356 ***p* = 0.000**
HPBS	*r* = 0.513 ***p* = 0.000**	*r* = 0.356 ***p* = 0.000**	1

**p<.001, r;pearson correlation test.*

4. Discussion

Addressing chronic diseases in women is crucial for improving their overall health and well-being (17). Spiritual well-being is defined as a sense of meaning, harmony and peace in life, and a sense of receiving strength and comfort from one's faith, and is a component of spirituality (30).

In this study, women with chronic disease were identified to have spiritual well-being levels above moderate levels. Similar to the results of our study, Durmuş et al. found patients had mean spiritual well-being points above moderate level in a study of diabetes patients (31). Different to our results, research conducted on individuals with chronic diseases has reported that patients exhibit moderate levels of spiritual well-being (32-34) In a meta-analysis study by Tirgari et al., they stated that individuals with chronic diseases have moderate levels of spiritual well-being (32). In our study, approximately three quarters of the women consider themselves religious. This suggests that it facilitates the acceptance of the disease, causing the spiritual well-being to be above the moderate level.

In our study, the quality of life of women with chronic disease was identified to be at moderate levels. Similar to our study, studies of patients with acute coronary syndrome by Dural and Sarıtaşın and of diabetic foot patients by Toygar et al. reported patients had moderate levels for quality of life (33, 35). Kalsoom found women had weaker quality of life compared to men in a study of chronic kidney patients (36). Another study of women with chronic urticaria identified that patients had poor quality of life (37). Different levels for quality of life among patients may be due to different chronic diseases.

In our study, women with chronic disease were identified to have health protective behavior below moderate levels. A study in Brazil observed that diabetic people displayed lower risky behavior and higher protective behavior compared to people without diabetes (38). A systematic investigation determined that displaying healthy behavior including diet and physical activity was associated with lower general incidence and risk of death due to cancers including specific types like breast and endometrial cancer (39). Gülcivan and Topçu determined that breast cancer patients had moderately good degree of healthy lifestyle behavior points (40). A study of patients with heart failure found that patients had low healthy lifestyle behavior points (41). The results of our study are similar to this study. It can be said that the fact that we obtained different results from some studies is due to the different demographic characteristics of the studies.

This study identified a positive and moderate, statistically significant correlation between spiritual well-being and quality of life among women with chronic diseases. A study of breast cancer patients by Albayrak and Kurtun found positive significant correlations between religious attitude with the general well-being dimension of quality of life, and between religious attitude behavior subdimension with functional status and general well-being dimensions of quality of life (42). Consistent with the findings of our study, Jafari et al. also observed a positive and significant correlation between spiritual well-being and quality of life in their research involving breast cancer patients undergoing radiation therapy (43). A study focusing on patients with urinary incontinence reported a positive, yet weak correlation between spiritual well-being and quality of life (44). A meta-analysis examining the relationship

between spiritual well-being and quality of life in diabetes patients found a significant correlation between these two variables (45). Another study of type 2 diabetes patients found positive significant correlations between all dimensions of quality of life with total spiritual well-being points (46). The results of our study are similar to the literature.

In this study, there was a positive, moderate level, significant correlation between spiritual well-being and health protective behavior of women with chronic disease. Since similar findings were not found in the literature, this finding could not be discussed with other studies. When the results of our study are evaluated, it can be said that women with better spiritual well-being demonstrate better protective behaviors.

This study identified a positive, moderate, and statistically significant correlation between quality of life and health protective behavior among women with chronic diseases. Similarly, research conducted by Rosiek et al. reported a significant relationship between health behavior and the quality of life of patients with type 2 diabetes (47). Annaç studied individuals with coronary artery disease and observed the difference was statistically significant for patients displaying healthy lifestyle behavior and quality of life (48).

5. Conclusions and Recommendations

Women with chronic disease were identified to have spiritual well-being levels above moderate level, quality of life at moderate level and health protective behavior below moderate level. In our study, moderate positive correlation was determined between spiritual well-being with quality of life and health protective behavior in women with chronic diseases. Additionally, A positive significant relationship was found between health protection behaviors and quality of life. Identifying the spiritual well-being and health protective behavior of women with chronic diseases can facilitate the development of nursing interventions designed to enhance patient quality of life. Nurses should take an active role in creating and implementing educational programs that promote positive health behaviors.

Furthermore, various educational interventions can be implemented to enhance women's health protection awareness, including the dissemination of informational brochures and the utilization of mass media and social media platforms for public health campaigns. Interventions can be developed to improve the quality of life and enhance the mental well-being of women with chronic diseases. It is recommended that further research be conducted with diverse sample populations to investigate mental well-being, quality of life, and health-protective behaviors among individuals with chronic diseases.

Limitations

This study has some limitations. First, the cross-sectional design of the study precludes the determination of causality between the variables. Second, since the research data were collected from a single province, this limits the generalizability of the findings to the broader population. Finally, the reliance on self-report scales to measure spiritual well-being, quality of life, and health-protective behaviors introduces potential bias, as it does not account for other factors that might influence these outcomes.

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