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Health Anxiety and Quality of Life in Older Adults With Chronic Illness: The Mediating Roles of Emotion Regulation and Perceived Social Support

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ABSTRACT

This study aimed to investigate the relationship between health anxiety and quality of life in older adults with chronic illness and to examine the mediating roles of emotion regulation and perceived social support in this relationship.

Methods and Materials: This cross-sectional descriptive-correlational study was conducted among 360 older adults aged 60 years and above with at least one physician-diagnosed chronic illness who were recruited from selected healthcare and community-based centers in Tehran, Iran, during 2026. Participants completed the Short Health Anxiety Inventory, World Health Organization Quality of Life-OLD instrument, Emotion Regulation Questionnaire, and Multidimensional Scale of Perceived Social Support. Data were analyzed using Pearson correlation coefficients, confirmatory factor analysis, and structural equation modeling in SPSS and AMOS. Model fit was evaluated using χ^2/df , CFI, TLI, RMSEA, and SRMR. Indirect effects were tested using a nonparametric bootstrap procedure with 5,000 resamples and bias-corrected 95% confidence intervals.

Findings: Health anxiety was negatively associated with quality of life ($r = -.58, p < .001$), adaptive emotion regulation ($r = -.46, p < .001$), and perceived social support ($r = -.39, p < .001$). In the structural model, health anxiety negatively predicted quality of life ($\beta = -.29, p < .001$), emotion regulation ($\beta = -.47, p < .001$), and perceived social support ($\beta = -.40, p < .001$). Emotion regulation ($\beta = .37, p < .001$) and perceived social support ($\beta = .33, p < .001$) positively predicted quality of life. The indirect effects through emotion regulation ($\beta = -.17, 95\% \text{ CI } [-.24, -.12]$) and perceived social support ($\beta = -.13, 95\% \text{ CI } [-.19, -.08]$) were significant. The model explained 58% of the variance in quality of life.

Conclusion: Health anxiety is associated with poorer quality of life among older adults with chronic illness both directly and indirectly through reduced adaptive emotion regulation and lower perceived social support, highlighting the importance of integrated psychological and social interventions in chronic disease care.

Keywords: Health Anxiety; Quality of Life; Older Adults; Chronic Illness; Emotion Regulation; Perceived Social Support; Structural Equation Modeling

1. Introduction

Population aging has become one of the most consequential demographic and public-health developments of the twenty-first century, accompanied by a

substantial increase in the prevalence of chronic and degenerative diseases among older adults. Improvements in medical care have extended life expectancy, yet longer survival frequently occurs alongside hypertension, diabetes mellitus, cardiovascular disorders, musculoskeletal

problems, chronic respiratory conditions, renal disease, cancer, and other long-term illnesses that require continuous monitoring and adaptation. Consequently, successful aging can no longer be evaluated only in terms of survival or disease control; increasing attention has been directed toward psychological adjustment, subjective well-being, functional independence, and quality of life. Quality of life is a multidimensional construct encompassing physical health, psychological well-being, autonomy, interpersonal relationships, social participation, environmental conditions, and individuals' subjective evaluations of their position in life (Maggino, 2023). Among older adults, these dimensions are particularly interdependent because deteriorations in physical health may influence mobility, independence, emotional functioning, social engagement, and perceptions of personal meaning. Studies of older populations have therefore emphasized that maintaining quality of life requires attention not only to disease symptoms but also to psychological and social resources that enable individuals to adapt to aging-related challenges (Chang, 2023; Obi, 2024; Uğur & Kabakci, 2025). This issue becomes especially important among older people with chronic illnesses, for whom recurrent symptoms, medical appointments, pharmacological treatments, uncertainty regarding disease progression, and concerns about disability or mortality may become enduring features of everyday life.

Chronic illness can affect quality of life through multiple biological, functional, and psychological pathways. Physical limitations may reduce an older person's ability to perform activities of daily living, participate in valued social roles, or maintain previous levels of independence, while repeated exposure to symptoms can heighten awareness of bodily vulnerability. Research among community-dwelling older adults has shown that physical health status, depression, and social support are closely associated with quality of life, indicating that health-related impairment is embedded within broader psychological and interpersonal processes rather than functioning as an isolated determinant (Chang, 2023). Similar evidence has emerged from work examining degenerative diseases and health education, suggesting that interventions capable of increasing health knowledge and adaptive self-management may contribute to improved quality of life in later life (Daniel et al., 2021). Among patients requiring intensive chronic disease management, such as individuals receiving hemodialysis, self-care capacity has also been identified as a major component of adjustment and disease management (Zhang & Xu, 2021). Moreover, frailty, impaired mobility, and depressive

symptoms can reinforce one another in older adults, potentially producing a cycle in which physical deterioration leads to emotional distress, reduced activity, and further reductions in perceived well-being (Yin et al., 2023). The significance of these relationships is further illustrated by evidence that recreational engagement, physical activity, and structured health-promoting activities may help preserve psychological functioning and quality of life among older adults (Obi, 2024; Uğur & Kabakci, 2025; Xue et al., 2025). Accordingly, the psychological interpretation of chronic illness may be as important as the objective medical burden itself.

One psychological factor that may be especially important in this context is health anxiety. Health anxiety refers to excessive concern about having, developing, or worsening a serious medical condition, often accompanied by heightened attention to bodily sensations, threat-focused interpretation of symptoms, reassurance seeking, and persistent preoccupation with health. Although a reasonable level of concern can motivate health-protective behavior, excessive anxiety may lead individuals to interpret ordinary or medically explained sensations as indicators of severe deterioration. For older adults who already live with chronic disease, the distinction between realistic concern and maladaptive health anxiety can be particularly complex because bodily symptoms are genuine and medical uncertainty is often unavoidable. The emotional consequences of illness-related concern were especially visible during the COVID-19 period, when older adults faced both heightened objective health risks and intensified anxiety, isolation, and uncertainty (Fazio et al., 2022; Field, 2022; Herdian et al., 2024). Studies conducted during this period documented meaningful relationships among anxiety, depression, coping strategies, and quality of life in older populations (Iswatun et al., 2022; Nadzir et al., 2022). Research on coronavirus-related anxiety among older adults further indicated that health-related quality of life was associated with anxiety through psychosocial pathways involving hope and perceived social support (Manijeh et al., 2021). These findings support the broader proposition that health anxiety may adversely influence quality of life not only through direct emotional distress but also through its effects on the psychological and social mechanisms used to cope with illness.

Health anxiety can interfere with quality of life by narrowing attention toward symptoms, increasing perceived vulnerability, and reducing participation in activities that would otherwise support physical and psychological

functioning. Persistent health-related worry may encourage avoidance of physical activity, social situations, or independent functioning because these activities are perceived as potentially dangerous. At the same time, excessive monitoring of bodily sensations may strengthen the salience of discomfort and increase emotional reactivity to normal fluctuations in health. Positive psychological functioning has increasingly been recognized as relevant to adaptation among medically vulnerable populations, with psychological resilience, positive affective resources, and health-promoting beliefs associated with more adaptive responses to illness (Chai, 2023; Wu et al., 2025). Likewise, systematic evidence regarding exercise and mind-body practices among older patients with serious illness suggests that interventions capable of reducing psychological distress can also contribute to broader improvements in functioning and well-being (Cui, 2026). These observations are consistent with transdiagnostic psychological models in which anxiety, maladaptive interpretations, avoidance, and emotion-regulation difficulties can operate across different diagnostic categories and physical conditions (Joaquim et al., 2023). Thus, examining the psychological processes that may connect health anxiety to reduced quality of life is essential for developing more comprehensive models of adaptation to chronic illness in old age.

Emotion regulation represents one of the most plausible mechanisms through which health anxiety may influence quality of life. Emotion regulation refers to the processes through which individuals monitor, evaluate, modify, and express emotional responses in accordance with situational demands and personal goals. Adaptive strategies such as cognitive reappraisal can alter the meaning assigned to stressful events and reduce the intensity of negative emotional reactions, whereas rigid suppression, rumination, catastrophizing, or other maladaptive strategies may intensify or prolong distress. In older adults living with chronic illness, emotion regulation may determine whether physical symptoms are interpreted as manageable challenges or overwhelming threats. Evidence from research on aging suggests that emotional functioning is strongly related to quality of life, particularly among older patients exposed to prolonged institutional or medical care (Kim et al., 2022). Emotional intelligence and the capacity to understand and manage emotional experiences have similarly been proposed as important components of healthy aging (Cé, 2025). In addition, insecure attachment and related emotional vulnerabilities may contribute to emotional disorders across the lifespan, including in later adulthood, highlighting the

importance of underlying emotion-regulatory processes in psychological adjustment (Bai, 2024). These findings suggest that older adults who are better able to reinterpret threatening health information, tolerate emotional discomfort, and regulate fear responses may experience less disruption in their daily functioning and quality of life even when chronic illness remains present.

The mediating role of emotion regulation is further supported by studies demonstrating that cognitive emotion-regulation strategies can transmit the effects of psychological resources on stress and health-related behavior. Cognitive emotion regulation has been identified as a mediator between resilience and stress, indicating that individual psychological resources may affect distress partly through the ways people cognitively manage difficult emotional experiences (Ursu & Măirean, 2022). Among older adults, psychological capital and perceived social support have likewise been linked to health-promoting behaviors through cognitive emotion-regulation strategies (Ahmadboukani et al., 2022). Regulatory emotional self-efficacy has also been examined in relation to physical activity, perceived burden, and social isolation among older adults, further suggesting that individuals' beliefs regarding their ability to manage emotions are closely intertwined with behavioral and interpersonal adaptation (Yang et al., 2025). Broader evidence relating coping responses to quality of life in older populations also indicates that the ways in which individuals respond cognitively and behaviorally to stress may meaningfully shape their subjective well-being (Rosaly & Parashar, 2021). Consequently, health anxiety may reduce quality of life partly because persistent threat appraisal consumes psychological resources, promotes maladaptive regulatory patterns, and limits the older person's ability to reinterpret and manage distressing health-related experiences effectively.

Perceived social support constitutes a second major mechanism that may explain variability in quality of life among chronically ill older adults. Perceived social support refers to an individual's belief that emotional, informational, and practical assistance is available from family members, friends, significant others, and the broader social network when needed. The subjective perception of support may be particularly important because the mere presence of other people does not necessarily guarantee that an older adult feels understood, valued, protected, or able to seek assistance. Social relationships can reduce stress by providing companionship, reassurance, practical help with illness management, and alternative perspectives on

threatening health experiences. Empirical studies consistently indicate that social support is associated with subjective well-being and quality of life among older adults. For example, perceived social support and living arrangements have been related to subjective well-being in older populations, with supportive interpersonal environments serving as important resources for successful adaptation (Adriani & Handika, 2023). Social support, together with gratitude, has also been linked to flourishing in later life, suggesting that interpersonal resources contribute not only to reduced distress but also to positive psychological functioning (Anand et al., 2024). In older adults with chronic diseases specifically, social support has been shown to mediate the relationship between depression and subjective well-being, emphasizing its role as a psychosocial mechanism linking emotional distress to broader life evaluation (Li et al., 2025).

The protective role of social support may be particularly relevant in the context of health anxiety because anxious individuals may require reassurance, assistance in interpreting medical information, and emotional support when confronting uncertainty. At the same time, excessive health anxiety may itself compromise social functioning by increasing dependence, reassurance-seeking behavior, irritability, withdrawal, or perceived burden. Research on older adults has demonstrated that social isolation can alter the association between social adaptation and depressive symptoms, indicating that the quality and availability of social relationships influence the psychological consequences of adjustment difficulties (Li et al., 2023). Studies of family-related mechanisms similarly suggest that intergenerational relationships, offspring resources, and family structure can influence health-related quality of life and subjective well-being in older adults (Jia et al., 2025; Lijing & Tian-Zi, 2024). Social support has also been identified as a psychological pathway through which behavioral or lifestyle factors may influence anxiety outcomes. For instance, research among older adults living alone has demonstrated that social support and psychological capital can function sequentially in the relationship between Tai Chi participation and death anxiety (Zhou et al., 2024). These findings underscore that social resources may buffer perceptions of threat, strengthen confidence in coping, and reduce the emotional impact of health-related uncertainty.

The importance of perceived support is amplified by the social transitions commonly associated with old age. Retirement, bereavement, reduced mobility, children

leaving the household, relocation, institutionalization, and the loss of long-standing social roles can alter both the quantity and quality of interpersonal contact. Emotional responses to the empty-nest experience, for example, may require psychotherapeutic intervention when changes in family structure generate loneliness or psychological distress (Guadalupe-Tixi & Santos-Morocho, 2024). More generally, the COVID-19 pandemic provided a particularly clear example of how social disconnection can magnify psychological vulnerability among older people (Field, 2022; Herdian et al., 2024). Healthcare environments themselves may also shape social and psychological adaptation. Multidimensional approaches to age-friendly healthcare communities emphasize that health in later life depends on the integration of medical services with spatial, social, and environmental resources that support sustained engagement and functioning (Che et al., 2022). Therefore, perceived social support should not be viewed merely as an external resource but as a central component of the older person's psychological appraisal of safety, belonging, and coping capacity.

Quality of life in chronic illness is thus likely to emerge from the interaction of health-related threat perceptions, emotional self-regulation, and social resources. The available literature suggests that each of these domains has independently important associations with well-being, yet fewer studies have examined them within an integrated mediation framework. Existing studies have often focused separately on depression, anxiety, social isolation, physical activity, resilience, or general psychological well-being rather than specifically testing whether emotion regulation and perceived social support explain the relationship between health anxiety and quality of life among older adults with chronic disease. Evidence from caregivers of geriatric populations also demonstrates that psychological well-being, quality of life, and distress tolerance are interconnected, reinforcing the broader relevance of emotional coping capacities within the aging context (Sridhar & Kuriakose, 2024). Similarly, positive psychological interventions and psychological resource models suggest that well-being can be enhanced by strengthening adaptive cognitive, emotional, and social processes rather than focusing exclusively on symptom reduction (Chai, 2023). The potential contribution of these mechanisms is especially important because health anxiety may be relatively modifiable even when the underlying chronic medical condition cannot be eliminated.

A further limitation of the existing literature is that much of the evidence concerning older adults' mental health and quality of life has been generated under specific contextual conditions, including institutional settings, rural communities, pandemic-related restrictions, and culturally distinct populations. Quality of life and the meaning of social support are shaped by cultural expectations regarding family responsibility, independence, aging, and illness. Therefore, models developed in one social context cannot automatically be generalized to older adults living in large urban settings such as Tehran. Older adults in Tehran may experience substantial variation in family structure, healthcare access, living arrangements, socioeconomic resources, and opportunities for social participation. These contextual differences may influence both perceived support and the strategies used to regulate health-related anxiety. Studies across diverse older populations have demonstrated that subjective well-being is shaped by complex combinations of social, emotional, behavioral, and health-related factors rather than by a single predictor (Adriani & Handika, 2023; Anand et al., 2024). Moreover, research into healthy aging increasingly emphasizes integrated models in which physical health, psychological resources, and interpersonal functioning are examined simultaneously (Cé, 2025; Xue et al., 2025). Such an approach is particularly relevant for older adults with chronic illness because their quality of life is likely to depend on how effectively they interpret illness-related threats, regulate emotional responses, mobilize social resources, and maintain meaningful engagement with daily life.

Clarifying these mechanisms also has practical implications. If emotion regulation and perceived social support mediate the association between health anxiety and quality of life, interventions need not focus solely on reducing health-related fears. Psychological programs could instead combine cognitive restructuring, emotion-regulation training, distress-tolerance strategies, family education, peer support, and enhancement of social connectedness. Transdiagnostic cognitive-behavioral approaches provide a relevant framework for targeting shared processes across anxiety and emotional disorders (Joaquim et al., 2023), while health-promotion models emphasize the importance of strengthening psychological capital, social support, and adaptive cognitive regulation to encourage healthier behavior among older adults (Ahmadboukani et al., 2022). Physical and mind-body activities may further support psychological functioning and reduce distress among older adults with serious medical conditions (Cui, 2026; Zhou et

al., 2024). Such multidimensional approaches are more consistent with contemporary models of healthy aging than interventions addressing medical symptoms or psychological distress in isolation.

Despite growing evidence concerning social support, emotional functioning, health-related anxiety, and quality of life, the specific pathways connecting these constructs among older adults with chronic illness remain insufficiently clarified. Previous studies have established associations between anxiety and quality of life (Iswatun et al., 2022; Manijeh et al., 2021), between social support and well-being (Anand et al., 2024; Li et al., 2025), and between emotion-regulation processes and psychological adjustment (Ahmadboukani et al., 2022; Ursu & Măirean, 2022); however, these relationships have rarely been tested simultaneously in a model in which emotion regulation and perceived social support operate as parallel mediators between health anxiety and quality of life. Integrating these variables may provide a more precise account of why some older adults maintain relatively satisfactory quality of life despite chronic illness, whereas others experience substantial psychological and functional deterioration. Such knowledge could also inform clinical screening by identifying modifiable psychological and interpersonal processes that should be assessed alongside conventional medical indicators. Given the increasing burden of chronic disease in aging populations and the growing emphasis on person-centered rather than disease-centered care, examining these pathways has both theoretical and applied significance (Che et al., 2022; Maggino, 2023).

Accordingly, the aim of the present study was to investigate the relationship between health anxiety and quality of life in older adults with chronic illness in Tehran and to determine the mediating roles of emotion regulation and perceived social support in this relationship.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a cross-sectional, descriptive-correlational design to examine the relationship between health anxiety and quality of life among older adults with chronic illness and to determine the mediating roles of emotion regulation and perceived social support in this relationship. The statistical population consisted of older adults with at least one physician-diagnosed chronic illness who were residing in Tehran, Iran, during 2026 and receiving outpatient health or supportive services through

selected hospitals, comprehensive health centers, geriatric clinics, and community-based centers for older adults. Considering the proposed mediation model, the number of observed variables, the need to obtain stable estimates for direct and indirect effects, and the possibility of incomplete questionnaires, a target sample of 360 participants was initially considered appropriate. A total of 382 older adults were approached and assessed for eligibility. Of these, 13 individuals declined participation or discontinued completion of the questionnaires, and nine questionnaires were excluded because more than 10% of the items were unanswered or showed clearly patterned responses. Consequently, data from exactly 360 participants were included in the final statistical analyses. Participants were recruited using a multistage sampling procedure. In the first stage, Tehran was divided into northern, southern, eastern, western, and central geographical sectors to increase the socioeconomic and demographic diversity of the sample. Several healthcare and community-based centers serving older adults were then selected from each sector, and eligible participants were recruited proportionately from the selected centers. Eligibility criteria included being 60 years of age or older, residing in Tehran for at least one year, having at least one chronic physical illness diagnosed by a physician for a minimum duration of six months, being able to communicate in Persian, having sufficient cognitive and sensory ability to understand and answer the questionnaire items, and providing informed consent to participate. Chronic illnesses included common long-term medical conditions such as cardiovascular disease, hypertension, diabetes mellitus, chronic respiratory disease, musculoskeletal disorders, chronic kidney disease, and other physician-confirmed conditions requiring ongoing medical care. Individuals were excluded if they had a documented diagnosis of a major neurocognitive disorder, acute psychotic disorder, severe neurological impairment interfering with questionnaire completion, an acute medical condition requiring hospitalization at the time of recruitment, or if they submitted substantially incomplete questionnaires. Before data collection, participants received information regarding the purpose and procedures of the study, voluntary participation, confidentiality of their responses, and their right to withdraw at any stage without consequences for the healthcare or social services they received. Questionnaires were administered individually in a quiet setting, and trained research assistants provided standardized clarification when participants experienced difficulty reading an item, without interpreting or influencing their responses. For participants

with minor visual limitations, questionnaire items were read aloud exactly as written and responses were recorded according to their stated choices. Completion of the complete assessment battery required approximately 25–35 minutes. All data were collected anonymously using numerical identification codes, and no personally identifiable information was entered into the analytical dataset.

2.2. Data Collection Tools

Data were collected using a demographic and clinical information form together with standardized measures of health anxiety, quality of life, emotion regulation, and perceived social support. The demographic and clinical information form was developed for the present study and collected information on age, sex, marital status, educational level, living arrangement, employment or retirement status, duration of chronic illness, number of diagnosed chronic conditions, and general patterns of medical service use. Health anxiety was assessed using the Short Health Anxiety Inventory (SHAI), a widely used self-report instrument developed to assess concerns and beliefs related to physical health and the possibility of having or developing a serious disease. The instrument consists of 18 items, each containing four statements reflecting increasing levels of health-related concern and scored from 0 to 3. The total score is obtained by summing the item scores, with higher scores indicating greater health anxiety. The SHAI assesses dimensions such as excessive attention to bodily sensations, concerns regarding illness, interpretation of physical symptoms as indicators of disease, and anticipated negative consequences of becoming seriously ill. Because the scale focuses primarily on health-related beliefs and concerns rather than the objective severity of physical symptoms, it was considered particularly appropriate for investigating health anxiety among individuals who already had diagnosed chronic illnesses.

Quality of life was assessed using the World Health Organization Quality of Life instrument for older adults (WHOQOL-OLD). The WHOQOL-OLD is specifically designed to measure quality of life in later life and consists of 24 items distributed across six domains: sensory abilities; autonomy; past, present, and future activities; social participation; death and dying; and intimacy. Items are rated on a five-point Likert-type scale, and domain scores can be calculated separately as well as combined to generate an overall quality-of-life score. Following the instrument's

scoring procedure, negatively phrased items were reverse-scored where required so that higher scores consistently represented a more favorable quality of life. The use of an older-adult-specific quality-of-life measure was considered preferable to relying exclusively on generic physical-health indicators because the construct examined in the present study encompassed autonomy, interpersonal relationships, social participation, perceptions of aging, and satisfaction with current and anticipated life circumstances.

Emotion regulation was measured using the Emotion Regulation Questionnaire (ERQ). The ERQ consists of 10 items designed to assess two commonly studied emotion-regulation strategies: cognitive reappraisal and expressive suppression. Cognitive reappraisal refers to modifying the interpretation of an emotionally relevant situation in order to alter its emotional impact, whereas expressive suppression reflects attempts to inhibit the outward expression of emotional responses after they have been generated. The items are rated on a seven-point Likert scale ranging from strong disagreement to strong agreement. Six items assess cognitive reappraisal and four assess expressive suppression. Subscale scores were calculated in accordance with the standard scoring procedure, with higher scores indicating greater use of the corresponding regulation strategy. For the mediation analyses, emotion regulation was modeled on the basis of the questionnaire's theoretically defined dimensions, with adaptive regulation being reflected primarily by greater cognitive reappraisal and lower reliance on maladaptive expressive suppression. The two-dimensional structure was retained rather than treating all ERQ items as indicators of a unidimensional construct because reappraisal and suppression represent conceptually distinct strategies and may have different associations with psychological well-being and quality of life.

Perceived social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS is a 12-item self-report measure assessing an individual's perception of the availability and adequacy of support from three major interpersonal sources: family, friends, and a significant other. Each dimension is represented by four items, and responses are provided using a seven-point Likert-type scale. A total perceived social support score was calculated by averaging or summing responses across the 12 items according to the standard scoring procedure, with higher scores indicating stronger perceived social support. Scores for the family, friends, and significant-other dimensions were also retained for descriptive and measurement-model analyses. The MSPSS

was selected because the present study focused on perceived rather than objectively received social support; perceived availability of assistance, emotional closeness, and interpersonal reassurance may be particularly relevant to how older adults cope with chronic disease, illness-related concerns, and limitations in everyday functioning. Prior to hypothesis testing, the internal consistency of all study measures was evaluated in the present sample. Cronbach's alpha and composite reliability coefficients were calculated for the principal constructs and their relevant subdimensions, with coefficients of .70 or greater considered indicative of acceptable internal consistency. The measurement properties of the constructs were additionally examined before estimation of the structural mediation model.

2.3. Data Analysis

Data analysis was conducted using IBM SPSS Statistics and AMOS. Before testing the hypothesized relationships, the dataset was screened for completeness, coding errors, implausible values, univariate and multivariate outliers, and patterns of missing data. Questionnaires with substantial missing responses were excluded according to the predefined criterion, while occasional missing item responses within otherwise valid questionnaires were examined before analysis and handled using an appropriate model-based procedure where necessary. Descriptive statistics, including frequency, percentage, mean, standard deviation, minimum, and maximum, were calculated to describe the demographic and clinical characteristics of the participants and the distributions of the principal study variables. The assumptions underlying multivariate analysis were subsequently evaluated. Univariate normality was assessed using skewness and kurtosis indices, while multivariate outliers were evaluated using Mahalanobis distance. Potential multicollinearity among predictors was assessed through correlations, tolerance statistics, and variance inflation factors. Pearson correlation coefficients were initially calculated to determine the magnitude and direction of the bivariate associations among health anxiety, quality of life, emotion regulation, and perceived social support.

The hypothesized mediation model was evaluated using structural equation modeling. Before testing the structural pathways, confirmatory factor analysis was performed to determine whether the observed indicators adequately represented the proposed latent constructs. The adequacy of

the measurement and structural models was evaluated using multiple goodness-of-fit indices rather than relying exclusively on the chi-square statistic because chi-square is sensitive to sample size. Model fit was considered acceptable when the chi-square to degrees-of-freedom ratio was below 3, the comparative fit index and Tucker–Lewis index were approximately .90 or higher, and the root mean square error of approximation was below .08, with values closer to .06 indicating better fit. The standardized root mean square residual was also examined, with values below .08 regarded as acceptable. Standardized factor loadings were examined to evaluate indicator performance, and reliability and convergent validity were assessed using Cronbach's alpha, composite reliability, and average variance extracted where applicable.

The structural model specified health anxiety as the primary predictor and quality of life as the outcome variable, with emotion regulation and perceived social support entered as mediating variables. Direct paths were estimated from health anxiety to quality of life, from health anxiety to each mediator, and from each mediator to quality of life. The model therefore permitted simultaneous estimation of the direct association between health anxiety and quality of life and the indirect associations transmitted through emotion regulation and perceived social support. Standardized regression coefficients, standard errors, critical ratios, and probability values were reported for individual structural paths. The statistical significance of indirect effects was assessed using a nonparametric bootstrap procedure with 5,000 resamples and bias-corrected 95% confidence intervals. An indirect effect was considered statistically significant when its bootstrap confidence interval did not include zero. The total effect of health anxiety on quality of life was decomposed into direct and indirect components to determine the extent to which emotion regulation and perceived social support accounted for the association. The coefficient of determination (R^2) was calculated for endogenous variables to indicate the proportion of variance

explained by the model. Where relevant, age, sex, number of chronic conditions, and duration of chronic illness were examined as potential covariates to ensure that the principal associations were not attributable solely to basic demographic or disease-related differences. All statistical tests were two-tailed, and the significance level was set at $p < .05$.

3. Findings and Results

The final sample consisted of 360 older adults with at least one physician-diagnosed chronic illness residing in Tehran. The mean age of participants was 68.74 years ($SD = 6.41$), with an age range of 60 to 87 years. Of the participants, 194 (53.9%) were women and 166 (46.1%) were men. Regarding marital status, 224 participants (62.2%) were married, 91 (25.3%) were widowed, 27 (7.5%) were divorced or separated, and 18 (5.0%) had never married. In terms of education, 74 participants (20.6%) had primary education or less, 93 (25.8%) had completed lower secondary education, 101 (28.1%) had a high-school diploma, and 92 (25.6%) had an academic degree. A total of 137 participants (38.1%) lived only with their spouse, 101 (28.1%) lived with their spouse and other family members, 72 (20.0%) lived with children or other relatives without a spouse, and 50 (13.9%) lived alone. The mean duration of chronic illness was 9.36 years ($SD = 6.18$). With regard to multimorbidity, 141 participants (39.2%) reported one diagnosed chronic condition, 132 (36.7%) reported two chronic conditions, and 87 (24.2%) reported three or more conditions. Hypertension was the most frequently reported condition, followed by diabetes mellitus, cardiovascular disease, musculoskeletal disorders, and chronic respiratory disease. Preliminary examination of demographic and clinical characteristics indicated adequate variability across the sample, supporting subsequent examination of individual differences in psychological functioning and quality of life.

Table 1

Descriptive Statistics, Distributional Characteristics, and Internal Consistency of the Study Variables

Variable	Mean	SD	Minimum	Maximum	Skewness	Kurtosis	Cronbach's α
Health anxiety	19.84	7.16	4	43	0.48	-0.21	.89
Quality of life	83.57	14.82	43	116	-0.31	-0.18	.91
Cognitive reappraisal	27.68	6.43	10	42	-0.19	-0.47	.86

Expressive suppression	16.42	5.09	4	28	0.26	-0.39	.79
Overall adaptive emotion regulation	34.91	7.88	14	52	-0.14	-0.32	.88
Perceived social support	54.73	13.17	18	82	-0.37	-0.44	.93
Family support	18.96	4.93	5	28	-0.42	-0.34	.89
Friend support	16.87	5.21	4	28	-0.21	-0.51	.87
Significant-other support	18.90	5.08	4	28	-0.39	-0.28	.90

As shown in Table 1, the participants exhibited meaningful variability across all principal study variables. The mean health-anxiety score was 19.84 (SD = 7.16), indicating substantial individual differences in illness-related worry, vigilance toward bodily sensations, and concern regarding the possible consequences of health deterioration. The mean overall quality-of-life score was 83.57 (SD = 14.82), suggesting that the sample included older adults with a broad range of perceived functioning and well-being. For emotion regulation, the mean cognitive-reappraisal score was 27.68 (SD = 6.43), whereas the mean expressive-suppression score was 16.42 (SD = 5.09). The derived adaptive emotion-regulation index had a mean of

34.91 (SD = 7.88), indicating considerable variability in participants' ability to modify emotional responses through comparatively adaptive regulatory processes. The mean perceived-social-support score was 54.73 (SD = 13.17), with family support showing the highest mean among the three social-support dimensions. Skewness values ranged from -0.42 to 0.48 and kurtosis values ranged from -0.51 to -0.18, indicating no serious departure from univariate normality. Moreover, Cronbach's alpha coefficients ranged from .79 to .93, demonstrating acceptable to excellent internal consistency for all scales and subscales. These findings supported the suitability of the variables for subsequent correlational and structural-equation analyses.

Table 2

Pearson Correlations Among Health Anxiety, Quality of Life, Emotion Regulation, and Perceived Social Support

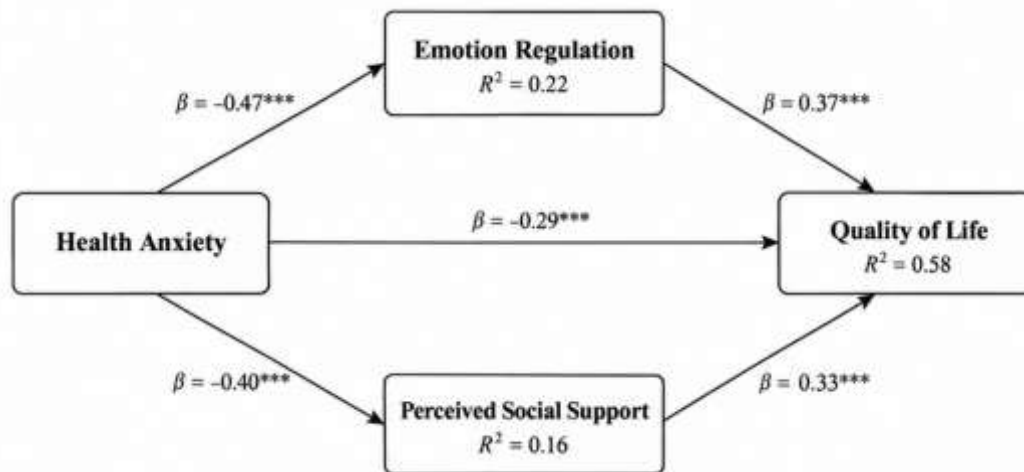
Variable	1	2	3	4
1. Health anxiety	1			
2. Quality of life	-.58***	1		
3. Adaptive emotion regulation	-.46***	.61***	1	
4. Perceived social support	-.39***	.57***	.42***	1

Table 2 presents the zero-order correlations among the main variables of the study. Health anxiety was significantly and negatively associated with quality of life ($r = -.58, p < .001$), indicating that older adults who reported greater illness-related worry and health-related threat perceptions tended to report poorer overall quality of life. Health anxiety was also negatively correlated with adaptive emotion regulation ($r = -.46, p < .001$) and perceived social support ($r = -.39, p < .001$), suggesting that greater health anxiety was associated with lower use of adaptive emotional-regulation processes and weaker perceptions of available interpersonal support. In contrast, adaptive emotion

regulation showed a strong positive association with quality of life ($r = .61, p < .001$), while perceived social support was also positively associated with quality of life ($r = .57, p < .001$). The two proposed mediators were moderately and positively correlated with one another ($r = .42, p < .001$), indicating that participants with more adaptive emotion-regulation abilities also tended to perceive greater availability of social support. None of the intercorrelations approached a magnitude indicative of problematic multicollinearity, supporting the simultaneous inclusion of emotion regulation and perceived social support in the structural mediation model.

Figure 1

Structural Model of the Relationships Among Health Anxiety, Emotion Regulation, Perceived Social Support, and Quality of Life in Older Adults With Chronic Illness



The final structural model demonstrated satisfactory overall fit to the observed data, $\chi^2/df = 2.24$, CFI = .945, TLI = .936, RMSEA = .059, and SRMR = .049. Health anxiety explained 22% of the variance in adaptive emotion regulation ($R^2 = .22$) and 16% of the variance in perceived social support ($R^2 = .16$). When health anxiety, adaptive emotion regulation, and perceived social support were considered simultaneously, the model explained 58% of the variance in quality of life ($R^2 = .58$), indicating substantial explanatory capacity for a psychosocial model of quality of life among chronically ill older adults. The strongest direct predictor of quality of life was adaptive emotion regulation ($\beta = .37$), followed by perceived social support ($\beta = .33$) and the remaining direct negative effect of health anxiety ($\beta = -$

.29). Bootstrap analysis confirmed that neither indirect-effect confidence interval included zero, providing statistical support for the hypothesized mediating mechanisms. The pattern of findings therefore indicated that health anxiety was associated with lower quality of life both directly and indirectly through diminished adaptive emotion-regulation capacity and reduced perceptions of available social support. These results supported the proposed theoretical model and suggested that the relationship between illness-related anxiety and quality of life in older adults with chronic conditions cannot be understood solely as a direct psychological effect; rather, it is partly transmitted through intrapersonal emotional processes and interpersonal supportive resources.

Table 3

Measurement Model, Reliability, Convergent Validity, and Model-Fit Indices

Construct	Standardized Loading Range	Cronbach's α	Composite Reliability	AVE
Health anxiety	.62-.84	.89	.91	.53
Quality of life	.65-.87	.91	.93	.58
Adaptive emotion regulation	.64-.86	.88	.90	.55
Perceived social support	.71-.91	.93	.94	.66
Fit Index	Obtained Value	Recommended Criterion		
χ^2/df	2.18	< 3.00		
CFI	.948	> .90		
TLI	.939	> .90		
RMSEA	.057	< .08		
SRMR	.046	< .08		

The results of the confirmatory factor analysis indicated that the measurement model provided an acceptable representation of the observed data. Standardized factor loadings for all indicators were statistically significant at $p < .001$ and ranged from .62 to .91 across the four principal constructs. Health anxiety showed factor loadings ranging

from .62 to .84, whereas the corresponding ranges were .65 to .87 for quality of life, .64 to .86 for adaptive emotion regulation, and .71 to .91 for perceived social support. Composite-reliability values ranged from .90 to .94 and exceeded the recommended threshold of .70 for all constructs. Average variance extracted values ranged from

.53 to .66 and therefore exceeded the conventional criterion of .50, providing evidence of adequate convergent validity. The overall measurement model demonstrated satisfactory goodness of fit, $\chi^2/df = 2.18$, CFI = .948, TLI = .939, RMSEA = .057, and SRMR = .046. All indices were within commonly accepted limits, indicating that the latent constructs were adequately represented by their observed

indicators and that the measurement properties were sufficient for testing the hypothesized structural relationships. Examination of tolerance and variance-inflation-factor statistics further revealed no evidence of problematic multicollinearity, with VIF values ranging from 1.24 to 1.69.

Table 4

Direct, Indirect, and Total Effects in the Structural Mediation Model

Structural Path	β	SE	CR/t	p	95% Bootstrap CI	Result
Health anxiety → Quality of life	-.29	.052	-5.87	< .001	[-.39, -.20]	Significant
Health anxiety → Adaptive emotion regulation	-.47	.048	-9.63	< .001	[-.56, -.37]	Significant
Health anxiety → Perceived social support	-.40	.050	-7.89	< .001	[-.49, -.30]	Significant
Adaptive emotion regulation → Quality of life	.37	.047	7.84	< .001	[.28, .46]	Significant
Perceived social support → Quality of life	.33	.045	7.29	< .001	[.24, .42]	Significant
Health anxiety → Emotion regulation → Quality of life	-.17	.031	—	< .001	[-.24, -.12]	Significant mediation
Health anxiety → Social support → Quality of life	-.13	.028	—	< .001	[-.19, -.08]	Significant mediation
Total indirect effect	-.30	.041	—	< .001	[-.39, -.23]	Significant
Total effect of health anxiety on quality of life	-.59	.047	-12.41	< .001	[-.68, -.50]	Significant

As reported in Table 4, all hypothesized direct structural pathways were statistically significant. Health anxiety had a significant negative direct effect on quality of life ($\beta = -.29$, $p < .001$), indicating that higher health anxiety remained independently associated with poorer quality of life even after accounting for the two mediators. Health anxiety also significantly predicted lower adaptive emotion regulation ($\beta = -.47$, $p < .001$) and lower perceived social support ($\beta = -.40$, $p < .001$). In turn, adaptive emotion regulation had a significant positive effect on quality of life ($\beta = .37$, $p < .001$), while perceived social support also positively predicted quality of life ($\beta = .33$, $p < .001$). The first specific indirect pathway, from health anxiety to quality of life through adaptive emotion regulation, was statistically significant ($\beta = -.17$, 95% bootstrap CI [-.24, -.12], $p < .001$). This finding indicated that part of the adverse association between health anxiety and quality of life could be explained by reduced adaptive emotion regulation among individuals experiencing greater health-related anxiety. The second specific indirect pathway through perceived social support was also significant ($\beta = -.13$, 95% bootstrap CI [-.19, -.08], $p < .001$), indicating that greater health anxiety was associated with lower perceived support, which in turn was associated with reduced quality of life. The combined indirect effect through the two mediators was $\beta = -.30$ (95% bootstrap CI [-.39, -.23], $p < .001$), while the total effect of health anxiety on quality of life was $\beta = -.59$ ($p < .001$). Because both the direct effect and indirect effects remained

statistically significant, the results supported partial rather than complete mediation. Comparison of the specific indirect coefficients further showed that the mediating effect through emotion regulation was somewhat stronger than the pathway through perceived social support.

4. Discussion

The present study examined the relationship between health anxiety and quality of life among older adults with chronic illness and tested the mediating roles of emotion regulation and perceived social support in this relationship. The findings indicated that health anxiety was significantly and negatively associated with quality of life, adaptive emotion regulation, and perceived social support. In contrast, adaptive emotion regulation and perceived social support were both positively related to quality of life. Structural equation modeling further demonstrated that health anxiety had a significant direct negative effect on quality of life and significant indirect effects through both emotion regulation and perceived social support. The indirect pathway through emotion regulation was somewhat stronger than the pathway through perceived social support, although both were statistically significant. Because the direct effect of health anxiety on quality of life remained significant after the mediators were introduced, the findings supported a partial mediation model. Overall, the model explained 58% of the variance in quality of life, suggesting

that health anxiety and the two proposed psychosocial mediators jointly account for a substantial proportion of individual differences in perceived quality of life among older adults with chronic illness.

The first major finding was that higher health anxiety was associated with lower quality of life. This finding is consistent with previous research showing that anxiety-related states, psychological distress, and negative health perceptions are closely linked to reduced well-being among older adults. Research conducted during the COVID-19 pandemic demonstrated that anxiety and depression were significantly associated with poorer quality of life in older populations, particularly when older adults faced uncertainty, social restriction, and perceived threats to health (Iswatun et al., 2022; Nadzir et al., 2022). Similarly, a model of coronavirus anxiety among older adults showed that anxiety was closely related to health-related quality of life and that this relationship was shaped by psychological and social resources (Manijeh et al., 2021). Broader reviews of older adults during the pandemic also documented substantial emotional vulnerability, including fear, loneliness, stress, and health-related concerns that negatively affected psychological well-being (Fazio et al., 2022; Field, 2022; Herdian et al., 2024). Although the present study focused on chronic illness rather than pandemic-specific anxiety, the underlying mechanism may be comparable: persistent perception of health-related threat can restrict attention, increase distress, and interfere with engagement in daily activities that contribute to quality of life.

The negative association between health anxiety and quality of life can also be understood in relation to the chronic disease context. Older adults with long-term medical conditions are repeatedly exposed to physical symptoms, medical examinations, medication regimens, uncertainty regarding disease progression, and reminders of bodily vulnerability. When these experiences are interpreted through a strongly threat-focused cognitive framework, relatively minor bodily changes may be perceived as evidence of serious deterioration. Such patterns can increase vigilance toward symptoms, reinforce reassurance seeking, and promote avoidance of activity. Over time, this may reduce independence, social participation, and confidence in self-management. Previous studies have shown that physical health status and depression are important determinants of quality of life among community-dwelling older adults (Chang, 2023), while frailty and reduced walking ability are related to depressive symptoms and poorer psychological

functioning (Yin et al., 2023). Similarly, research on older adults with degenerative diseases has emphasized the importance of health education and adaptive disease management in maintaining quality of life (Daniel et al., 2021). These findings support the interpretation that the consequences of chronic illness are shaped not only by medical severity but also by how older adults cognitively and emotionally respond to health-related changes.

Another important finding was that health anxiety significantly predicted poorer adaptive emotion regulation, and adaptive emotion regulation, in turn, significantly predicted higher quality of life. The significant indirect pathway through emotion regulation indicates that part of the adverse effect of health anxiety on quality of life may operate through difficulties in managing emotional responses to illness-related stress. This finding is consistent with research indicating that cognitive emotion-regulation strategies play an important role in the psychological adaptation of individuals exposed to stress. Cognitive emotion regulation has been shown to mediate the association between resilience and perceived stress, demonstrating that psychological resources influence well-being partly through the way individuals interpret and regulate emotional experiences (Ursu & Măirean, 2022). In older adults, cognitive emotion-regulation strategies have also been identified as mediating mechanisms linking psychological capital and perceived social support with health-promoting behaviors (Ahmadboukani et al., 2022). These findings align closely with the current mediation model and suggest that emotion regulation constitutes an important psychological pathway through which health-related concerns may influence broader functioning.

The positive relationship between adaptive emotion regulation and quality of life also corresponds with research emphasizing emotional functioning as a central component of healthy aging. Studies examining older patients in long-term care settings have demonstrated that emotional experiences and emotional well-being are closely associated with quality of life (Kim et al., 2022). Emotional intelligence, including the ability to identify, understand, and regulate emotional states, has likewise been proposed as an important contributor to healthy aging (Cé, 2025). Regulatory emotional self-efficacy has been associated with physical activity, perceived burden, and social isolation among older adults, highlighting the relevance of confidence in emotional management for broader psychosocial adjustment (Yang et al., 2025). In addition, insecure attachment has been discussed as a factor contributing to

emotional disorders across the lifespan, including in older populations, partly because of its relationship with ineffective emotional regulation (Bai, 2024). Together, these studies support the present finding that older adults who are better able to cognitively reappraise distressing situations and regulate negative emotional reactions are more likely to maintain a higher quality of life despite chronic illness.

The mediating role of emotion regulation may be particularly important in health anxiety because health anxiety is characterized by persistent interpretation of bodily sensations as threatening. Adaptive reappraisal can potentially interrupt this process by helping older adults interpret symptoms in a more balanced and context-sensitive manner. For example, rather than interpreting fatigue, pain, or temporary physiological changes as immediate signs of serious deterioration, individuals with more effective emotion-regulation capacities may be better able to distinguish between expected fluctuations in chronic illness and genuine medical danger. This can reduce catastrophic thinking and support continued participation in valued activities. The importance of adaptive psychological functioning is consistent with research on positive psychology and resilience among medically vulnerable populations (Chai, 2023; Wu et al., 2025). Transdiagnostic cognitive-behavioral interventions have similarly emphasized the importance of targeting shared processes such as maladaptive interpretations, avoidance, and ineffective emotion regulation across different forms of anxiety and emotional distress (Joaquim et al., 2023). Therefore, the present findings suggest that emotion regulation is not merely associated with quality of life but may help explain how health anxiety is translated into broader impairment.

The second mediating mechanism identified in the present study was perceived social support. Health anxiety significantly predicted lower perceived social support, whereas perceived social support significantly predicted better quality of life. The indirect effect of health anxiety on quality of life through perceived social support was also statistically significant. This finding is consistent with a substantial body of evidence demonstrating that social support is an important determinant of subjective well-being in older populations. Perceived social support and living arrangements have been associated with subjective well-being among older adults, indicating that older people who experience supportive interpersonal environments are more likely to report favorable psychological outcomes (Adriani & Handika, 2023). Social support and gratitude have also

been linked to flourishing in later life (Anand et al., 2024). Most directly relevant to the present study, social support has been shown to mediate the relationship between depression and subjective well-being among older patients with chronic diseases (Li et al., 2025). These findings support the current conclusion that perceived availability of emotional, practical, and relational support can function as a protective mechanism in the context of chronic illness.

The negative association between health anxiety and perceived social support deserves particular attention. Although anxious older adults may objectively have family members and other supportive individuals available, excessive health-related concern may influence how support is interpreted and used. Persistent reassurance seeking can strain relationships, while fear of being a burden may discourage some individuals from communicating their needs. In other cases, health anxiety may contribute to withdrawal from social activities, especially if the individual fears physical deterioration outside the home or believes that social engagement may interfere with disease management. Research has shown that social isolation can alter the relationship between social adaptation and depression, indicating that social connectedness influences psychological adjustment in later life (Li et al., 2023). Likewise, family-related factors and offspring resources have been linked to older adults' health-related quality of life and subjective well-being (Jia et al., 2025; Lijing & Tian-Zi, 2024). These findings support the possibility that health anxiety may impair quality of life partly by weakening the older person's subjective sense of interpersonal security and available assistance.

The positive effect of perceived social support on quality of life is also consistent with research showing that supportive relationships may reduce fear and strengthen psychological resources. Among older adults living alone, social support and psychological capital have been shown to mediate the relationship between Tai Chi participation and death anxiety (Zhou et al., 2024). This finding is particularly relevant because both death anxiety and health anxiety involve perceptions of physical vulnerability and uncertainty. Supportive interpersonal relationships may help older adults contextualize threatening experiences, obtain accurate health information, access practical assistance, and maintain meaningful roles. Broader age-friendly healthcare perspectives similarly emphasize the importance of integrating medical care with social and environmental resources that promote participation, autonomy, and sustained functioning (Che et al., 2022). Accordingly,

perceived social support appears to function not simply as a background characteristic but as an active psychosocial resource capable of modifying the impact of health-related distress on quality of life.

The finding that emotion regulation exerted a somewhat stronger mediating effect than perceived social support is theoretically meaningful. Health anxiety is primarily driven by internal processes such as catastrophic interpretation, selective attention to bodily sensations, worry, and emotional arousal. Therefore, an intrapersonal mechanism such as emotion regulation may be more proximal to the immediate experience of health anxiety than an interpersonal resource such as social support. Older adults who can effectively regulate fear and reinterpret health-related events may experience less disruption even in the absence of exceptionally strong social networks. Nevertheless, the contribution of social support remained substantial and independent. This suggests that internal and external coping resources operate simultaneously rather than competitively. Emotion regulation may help older adults manage the internal emotional consequences of chronic illness, whereas social support provides reassurance, practical assistance, companionship, and a broader sense of belonging.

The simultaneous significance of both mediators is consistent with multidimensional models of quality of life and healthy aging. Quality of life cannot be reduced to physical health status alone because subjective well-being depends on psychological interpretation, emotional functioning, social participation, autonomy, and meaningful engagement (Maggino, 2023). Research on older adults has shown that recreational activities can enhance quality of life by supporting physical, psychological, and social functioning (Obi, 2024), while gardening and other meaningful activities may promote engagement, connection, and well-being in institutionalized older populations (Uğur & Kabakci, 2025). Exercise has also been linked to improved psychological outcomes through both physiological and psychological mechanisms (Xue et al., 2025), and systematic evidence indicates that aerobic and mind-body activities may reduce distress among older patients with serious illness (Cui, 2026). These findings reinforce the conclusion that quality of life in later life is produced through interacting physical, emotional, and social systems.

The partial rather than complete mediation observed in the present study indicates that emotion regulation and perceived social support explain an important but incomplete portion of the relationship between health

anxiety and quality of life. Health anxiety retained a significant direct negative effect even after both mediators were considered. This suggests that additional mechanisms are likely involved, including illness severity, functional disability, pain, sleep disturbance, depression, resilience, self-efficacy, fear of death, financial strain, access to healthcare, and social isolation. Previous research has identified coping strategies as important correlates of quality of life among older adults (Rosaly & Parashar, 2021), while distress tolerance and psychological well-being have also been linked to quality-of-life outcomes in geriatric contexts (Sridhar & Kuriakose, 2024). These additional variables may either operate independently or interact with emotion regulation and social support. The current model should therefore be understood as a meaningful but not exhaustive explanation of quality-of-life variability in older adults with chronic illness.

The substantial proportion of explained variance in quality of life further supports the relevance of the proposed psychosocial model. The finding that health anxiety, emotion regulation, and perceived social support collectively explained 58% of the variance suggests that psychological and interpersonal variables can account for a large proportion of differences in how older adults evaluate their quality of life despite sharing the common experience of chronic illness. This is consistent with contemporary approaches emphasizing person-centered rather than disease-centered care. Older adults with comparable medical diagnoses may differ substantially in their daily functioning and well-being depending on how they interpret illness, regulate emotional reactions, and perceive available social resources. Interventions based solely on disease control may therefore fail to address major determinants of subjective functioning. Positive psychological approaches, health-promotion interventions, and transdiagnostic psychological models provide relevant frameworks for addressing these broader dimensions (Ahmadboukani et al., 2022; Chai, 2023; Joaquim et al., 2023).

5. Conclusion

Overall, the present findings suggest that reducing health-related threat perceptions while strengthening emotional and interpersonal resources may offer a more comprehensive pathway for supporting quality of life among older adults with chronic disease.

The present study has several limitations that should be considered when interpreting the findings. First, the cross-

sectional design does not permit definitive causal conclusions regarding the direction of relationships among health anxiety, emotion regulation, perceived social support, and quality of life. Although the structural model was theoretically specified and statistically supported, reciprocal relationships are possible; for example, poorer quality of life may increase health anxiety, and prolonged health anxiety may alter social perceptions over time. Second, all principal variables were assessed using self-report instruments, which may introduce common-method variance, recall bias, social desirability, and response-style effects. Third, participants were recruited from healthcare and community-based settings in Tehran, and therefore the findings may not generalize to older adults living in rural areas, other Iranian provinces, long-term residential facilities, or populations with substantially different cultural and socioeconomic characteristics. Fourth, the sample included older adults with heterogeneous chronic diseases, and the effects may differ according to illness type, severity, number of conditions, functional impairment, pain, treatment burden, and prognosis. Finally, although major demographic and clinical covariates were considered, potentially relevant factors such as depression, sleep quality, resilience, cognitive functioning, financial stress, medication burden, and objective social-network size were not incorporated into the model.

Future research should employ longitudinal and prospective designs to clarify the temporal ordering of health anxiety, emotion regulation, perceived social support, and quality of life and to determine whether changes in the proposed mediators predict subsequent improvement or deterioration in quality of life. Experimental and intervention studies are also needed to test whether directly improving emotion-regulation skills or strengthening perceived social support produces measurable reductions in the negative consequences of health anxiety. Future models could compare specific chronic disease groups and examine whether the structural relationships differ according to disease severity, multimorbidity, sex, age subgroup, socioeconomic status, living arrangement, or level of functional independence. It would also be valuable to distinguish among specific emotion-regulation strategies rather than relying only on a general adaptive-regulation construct and to examine different sources of social support, including family, friends, significant others, peers with similar illnesses, and healthcare professionals. Incorporating objective indicators of physical functioning, healthcare utilization, social-network characteristics, and longitudinal

clinical outcomes could further strengthen methodological rigor. Future studies may also test more complex sequential or moderated mediation models involving resilience, depression, self-efficacy, illness perception, loneliness, fear of death, or psychological capital.

From a practical perspective, the findings suggest that assessment and care of older adults with chronic illness should extend beyond physical symptoms and disease management to include systematic screening for excessive health anxiety, emotional-regulation difficulties, and inadequate perceived social support. Healthcare professionals working with older adults should be trained to identify patterns of catastrophic health interpretation, persistent reassurance seeking, avoidance, and social withdrawal. Psychological interventions may incorporate cognitive reappraisal, anxiety-management techniques, distress-tolerance training, mindfulness-based strategies, and education about realistic interpretation of chronic disease symptoms. Family members and caregivers may benefit from guidance on how to provide supportive reassurance without reinforcing excessive illness-focused behavior. Group-based programs, peer-support networks, community activities, and structured opportunities for social participation may further strengthen perceived support and reduce isolation. Integrating geriatric medical care with psychological and social services could therefore provide a more comprehensive model of chronic disease management and may help older adults maintain autonomy, emotional stability, and a higher quality of life despite ongoing medical limitations.

Authors' Contributions

Authors equally contributed to this article.

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

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References

- Adriani, Y., & Handika, S. (2023). Influence of Self-Compassion, Social Support, and Living Arrangements on Subjective Well-Being of the Elderly. *Psypathic Jurnal Ilmiah Psikologi*, 10(1), 93-100. <https://doi.org/10.15575/psy.v10i1.9918>
- Ahmadbougani, S., Fathi, D., Karami, M., Bashirgonbadi, S., Mahmoudpour, A., & Molaci, B. (2022). Providing a Health-promotion Behaviors Model in Elderly: Psychological Capital, Perceived Social Support, and Attitudes Toward Death With Mediating Role of Cognitive Emotion Regulation Strategies. *Health Science Reports*, 6(1). <https://doi.org/10.1002/hsr2.1020>
- Anand, P., Choudhary, P., Bali, M., & Gupta, R. (2024). Flourishing Among Elderly Population: The Role of Social Support and Gratitude. *Psychological Reports*, 129(4), 3255-3272. <https://doi.org/10.1177/00332941241285845>
- Bai, J. (2024). The Role of Insecure Attachment in Emotional Disorders: From Children to the Elderly. *Lecture Notes in Education Psychology and Public Media*, 51(1), 125-134. <https://doi.org/10.54254/2753-7048/51/20240960>
- Cé, R. (2025). The Influence of Emotional Intelligence on Healthy Aging. *International Journal of Clinical Case Reports and Reviews*, 22(3), 01-10. <https://doi.org/10.31579/2690-4861/663>
- Chai, R. (2023). Research on the Application Value of Positive Psychology in Clinical Practice. *International Journal of Clinical and Experimental Medicine Research*, 7(4), 609-613. <https://doi.org/10.26855/ijcemr.2023.10.016>
- Chang, K.-O. (2023). Effects of Physical Health Status, Social Support, and Depression on Quality of Life in the Korean Community-Dwelling Elderly. *Advances in Public Health*, 2023, 1-9. <https://doi.org/10.1155/2023/7262390>
- Che, L., Guo, Z., Yang, Y., Kang, H., & Cao, S. (2022). Life-Cycle Spatial Strategy for Multidimensional Health-Oriented Medical Care Community—From the Perspective of Sustainable Marketing. *Sustainability*, 14(17), 11081. <https://doi.org/10.3390/su141711081>
- Cui, C. (2026). Comparative Efficacy of Aerobic Exercise and Mind-Body Practices in Improving Sleep Quality and Psychological Distress Among Elderly Breast Cancer Patients: A Systematic Review. *Frontiers in Oncology*, 16. <https://doi.org/10.3389/fonc.2026.1798402>
- Daniel, W. H., Anwar, C., Fajar, N. A., Sitorus, R. J., & Ghiffari, A. (2021). Improving the Quality of Life for the Elderly With Degenerative Diseases Through to the Charitas Group Virtual Health Education Program During the Pandemic of the COVID-19. *Bioscientia Medicina Journal of Biomedicine and Translational Research*, 5(8), 803-810. <https://doi.org/10.32539/bsm.v5i8.389>
- Fazio, N. D., Morena, D., Delogu, G., Volonnino, G., Manetti, F., Padovano, M., Scopetti, M., Frati, P., & Fineschi, V. (2022). Mental Health Consequences of COVID-19 Pandemic Period in the European Population: An Institutional Challenge. *International journal of environmental research and public health*, 19(15), 9347. <https://doi.org/10.3390/ijerph19159347>
- Field, T. (2022). Elderly Problems During COVID-19: A Narrative Review. *International Journal of Psychological Research and Reviews*. <https://doi.org/10.28933/ijpr-2022-05-0507>
- Guadalupe-Tixi, P., & Santos-Morocho, J. (2024). Plan De Intervención Psicoterapéutica Para Reducir Los Efectos Emocionales Del Síndrome Del Nido Vacío en Adultos Mayores. *Psiquemag/ Revista Científica Digital De Psicología*, 13(1), 34-47. <https://doi.org/10.18050/psiquemag.v13i1.2679>
- Herdian, H., Septiningsih, D. S., Estria, S. R., Nuryana, Z., Yuniawati, R., & Tarnoto, N. (2024). Beyond the Pandemic: Understanding the Perceived Changes in Mental Health of the Elderly Population. *International Journal of Public Health Science (Ijphs)*, 13(2), 848. <https://doi.org/10.11591/ijphs.v13i2.23353>
- Iswatun, I., Yusuf, A., Susanto, J., Makhfudli, M., Nasir, A., & Mardhika, A. (2022). Depression, Anxiety, Coping Strategies, Quality of Life of the Elderly During the COVID-19 Pandemic. *International Journal of Public Health Science (Ijphs)*, 11(4), 1501. <https://doi.org/10.11591/ijphs.v11i4.21768>
- Jia, C., Ren, P., Jia, J., Xu, J., Chen, M., & Zhang, X. (2025). Research on the Impact Mechanism of Offspring Human Capital Endowment on the Health-Related Quality of Life of Rural Fathers From the Perspective of Digital Integration. <https://doi.org/10.21203/rs.3.rs-6299719/v1>
- Joaquim, S. B., Almeida, R. S. d., & Marques, A. (2023). Transdiagnostic Cognitive Behavioral Group Interventions: A Systematic Review. *Cognitive therapy and research*, 47(3), 303-326. <https://doi.org/10.1007/s10608-023-10372-x>
- Kim, A., Kim, Y., Rhee, J., Lee, S. Y., Jeong, Y.-I., Lee, J., Yoo, Y., Kim, H., So, H., & Park, J. (2022). A Study on Emotions to Improve the Quality of Life of South Korean Senior Patients Residing in Convalescent Hospitals. *International journal of environmental research and public health*, 19(21), 14480. <https://doi.org/10.3390/ijerph192114480>
- Li, X., He, Y., & Zhang, J. (2023). The Temporal Relationship Between Social Adaptation and Depression: The Moderating Role of Social Isolation. <https://doi.org/10.21203/rs.3.rs-3663952/v1>
- Li, Z., Zhu, Y., Zhou, Q., Yi, A., Mo, C., Gao, J., Chen, J., Wang, T., Feng, Z., & Mo, X. (2025). Social Support Mediates the Relationship Between Depression and Subjective Well-Being in Elderly Patients With Chronic Diseases: Evidence From a Survey in Rural Western China. *PLoS One*, 20(6), e0325029. <https://doi.org/10.1371/journal.pone.0325029>
- Lijing, Y., & Tian-Zi, Y. (2024). The Effect of Childbearing on the Subjective Well-Being of the Elderly and Its Psychological Mechanisms. *Modern Management Science & Engineering*, 6(3), p128. <https://doi.org/10.22158/mmse.v6n3p128>
- Maggino, F. (2023). Well-Being and Quality of Life. 7651-7651. https://doi.org/10.1007/978-3-031-17299-1_304844
- Manijeh, H. S., Rostami, M., & Ahmadbougani, S. (2021). Development of the Coronavirus Anxiety Model in the Elderly: Based on Hope and Health-Related Quality of Life With the Mediating Role of Perceived Social Support.

- Gerontology and geriatric medicine, 7.
<https://doi.org/10.1177/23337214211048324>
- Nadzir, Z. M., Fajria, K., Kitabi, I. A. A., & Simanjuntak, M. (2022). Phenomenological Study of Elderly Quality of Life in Pandemic Covid-19. *Journal of Family Sciences*, 7(1), 1-13.
<https://doi.org/10.29244/jfs.v7i1.36552>
- Obi, L. (2024). The Role of Recreational Activities in Enhancing Quality of Life Among the Elderly. *International Journal of Arts Recreation and Sports*, 3(3), 52-65.
<https://doi.org/10.47941/ijars.1944>
- Rosaly, P., & Parashar, N. (2021). The Relationship Between Coping Responses and Quality of Life Among Indian Elderly Population. *Pijr*, 23-26.
<https://doi.org/10.36106/paripex/3407826>
- Sridhar, A., & Kuriakose, H. (2024). Role of Psychological Well-Being, Quality of Life and Distress Tolerance in Caregivers of Geriatric Population: An Indian Exploratory Study. *Working With Older People*, 29(1), 57-65.
<https://doi.org/10.1108/wwop-03-2024-0015>
- Uğur, H. G., & Kabakci, M. (2025). The Perspectives of Elderly Residents in Nursing Home on Gardening Activities: A Qualitative Study. *Psychogeriatrics*, 25(2).
<https://doi.org/10.1111/psyg.70020>
- Ursu, A., & Măirean, C. (2022). Cognitive Emotion Regulation Strategies as Mediators Between Resilience and Stress During COVID-19 Pandemic. *International journal of environmental research and public health*, 19(19), 12631.
<https://doi.org/10.3390/ijerph191912631>
- Wu, S., Dai, F., Jiang, Y., Yang, H., Luo, C., Jiang, L., Gong, J., & Wu, C. (2025). Current Status and Factors Influencing Psychological Resilience and Positive Psychology in Patients With Tuberculosis Combined With Maintenance Hemodialysis: A Cross-Sectional Study.
<https://doi.org/10.21203/rs.3.rs-6665607/v1>
- Xue, P., Du, X., & Kong, J. (2025). Age-Dependent Mechanisms of Exercise in the Treatment of Depression: A Comprehensive Review of Physiological and Psychological Pathways. *Frontiers in psychology*, 16.
<https://doi.org/10.3389/fpsyg.2025.1562434>
- Yang, S., Peng, H., Jing, L., Wang, H., & Chen, S. (2025). Exploring the Association Between Physical Activity, Regulatory Emotional Self-Efficacy, Perceived Self-Burden, and Social Isolation Among Older Adults in China. *Healthcare*, 13(6), 687.
<https://doi.org/10.3390/healthcare13060687>
- Yin, H., Quan, Z., & Zhang, Y. (2023). The Relationship Between Frailty, Walking Ability, and Depression in Elderly Chinese People. *Medicine*, 102(45), e35876.
<https://doi.org/10.1097/md.00000000000035876>
- Zhang, X., & Xu, C. (2021). Research Progress on Self-Care Ability of Hemodialysis Patients. *Open Journal of Nursing*, 11(05), 320-330. <https://doi.org/10.4236/ojn.2021.115029>
- Zhou, J., Wu, B., Su, L., & Ma, X. (2024). The Influence of Tai Chi on the Death Anxiety of Elderly People Living Alone: The Chain Mediating Effect of Social Support and Psychological Capital. *Frontiers in psychology*, 14.
<https://doi.org/10.3389/fpsyg.2023.1303524>