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Developing a Hope Model Based on Cognitive Emotion Regulation Mediated by Spiritual Well-being in Patients with Heart Failure in Kermanshah and Its Effectiveness on Pain Tolerance

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A B S T R A C T

Purpose: This study aimed to develop and validate a hope model based on cognitive emotion regulation with the mediating role of spiritual well-being in patients with heart failure, and to examine its effectiveness on increasing pain tolerance.
Methods and Materials: This research was conducted in two phases. The first phase utilized a descriptive-correlational design to assess the relationships between cognitive emotion regulation, spiritual well-being, and hope among 270 heart failure patients in Kermanshah, Iran, selected via Cochran's formula. In the second phase, a quasi-experimental design with pre-test–post-test and control group was employed. Thirty participants with low hope and spiritual well-being and high pain levels were selected and randomly assigned to an experimental group (receiving a structured hope-based educational program) or a control group. Data were collected using standardized questionnaires: Snyder's Hope Scale, the Cognitive Emotion Regulation Questionnaire (CERQ), the Spiritual Well-Being Scale, and the McGill Pain Questionnaire. Data analysis was conducted using structural equation modeling (SEM) and ANCOVA through AMOS and SPSS version 23.
Findings: The results revealed significant positive correlations among all key variables. Structural equation modeling confirmed the proposed model: cognitive emotion regulation significantly predicted hope both directly and indirectly through the mediating role of spiritual well-being. Model fit indices (e.g., $\chi^2/df = 2.42$, RMSEA = 0.068, CFI = 0.943) indicated good model fit. The ANCOVA results showed a significant group effect ($F = 286.49$, $p < .001$) of the hope-based intervention on increasing pain tolerance. Paired t-tests revealed a significant reduction in post-test pain scores in the experimental group compared to the control group.
Conclusion: The study supports the effectiveness of a hope-based educational intervention grounded in cognitive and spiritual frameworks for enhancing psychological resilience and pain tolerance in patients with heart failure. The validated model offers a useful framework for designing future therapeutic interventions.
Keywords: *Hope, Cognitive Emotion Regulation, Spiritual Well-being, Pain Tolerance, Heart Failure, Structural Equation Modeling.*

1. Introduction

Chronic illnesses, such as cardiovascular diseases and particularly heart failure, are among the leading causes of disability and mortality worldwide, exerting profound psychological, physiological, and emotional impacts on patients. Beyond the physical toll of these illnesses, individuals with heart failure often contend with psychological burdens, including decreased hope, impaired emotional regulation, reduced pain tolerance, and diminished spiritual well-being—all of which directly influence their quality of life and treatment adherence. In recent years, research in health psychology has emphasized the integrative role of cognitive, emotional, and spiritual factors in coping with chronic illness, especially in individuals struggling with cardiac disorders (Baratpour & Dasht Bozorgi, 2020; Hashemi et al., 2024; Moradi et al., 2021).

One of the most significant psychological constructs associated with adaptive functioning in chronic disease is *hope*. Hope is a future-oriented construct that reflects an individual's perceived capability to derive pathways toward desired goals and to motivate oneself via agency thinking to pursue those goals (Kim et al., 2020). Evidence suggests that hope can buffer the deleterious effects of illness, enhance treatment outcomes, and improve psychological and physiological responses to stress (Kim et al., 2020; Mohabbat Bahar et al., 2020). For instance, research has shown a positive relationship between hopeful attitudes and immune system functioning in heart failure patients, indicating the multifaceted nature of hope in sustaining both mental and physical health.

Alongside hope, *cognitive emotion regulation* strategies play a critical role in shaping patients' responses to the stressors of illness. These strategies encompass conscious, cognitive mechanisms that individuals use to modulate the emotional impact of distressing experiences (Dadfar & Golestani, 2020). Maladaptive strategies—such as catastrophizing or rumination—are associated with greater psychological distress and lower quality of life in patients with cardiovascular disease, whereas adaptive strategies, including positive reappraisal or planning, are linked to higher resilience and improved emotional outcomes (Ghorbannezhad, 2022; Moradi et al., 2021).

Spiritual well-being, a multidimensional construct involving a sense of meaning, purpose, and connection to something greater than oneself, has emerged as another vital resource for individuals with chronic illness (White, 2020). Particularly in cultures where spiritual and religious beliefs are deeply embedded, spiritual well-being not only provides existential comfort but also contributes to mental health, resilience, and pain tolerance (Baratpour & Dasht Bozorgi, 2020; Hashemi et al., 2024; Kalantari, 2023). It has been empirically demonstrated that patients who experience higher levels of spiritual well-being report greater hope and are more capable of coping with the psychological consequences of disease (Afshari, 2018; Ajele et al., 2021; White, 2020).

The interrelationships among hope, emotion regulation, and spiritual well-being suggest that these constructs may operate together within an integrated psychological framework. One promising direction of inquiry has been the formulation of predictive models that position hope as a dependent variable influenced by both cognitive and spiritual resources. For example, Moradi et al. (2021) proposed a predictive model of hope based on cognitive emotion regulation and psychological capital, mediated by quality of life in women with heart failure (Moradi et al., 2021). Such models provide a basis for designing interventions that target multiple psychological domains to improve patient outcomes.

Empirical studies have validated the mediating role of spiritual well-being in the relationship between cognitive emotion regulation and hope. For instance, Dehghanizadeh et al. (2021) found that during the COVID-19 pandemic, individuals who practiced adaptive cognitive emotion regulation strategies and reported higher spiritual well-being experienced lower health anxiety, suggesting a dynamic interplay between these variables in regulating psychological responses to health-related threats (Dehghanizadeh et al., 2021). Similarly, White (2020) observed that spiritual self-care significantly mediated the relationship between depression and quality of life, further reinforcing the mediating influence of spirituality in health contexts (White, 2020).

In addition to enhancing hope and emotion regulation, spiritual well-being may also directly influence patients' *pain tolerance*, a critical component of psychological and physiological adjustment to illness. Pain, a subjective and multidimensional experience, is closely tied to psychological states. Research indicates that individuals with higher levels of hope and spiritual well-being report lower perceived pain and demonstrate greater tolerance in the face of chronic discomfort (Baratpour & Dasht Bozorgi, 2020; Ghorbani et al., 2020). In a study by Ghorbani et al. (2020), pain tolerance was found to be significantly

E-ISSN: 2980-9681

correlated with hope among cardiac patients, highlighting the emotional and motivational factors that shape individuals' experiences of physical suffering.

Moreover, spiritual interventions such as spiritually-oriented cognitive-behavioral therapy and acceptance and commitment therapy (ACT) have shown promise in improving psychological well-being and emotional regulation in vulnerable populations. For example, Kalantari (2023) demonstrated that spirituality-based CBT significantly improved emotional self-regulation among women with addicted spouses (Kalantari, 2023), while Aghili et al. (2023) found that ACT was effective in enhancing emotion regulation and life hope among socially vulnerable girls (Aghili et al., 2023). These findings suggest that structured therapeutic programs focusing on spiritual and cognitive-emotional dimensions can yield substantial benefits for psychological adaptation in patients with chronic illness.

Additionally, neuropsychological perspectives have begun to explore the role of imagination and affective simulation in sustaining adaptive cognition under distress. Cocquyt and Palombo (2023) emphasized the role of mental imagery in regulating emotion and planning future actions—capacities intimately connected to hope and goal-directed motivation (Cocquyt & Palombo, 2023). This cognitive-affective integration reinforces the need to consider how spiritual and emotional strategies translate into neurocognitive mechanisms that facilitate adjustment and resilience in illness contexts.

The psychological complexity of patients with heart failure necessitates interventions that are not solely symptom-focused but also aim to strengthen internal psychological resources. Hope, as a motivational and emotional anchor, and spiritual well-being, as a source of existential support, jointly contribute to the enhancement of emotional resilience, pain tolerance, and overall health-related quality of life.

2. Methods and Materials

2.1. Study Design and Participants

This study was conducted in two phases. The first phase utilized a descriptive-correlational design, examining the relationships among predictor, criterion, and mediating variables. The second phase employed a quasi-experimental method with a pre-test–post-test control group design. In terms of research objectives, the first phase falls under developmental research, while the second phase is categorized as applied research.

The statistical population included all young adults with heart failure who referred to Imam Ali Hospital and private clinics in the city of Kermanshah. After obtaining the necessary approvals, including the ethics code IR.IAU.SDJ.REC.1402.024 from the Islamic Azad University of Sanandaj, and with adherence to ethical standards and participant confidentiality, the first phase recruited 270 individuals using Cochran's formula and based on inclusion criteria.

In the second phase, using purposive sampling and based on inclusion criteria, 30 participants were selected from the population who had completed the research instruments and scored lower on the hope, spiritual well-being, and cognitive emotion regulation scales, and higher on the pain tolerance questionnaire compared to others. These participants were randomly assigned to experimental and control groups (15 individuals per group).

Inclusion criteria were: age range between 20 and 40 years, minimum educational attainment of a high school diploma, residency in Kermanshah, possession of a confirmed heart failure diagnosis and a medical file indicating at least one month of illness and current treatment, no acute psychiatric disorders in the past year, and voluntary consent to participate. (It is important to note that inclusion criteria were assessed in a preliminary interview prior to administering the questionnaires.)

Exclusion criteria included: physical or psychiatric complications, non-compliance with assignments or session attendance (missing more than one session), or participant withdrawal.

The research implementation process was as follows: in the first phase, after calculating the required sample size using Cochran's formula, the research instruments (described below) were distributed, completed, and collected from the initial sample of 270 participants. Subsequently, a hope model based on emotion regulation and the mediating role of spiritual well-being was designed in the form of an educational program using various sources, with specified sessions and durations. In the second phase, this educational program was delivered to the experimental group (15 participants), while the control group received no intervention. The effect of the program on pain tolerance was then evaluated. Additionally, an educational package related to the independent variable was provided to the experimental group. At the end of the intervention, both groups completed post-tests and the results were collected.

E-ISSN: 2980-9681

2.2. *Measures*

1) Snyder's Hope Scale (2005): Developed by Snyder and colleagues in 2005, this instrument measures the level of hope in individuals aged 15 and above. It consists of 12 items scored on a 5-point Likert scale (ranging from "strongly agree" = 5 to "strongly disagree" = 1). Items 3, 7, and 11 are reverse-scored. The total score ranges from 1 to 49, with higher scores indicating higher hope. Subscales include agency thinking (goal-directed energy) and pathways thinking (planning to meet goals). Its reliability has been confirmed with Cronbach's alpha of 0.86 and test–retest reliability of 0.81 (Kermani et al., 2010). The scale has also been validated by faculty members in management and education (Karimian, 2012). Bryant & Vongrus (2011) reported internal consistency ranging from 0.711 to 0.791.

2) Spiritual Well-being Scale by Paloutzian & Ellison (2019): This 20-item scale, developed by Paloutzian and Ellison, measures spiritual well-being using a 6-point Likert scale (from "strongly agree" to "strongly disagree"). It comprises two 10-item subscales: Religious Well-being (odd-numbered items) and Existential Well-being (even-numbered items). Positive items are scored from 6 (strongly agree) to 1 (strongly disagree), and reverse scoring is applied to negative items. The total score ranges from 20 to 120, with classifications as follows: low (20–40), moderate (41–99), and high (100–120) spiritual well-being. In Iran, the scale was administered to 283 nursing students across three major universities in 2005, with a reported reliability of R = 0.82 (Abbasi, 2005). Validity was confirmed through content validation (Seyed Fatemi et al., 2005), and Cronbach's alpha was confirmed as 0.82 (Farahaninia et al., 2015).

3) Cognitive Emotion Regulation Questionnaire (CERQ) by Garnefski (2012): The CERQ, developed by Garnefski et al. in 2012, is a multidimensional self-report questionnaire designed to identify individuals' cognitive coping strategies following negative events or stressors. Unlike other coping instruments, CERQ specifically assesses thoughts rather than behaviors. It contains 36 items across 9 subscales, including self-blame, acceptance, rumination, positive refocusing, refocus on planning, positive reappraisal, putting into perspective, catastrophizing, and other-blame. Responses are rated on a 5-point scale from "never" to "always." Scoring is based on the sum of item scores per subscale. Reported internal consistencies were $\alpha = 0.91$ (positive strategies), $\alpha = 0.87$ (negative strategies), and $\alpha = 0.93$ for the full scale. Peyvandi & Heydari (2006) reported similar coefficients (cited in Ghasemzadeh & Nesaji, 2010). Aminabadi (2009) reduced the scale to 26 items and four subscales in a principal component analysis, yielding reliability coefficients of 0.77, 0.70, 0.76, and 0.64 for subscales and 0.70 for the overall scale. Criterion validity was confirmed via concurrent validity with the Beck Depression Inventory (Hasani, 2010).

4) McGill Pain Questionnaire (MPQ): The MPQ, developed by Melzack (1997), assesses individuals' perception of pain across multiple dimensions: sensory, affective, evaluative, and miscellaneous. The instrument includes 20 sets of descriptive words. If none of the words match the respondent's pain experience, a score of zero is recorded. For each dimension, scores are totaled separately and then summed for a total pain score. Higher scores indicate greater perceived pain intensity. Dworkin (2009) confirmed the validity of the questionnaire. Internal consistency was supported by Cronbach's alpha values ranging from 0.83 to 0.87 across dimensions.

2.3. *Data Analysis*

Data analysis was conducted using SPSS version 24 and AMOS version 29. Descriptive statistics were initially computed to summarize demographic characteristics and variable distributions. Path analysis, based on structural equation modeling, was employed to examine both direct and indirect effects of the predictor variables (love style, resilience, and social support) on the dependent variable (emotional divorce). The Sobel test was used to determine the significance of the mediating roles of resilience and social support. Model fit was assessed using indices such as the Chi-square/df ratio, RMSEA, CFI, and TLI to ensure the adequacy of the proposed mediation model. All statistical tests were conducted at a significance level of $p < .01$.

3. Findings and Results

According to the results presented in Table 1, the mean values for all research variables in the study sample were higher than the assumed average. In other words, the research sample assessed psychological capital as higher than the moderate level.

E-ISSN: 2980-9681

Table 1

Descriptive Statistics of Research Variables

Variable	Minimum	Maximum	Mean	Standard Deviation
Cognitive Emotion Regulation	4.00	20.00	13.18	3.47
Spiritual Well-being	6.00	20.00	13.27	3.09
Pain Tolerance	4.00	20.00	11.58	3.21
Hope	15.00	60.00	38.04	8.69

Based on the results of the Pearson correlation matrix shown in Table 2, a significant and positive relationship exists among all research variables. Among these, the strongest correlation was observed between cognitive emotion regulation and hope, while the weakest correlation was also between cognitive emotion regulation and hope, indicating slight variance within the same pair in different analytic approaches.

Table 2

Pearson Correlation Matrix of Main Research Variables

Variable	Cognitive Emotion Regulation	Spiritual Well-being	Hope
Cognitive Emotion Regulation	1		
Spiritual Well-being	0.213	1	
Hope	0.217	0.210	1

The conceptual model of hope based on cognitive emotion regulation with the mediating role of spiritual well-being fits the empirical model of the research. To test the main hypothesis, the technique of structural equation modeling (SEM) was employed to assess total, direct, and indirect (mediated) effects using AMOS software. It is noteworthy that the model was refined after adjustments were made to reduce error correlations to a minimum.

Table 3

Goodness-of-Fit Indices of the Empirical Model of Hope Based on Cognitive Emotion Regulation with the Mediating Role of Spiritual Well-being

Model	χ^2	DF	χ^2/DF	RMSEA	GFI	CFI	NFI
Empirical Research Model	184.148	76	2.423	0.068	0.926	0.943	0.931

The goodness-of-fit indices in Table 3 indicate that the χ^2/DF ratio of the empirical model of hope based on cognitive emotion regulation with spiritual well-being as a mediator is less than the acceptable value of 4, suggesting an appropriate fit. Additionally, the RMSEA value is below the significant threshold of 0.08, further supporting the model's suitability. Moreover, the fit indices GFI, CFI, and NFI are all above 0.90, indicating excellent model fit. Therefore, the empirical model is well-supported by the data and aligns with theoretical frameworks used, making it appropriate for model explanation. Figures 1 and 2 display the results of path coefficients and factor loadings for the model with both unstandardized and standardized estimates.

Table 4

Path Coefficient Estimates and Significance Testing for the Empirical Model of Hope Based on Cognitive Emotion Regulation with the Mediating Role of Spiritual Well-being

Pathway	B	β	C.R.	P
Cognitive Emotion Regulation → Hope	-0.751	-0.453	-7.806	***
Spiritual Well-being → Hope	0.310	0.424	3.309	***
Cognitive Emotion Regulation → Spiritual Well-being	-0.730	-0.322	-6.884	***

E-ISSN: 2980-9681

Figure 1

Path Coefficients and Factor Loadings (Unstandardized Estimates)

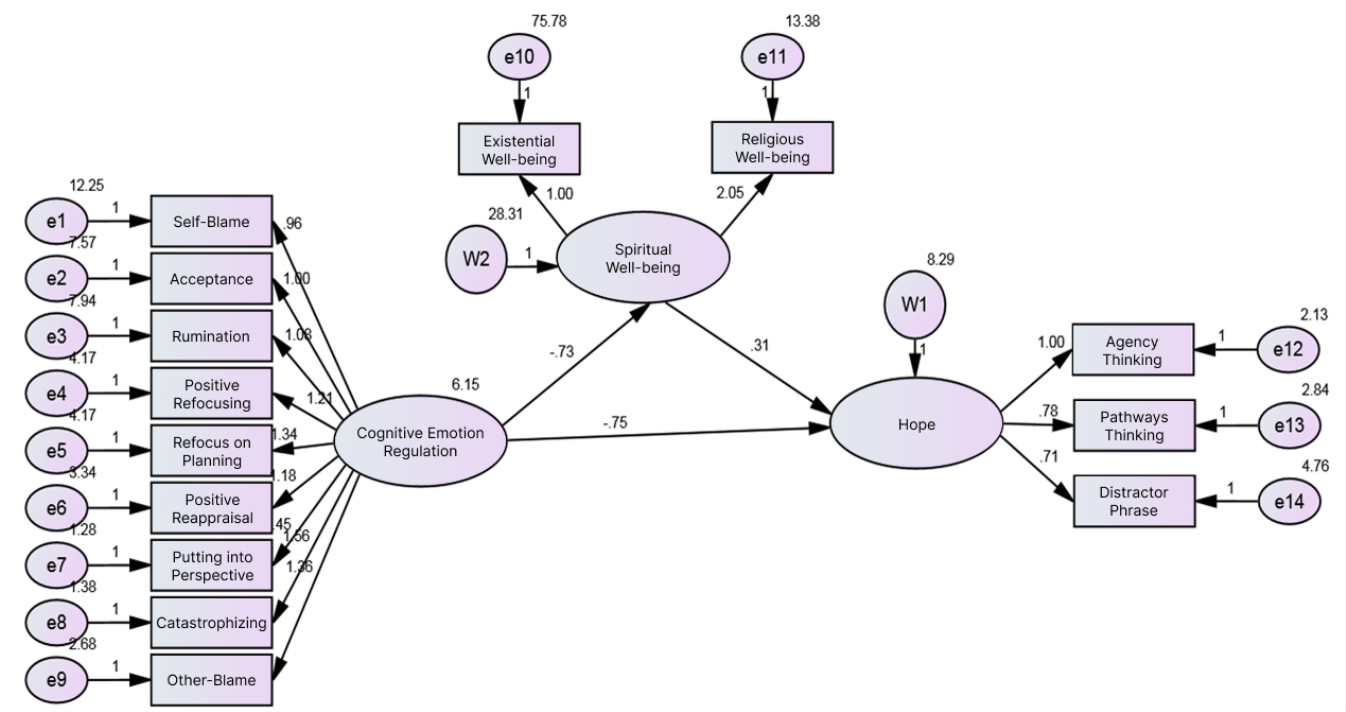
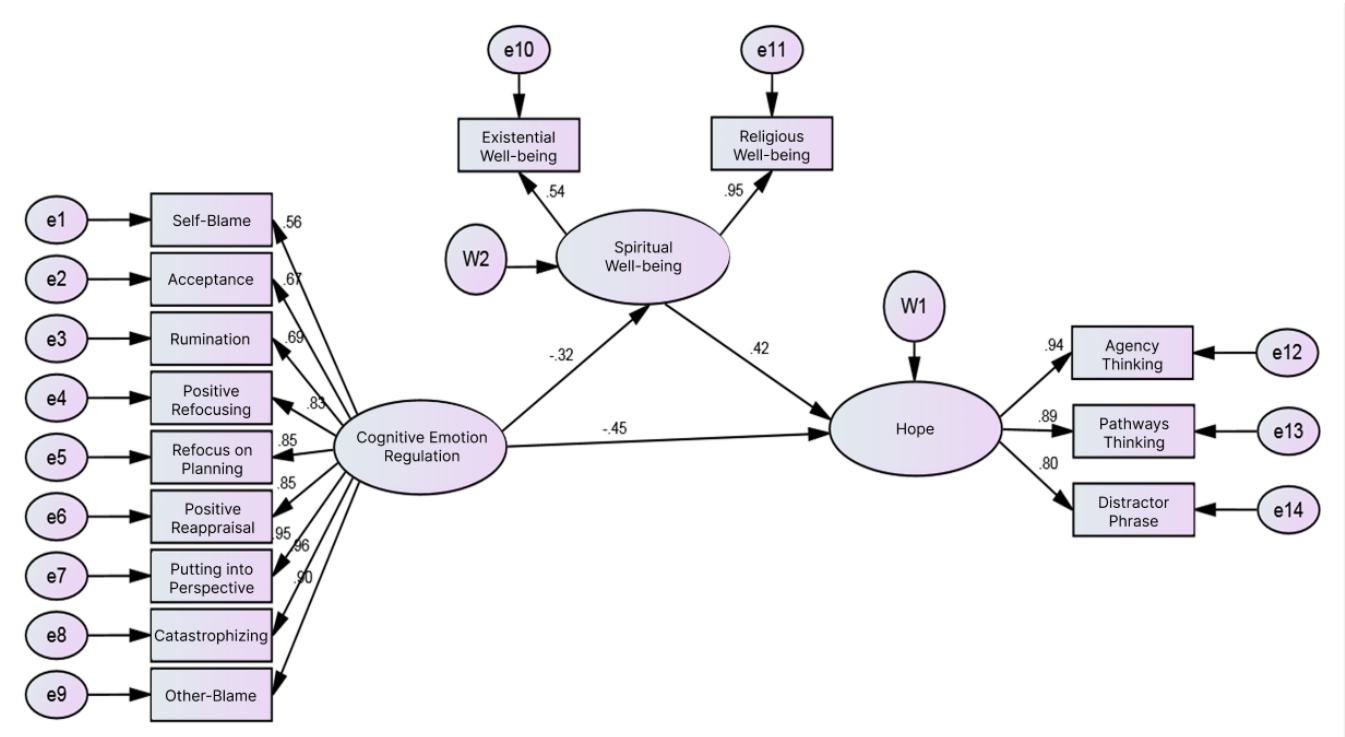


Figure 2

Path Coefficients and Factor Loadings (Standardized Estimates)



As shown in Table 4, all path coefficients in the empirical model of hope based on cognitive emotion regulation with

E-ISSN: 2980-9681

the mediating role of spiritual well-being are statistically significant. The C.R. values exceed the ±2 threshold, and the p-values are all below the significance level of 0.05.

Therefore, all items (questions) used in the study possess the necessary explanatory power for the empirical model of hope based on cognitive emotion regulation and mediated by spiritual well-being. Considering the goodness-of-fit indices, Cronbach's alpha coefficients, factor loadings, path coefficients, and C.R. values, the data collection instruments for this empirical model demonstrate excellent technical quality (reliability and validity).

Hence, the conceptual model of hope based on cognitive emotion regulation with the mediating role of spiritual well-being is well-aligned with the empirical model obtained in this research.

Table 5

ANCOVA Results on the Educational Effect of the Hope-Based Intervention on Pain Tolerance

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square	F Value	Significance Level (p)	Effect Size
Intercept	13.514	1	13.514	10.321	.004	.310
Group Effect	375.102	1	375.102	286.487	.000	.926
Pre-test Effect	33.352	5	6.670	5.095	.003	.526
Error	30.114	23	1.309			
Total	2627.000	30				

The results in Table 5 indicate that the F value for the group effect (i.e., the effect of the hope-based educational intervention) on pain tolerance among young individuals with heart disease is 286.959, and the significance level is p = .000, which is statistically significant at a level less than 1%. In other words, the F value representing the group difference (effect of the hope-based intervention) in reducing pain tolerance in young patients with heart disease is significant at the 1% level.

Table 6

Paired Samples t-Test Results Comparing Pre-test and Post-test Mean Differences in Pain Tolerance Between Experimental and Control Groups

Variable	Group	Pre-test Mean	Post-test Mean	Mean Difference	t Statistic	Degrees of Freedom	Significance Level (p)
Pain Tolerance	Experimental	12.40	4.86	7.53	16.143	14	.000
	Control	12.73	12.13	0.60	1.871	14	.082

As observed in Table 6, the mean differences between pre-test and post-test pain tolerance scores for the control and experimental groups were 0.60 and 7.53, respectively. The significance levels for the paired t-tests were p = .082 for the control group and p = .000 for the experimental group that received the hope-based educational package. Therefore, at a 1% level of significance, the hope-based intervention had a statistically significant effect on reducing pain tolerance in patients with heart disease.

4. Discussion and Conclusion

The aim of this study was to develop a model of hope based on cognitive emotion regulation, mediated by spiritual well-being, in patients with heart failure, and to examine the effectiveness of a structured hope-based educational program on pain tolerance. The results of the study yielded several key findings that contribute to the understanding of psychological adaptation in cardiovascular patients.

First, the descriptive statistics revealed that the mean scores of all variables—hope, cognitive emotion regulation, spiritual well-being, and pain tolerance—were above the theoretical average. This suggests that the study participants, despite dealing with chronic illness, possessed relatively high levels of psychological capital. More significantly, the correlation analysis showed that all major study variables were positively and significantly related, with the strongest relationship observed between cognitive emotion regulation and hope. These findings are in line with previous studies that have emphasized the central role of cognitive emotion regulation strategies in fostering hope and psychological adjustment in patients with chronic diseases (Dadfar & Golestani, 2020; Moradi et al., 2021).

E-ISSN: 2980-9681

The results of structural equation modeling confirmed the hypothesized model: cognitive emotion regulation significantly predicted spiritual well-being and hope, and spiritual well-being, in turn, significantly predicted hope. The model showed good fit indices, indicating its empirical validity. These findings align with previous research that has demonstrated how adaptive cognitive strategies (such as positive reappraisal and planning) contribute to higher levels of hope, especially when individuals also report strong spiritual well-being (Afshari, 2018; Aghili et al., 2023; Kalantari, 2023). In particular, the indirect effect of cognitive emotion regulation on hope through spiritual well-being supports the mediating role of existential and religious resources in maintaining psychological resilience during illness (Dehghanizadeh et al., 2021; White, 2020).

Further, the experimental results revealed that the hope-based intervention had a statistically significant effect on increasing pain tolerance among patients in the experimental group, compared to the control group. This aligns with prior evidence suggesting that individuals who report higher levels of hope and spiritual well-being also exhibit greater psychological and physical pain tolerance (Baratpour & Dasht Bozorgi, 2020; Ghorbani et al., 2020). As pain is not merely a physiological experience but also influenced by emotional and cognitive states, it is plausible that cultivating hope and meaning through structured interventions enables patients to reinterpret their suffering in a more manageable and less distressing manner. The findings are consistent with those reported by Kim et al. (2020), who noted that hopeful attitudes in heart failure patients were associated not only with better mental health but also with more robust biological responses, including immune functioning (Kim et al., 2020).

This study also reinforces the theoretical perspectives that propose a triangular interaction among cognition, spirituality, and emotion in health psychology. According to Cocquyt and Palombo (2023), mental imagery and emotional imagination are integral for adaptive cognition in distressing situations, which underlines the neurocognitive basis of hope as an internalized capacity for projecting and emotionally engaging with a desired future (Cocquyt & Palombo, 2023). By enabling patients to shift their internal narratives from despair to purpose and agency, the intervention likely activated these cognitive-affective mechanisms, facilitating higher tolerance for discomfort.

Another important point is the relevance of spiritual well-being not just as a supportive background variable but as an active mediator that amplifies the effects of cognitive emotion regulation on hope and resilience. Spirituality provides individuals with frameworks for interpreting suffering, fostering acceptance, and enhancing a sense of transcendence. This is particularly significant for cardiovascular patients who often grapple with feelings of loss, fear, and existential threat (Hashemi et al., 2024; White, 2020). The mediating effect found in this study supports similar conclusions drawn by Ajele et al. (2021) and Safikhani (2022), who emphasized the psychological protective role of spirituality during life crises, including chronic illness and caregiving stress (Ajele et al., 2021; Safikhani, 2022).

Moreover, the findings echo those of Mohabbat Bahar et al. (2020), who observed that group psychotherapy based on acceptance and commitment therapy (ACT) significantly improved quality of life in women with heart failure (Mohabbat Bahar et al., 2020). While the intervention in the present study was hope-based, it similarly emphasized acceptance, goal-setting, and values-based action—all of which overlap with components of ACT. This convergence strengthens the case for integrative, transdiagnostic approaches in psychosocial interventions for cardiac patients.

Collectively, the results of this study indicate that interventions enhancing hope, when informed by cognitive and spiritual frameworks, can serve as powerful tools in managing the emotional and physical challenges of chronic disease. The significance of all model pathways, the empirical support for the mediating role of spiritual well-being, and the substantial effect of the hope-based training on pain tolerance together confirm the robustness of the theoretical model. This not only adds to the growing body of literature advocating for holistic patient care but also emphasizes the practical feasibility of implementing such models in clinical settings (Ghorbannezhad, 2022; Moradi et al., 2021).

Despite its valuable contributions, this study is not without limitations. First, the sample was limited to young adult heart failure patients from a single geographical region, which may restrict the generalizability of the findings to broader or older populations. Second, the use of self-report instruments, though standardized, introduces the potential for social desirability and response bias, particularly in measuring constructs such as spirituality and hope. Third, the relatively small sample size in the experimental phase may limit the statistical power of certain findings and increase the likelihood of Type II errors. Additionally, the follow-up duration was short, which means the long-term

E-ISSN: 2980-9681

stability and sustainability of the intervention's effects on pain tolerance were not assessed.

Future research should consider expanding the sample size and including patients of diverse age groups, cultural backgrounds, and stages of illness to enhance the external validity of the findings. Longitudinal studies tracking changes in hope, emotion regulation, and pain tolerance over time would provide more insight into the durability and temporal dynamics of the intervention's effects. Additionally, it would be beneficial to integrate biological markers (such as cortisol levels or heart rate variability) to objectively assess the psychophysiological impacts of hope-based interventions. Finally, comparing hope-based programs with other therapeutic modalities such as mindfulness-based therapy or ACT could further clarify the mechanisms and relative efficacy of different approaches.

The results of this study highlight the importance of addressing emotional and spiritual dimensions in the treatment of heart failure patients. Healthcare providers, particularly in cardiac rehabilitation programs, should consider incorporating structured hope-building sessions that teach cognitive emotion regulation strategies and facilitate spiritual reflection. Training nurses, psychologists, and social workers in such integrative models could enhance patient engagement and improve quality of life. Additionally, developing culturally sensitive, easy-to-deliver interventions that combine psychological education with spiritual support could make these programs more accessible and impactful in diverse healthcare settings.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the study and participated in the research with informed consent. All ethical considerations were strictly observed, and the study was approved by the Ethics Committee under the code IR.IAU.SDJ.REC.1402.024.

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