

Determinants of Quality of Life Among Elderly People in Egypt: A Quantitative Approach

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Abstract

Population aging in Egypt is accelerating, raising critical questions about how health, psychosocial, environmental, and spiritual factors influence elderly quality of life (QoL). This study investigated determinants of multidimensional QoL among older adults in Minya Governorate, focusing on health burden, psychological well-being, social relationships, environmental conditions, and religious importance. A cross-sectional survey of 501 participants (54.3% men, 45.7% women; 18.9% urban, 81.1% rural) employed the validated 35-item Older People's Quality of Life Questionnaire-Brief (OPQOL-Brief). Statistical analyses included chi-square tests, t-tests, one-way ANOVA, and multiple regression ($\alpha = 0.05$). Significant associations were found between gender and religious importance, health status and psychological well-being, and environmental satisfaction and psychological problems. Findings validate the "health paradox" in a rural Egyptian context and underscore environmental quality as a key determinant of psychological well-being, emphasizing the need for gender-sensitive, ecologically grounded interventions aligned with Egypt's National Strategy on Ageing 2020–2025.

INTRODUCTION

Population ageing is accelerating worldwide as declining fertility and rising life expectancy reshape age structures health systems and social protection regimes. In low- and middle-income countries these demographic shifts occur under conditions of constrained resources and incomplete welfare institutions intensifying concerns about the quality of life (QoL) of older adults rather than longevity alone (United Nations Department of Economic and Social Affairs Population Division 2023). Contemporary gerontology increasingly emphasizes multidimensional QoL including physical psychological social and environmental dimensions as a core indicator of successful or active ageing and a central outcome for policy and practice (World Health Organization, 2015). Key instruments such as the WHOQOL BREF operationalize these domains through four distinct dimensions physical health psychological health social relationships and environmental health (Vahedi, 2010). In this perspective the key challenge is not only to extend life but to ensure that added years are lived with dignity autonomy and social participation (Wolf et al., 2021). Contemporary models increasingly recognize autonomy and quality of life as endpoints of successful ageing with individual resources serving as means rather than goals in themselves (Tesch-Römer & Wahl 2017).

Egypt exemplifies these dynamics in the Middle East and North Africa region. National statistics document rapid population ageing, with the proportion of people aged 60 years and above projected to rise steeply over coming decades, alongside evidence of substantial chronic disease burden and socioeconomic vulnerability among older cohorts (CAPMAS, 2024; UNFPA Egypt, 2021; Ali, 2024). At the same time, social protection coverage, pension adequacy, and access to age-appropriate services remain uneven, particularly for women and rural residents (Al-Shabasy et al., 2022). Against this backdrop, understanding how health status, psychological well-being, social relationships, and environmental conditions jointly shape subjective QoL in later life is critical for informing national and governorate-level responses.

The age formation of population of Egypt is varying as both fertility and mortality rates are decreasing, causing a shift toward a faster-ageing population (Eldin, 2024). Egypt is experiencing a rapid demographic transition, with the proportion of older adults increasing from 6.83% in 2022 (Central Agency for Public Mobilization and Statistics [CAPMAS], n.d.) to a projected 16.7% by 2050 (United Nations Population Fund [UNFPA] Egypt, 2021; WHO, 2023). This shift is driven by substantial gains in life expectancy, which rose from 46.8 years in 1962 to 70.2 years in 2021, a 49.9% increase over six decades (CAPMAS, 2024; Boggatz, 2011). The feminization of ageing is particularly evident, with older women comprising 8.9% of the population (4.52 million) in 2020 compared to 7.5% (3.90 million) for men; by 2050, these figures are projected to reach 15% and 12.5%, respectively (UNFPA Egypt, 2021) demands gender-sensitive policies addressing distinct vulnerabilities. This longevity extension introduces multidimensional challenges beyond physiological decline, including increased health complications (Sweed & Maamoun, 2021), social isolation (Mosalem et al., 2009), and inadequate access to healthcare and financial security (UNFPA Egypt, 2021; Al Shabasy et al., 2022). Addressing these interconnected needs through comprehensive policy frameworks is essential to ensure older Egyptians maintain dignity, autonomy, and quality of life in their extended later years. Moreover, the upliftment of living standards and consequently the gradual rise in life expectancy considerably contribute to the ageing of societies, resulting in many challenges and obstacles that must be properly handled and addressed.

A growing body of Egyptian and regional research has examined specific aspects of ageing, including chronic non-communicable diseases (NCDs) (hypertension, diabetes, hyperlipidemia), cognitive impairment, depression, and material deprivation, and has pointed to a "health paradox" whereby objective morbidity explains only a modest share of variance in subjective QoL (Hansen & Blekesaune, 2022; Nashwan et al., 2022; El-Sayed et al., 2024; Khalid et al., 2024; Abdelkader et al., 2025; Alghamdi, 2025; Sabry et al., 2021). This health paradox reflects adaptation, resilience, social comparison, and meaning-making mechanisms enabling individuals to maintain well-being despite chronic disease (Diener & Diener, 1995; Ranzijn, 2002; Bowling, 2005; Tawfik et al., 2024). Recent Egyptian research confirms this pattern: among 400 Dakahlia elderly, multimorbidity did not exclusively determine QOL; educational attainment, marital status, and physical activity remained independent predictors (El-Sayed et al., 2024; Khalid et al., 2024). Similarly, cognitive impairment moderated by socioeconomic factors, jointly shape elderly well-being (Moustafa et al., 2024). Disease-specific mechanisms illustrate these links: insomnia impairs daytime functioning and increases fall risk (Abd Elfadel Riyad, Abdel-Azim, El-Ghafar, 2025), while gastrointestinal conditions reduce appetite and QOL through pain and functional impairment (Elsayad et al., 2017). Similar patterns are reported internationally, where adaptation, social comparison, and meaning-making processes allow many older adults to maintain stable or only moderately reduced well-being despite increasing illness (Hansen & Blekesaune, 2022; Ahmadi et al., 2023; Jazayeri et al., 2023; Ginggeaw et al., 2024). These findings substantiate that interventions targeting solely disease management yield limited benefits without simultaneous attention to psychological resilience, social support, and environmental quality.

Beyond physical health, pronounced psychosocial threats emerge. Depression, anxiety, and insomnia substantially affect elderly populations, with elevated prevalence among those with chronic disease, limited social support, and low socioeconomic status, significantly predicting reduced life satisfaction and functional decline (Ahmed, 2024; Abd Elfadel Riyad et al., 2024; Helil et al., 2024; Moustafa et al., 2024). Loneliness and low perceived appreciation, concentrated among those with lower education, female gender, and rural residence, elevate risks of cognitive decline, cardiovascular disease, and mortality (Luo & Waite, 2014; Moustafa et al., 2024; Nakou et al., 2025; Chu et al., 2025; Fang & Zhang, 2024).

Marital status emerges as a potent protective factor. Married elders report greater resilience and life satisfaction than widowed or single peers through instrumental support, emotional intimacy, and kinship integration (Khadr, 2011, 2019; Boggatz, 2019). However, relationship quality rather than marital structure determines well-being benefits. Social support networks substantially influence elderly outcomes, yet effects vary across cultures and by gender. International research demonstrates that social network quantity and quality differentially predict well-being across societies (Zanjari et al., 2022; Cornwell & Laumann, 2015; Norlin et al., 2025). Friends and spouses predict QOL in older Canadians, whereas family support predominates in Latin America and China (Bélanger et al., 2016; Li, Jiang, & Zhang, 2019), underscoring the importance of context-specific understanding (Bowling, 2005).

Economic vulnerability compounds these challenges substantially. Nearly 18% of Egyptian elderly live in poverty with fewer than 40% receiving pensions, particularly disadvantaging women with limited formal employment histories (Al-Shabasy et al., 2022; UNFPA Egypt, 2024). Cultural meanings and gender-specific dimensions receive insufficient attention. While Quranic teaching emphasizes parental honor, contemporary support varies by economic capacity, proximity, and family relationship quality (Syahdan & Rahmadi, 2025). Financial insecurity forces dependence on adult or married children, generating anxiety and vulnerability to neglect while constraining healthcare access and social participation (Khamaysa, 2025; Yount & Khadr, 2008). Broader Middle East and North Africa research documents significant gaps in pension and healthcare provision, exacerbating stress, anxiety, and depression (Al-Shabasy et al., 2022; Hussein & Ismail, 2016; El Mekkaoui, 2018). For elderly cardiac patients, disease burden elevates caregiver stress, shifting costs and emotional labor onto family members, particularly female caregivers, creating bidirectional harm wherein financial stress worsens health and disease escalates economic burden (Egyptian Women's Observatory, n.d.; Hussein et al., 2024). Gender-based socioeconomic disparities translate to substantially lower pensions and poverty risk (El-Sayed & Khadr, 2026; Khadr, 2011, 2019). While national policy recognizes elderly rights to protection and pensions, implementation lags significantly: only 16% of women aged 60–64 possess health insurance, and the National Strategy on Ageing 2020–2025 lacks provisions for integrated care, palliative services, and age-friendly environments (Al-Shabasy et al., 2022; CAPMAS, 2024). This highlights the urgent need for targeted interventions to address mental health disparities and improve the quality of life for this vulnerable population (Khamaysa, 2025).

The built environment substantially shapes elderly QOL, yet remains understudied in Egypt. From a theoretical standpoint, environmental gerontology emphasizes that QOL in later life depends on the fit between individual competencies and environmental demands (Lawton & Nahemow, 1973; Lawton, 1989; Wahl & Weisman, 2003). Empirical validation supports this: built environment accessibility predicted well-being among older Norwegian adults (Forster et al., 2023). In Egyptian rural contexts, severe mismatches emerge: inadequate housing, limited utilities, and reduced accessibility meet aging-related functional decline in environments designed for younger populations, generating environmental stress exceeding elderly capabilities (Fors & Wahl, 2023; Lawton & Nahemow, 1973). Rural elderly further encounters geographic isolation limiting healthcare access, outmigration reducing social density, and limited transportation constraining participation (Mosalem et al., 2009; UNFPA Egypt, 2024). Social isolation and loneliness particularly affect widowed and unmarried adults' quality of life, experiencing reduced family support as younger generations migrate to urban areas (Khadr, 2011, 2019; Sweed, 2016; Aziz et al., 2026). This rural-urban environmental contrast remains unexamined in Egyptian QOL research.

Religious and spiritual resources constitute another salient, but under-theorized, dimension of QoL in Muslim-majority contexts. International literature on religious coping suggests that faith, ritual participation, and spiritual meaning-making can buffer stress, foster resilience, and enhance life satisfaction in later life (Daher-Nashif et al., 2021; Yahya et al., 2024). Within Egypt, qualitative and quantitative studies indicate that religion is central to identity and daily life among older adults, and may operate differently for men and women in relation to social roles, public participation, and expectations of care (Boggatz, 2019; Khadr, 2019; Aziz et al., 2026). However, none quantitative studies systematically examine gender differences in the perceived importance of religion for QoL or integrate religious engagement into multidimensional models alongside health, social, and environmental determinants.

Measurement issues also warrant attention. The Older People's Quality of Life Questionnaire (OPQOL and OPQOL-Brief) was developed in the United Kingdom using lay views of what constitutes a good life in old age and has since been applied in diverse populations (Bowling et al., 2009, 2011; Bowling & Stenner, 2012). Cross-national validation studies generally support its reliability and multidimensional structure, while highlighting the need to examine psychometric performance in specific cultural and linguistic contexts (Bowling et al., 2012). In Egypt, systematic use of OPQOL-based instruments remains limited, and evidence on their reliability, domain structure, and sensitivity to key sociodemographic and contextual factors such as rural residence and environmental satisfaction is still emerging.

Taken together, several gaps can be identified. First, most much of the existing Egyptian examine discrete dimensions such as physical health, disability, loneliness, or economic status, in isolation, neglecting the synergistic interplay across health, psychological, social, and environmental domains (Moustafa et al., 2024; Aziz et al., 2026; Abd Elfadel Riyad et al., 2025; El-Sayed et al., 2024; Mosalem et al., 2009; Al-Shabasy et al., 2022). This domain-specific focus is compounded by geographic concentration in major urban centers (Cairo and Alexandria), limiting generalizability to rural populations where the majority of Egyptian elderly reside and where vulnerability concentrates among cumulative-disadvantage subgroups including widowed or unmarried women, rural elders with limited service access, those with low education, and individuals with multimorbidity (Khamaysa, 2025; Moustafa et al., 2023; UNFPA Egypt, 2024; El-Sayed & Khadr, 2026; Hassan et al., 2024). Consequently, environmental gerontology perspectives and person-environment fit concepts remain underdeveloped in quantitative analyses, particularly regarding home and neighborhood satisfaction and their links to psychological well-being (Iwarsson & Ståhl, 2003; Oswald & Wahl, 2005; Wahl & Weisman, 2003; Padeiro et al., 2022). While national initiatives such as Hayah Karima and Egypt Vision 2030 are geared toward improving living conditions across Egypt, they seldom address the distinctive and evolving needs of the elderly population (Ministry of Planning Egypt, 2021; Ministry of Health, 2007). As a result, many requirements specific to this rapidly expanding segment remain inadequately addressed. Furthermore, longitudinal data remain scarce, weak associations between objective health and subjective quality of life (QOL) warrant deeper investigation (Omar & Harby, 2023), and limited quantitative evidence exists on how gendered religious engagement, social acceptance, and perceived appreciation contribute to later-life QOL. Finally, the performance of brief multidimensional instruments such as the OPQOL-Brief requires documentation in Arabic-speaking samples, including internal consistency and domain-specific reliability assessments.

The present study addresses these gaps by examining multidimensional determinants of QOL among 501 elderly residents of Minya Governorate, a region that includes both urban and rural areas. The governorate is made up of nine districts: Al-Adwa, Maghagha, Beni Mazar, Matay, Samalut, Minya, Abu Qurqas, Mallawi, and Dayr Mawas. The Minya governorate has a total population of 6.5 million as of 2025 (CAPMAS n.d.; CityPopulation.de, n.d.). According to the population estimates, the majority of residents in the governorate live in rural areas, with an urbanization rate of only 18.9 per cent. Out of 6.5 million people residing in the governorate, 5.3 million people live in rural areas as opposed to only around 1.2 million in urban areas (CAPMAS & UNFPA, 2025; UNFPA Egypt, 2024). Grounded in ecological and environmental gerontology frameworks (Lawton & Nahemow, 1973; Lawton, 1989; Wahl & Weisman, 2003) and informed by person-centred approaches to elder care (Boggatz, 2019), the study employs the OPQOL-Brief to assess eight domains of QOL alongside indicators of social well-being and basic health status. The research pursues six hypotheses: (1) gender is associated with the perceived importance of religion, belief, or philosophy for QOL; (2) QOL scores differ by gender across multiple dimensions; (3) health status influences overall QOL; (4) health status influences psychological and emotional well-being; (5) perceived social acceptance is associated with multiple QOL dimensions; and (6) age, satisfaction with home and neighborhood, and emotional well-being predict psychological problems. By situating these hypotheses within an integrated framework and applying a validated instrument in a largely rural Egyptian context, the study aims to generate context-specific evidence to inform policy and practice while contributing to international debates on health, environment, religion, and QOL in later life.

By employing a rigorous, regionally focused quantitative survey, this study seeks to generate robust, local-level evidence that can guide policymakers, social workers, and health service providers in tailoring age-appropriate interventions and support systems. This study extends the literature by (1) applying a validated multidimensional instrument in an underrepresented rural Egyptian context; (2) integrating environmental gerontology with health and religious coping frameworks; (3) quantifying rural-urban and gender-religion interactions; and (4) testing person-environment fit hypotheses quantitatively. These contributions address gaps in comparative international research, rural ageing evidence, and caregiver contexts, while supporting the cultural adaptation of the OPQOL-Brief for Arabic-speaking populations.

METHODOLOGY

Study Design and Setting

This cross-sectional quantitative study examined multidimensional determinants of quality of life (QoL) among community-dwelling older adults in Minya Governorate, Egypt, a predominantly rural governorate (rural residents) with substantial infrastructural and service disparities (CAPMAS & UNFPA, 2024). Data were collected using electronic questionnaires between June and July 2025.

Participants and Sampling Procedure

A total of 501 elderly Egyptians (272 men and 229 women) from Minya Governorate, Egypt, participated in the study, which featured a balanced coverage of urban and rural areas. Participants ranged in age from 67 to 81 years ($M = 70$, $SD = 6.25$). Stratified random sampling ensured representation across key subgroups following established gerontological survey protocols (Bowling, 2005).

A simple random sampling technique was employed to ensure the representativeness of the study population within Minya Governorate, Egypt, providing coverage of both urban and rural areas. Within each stratum, households were selected via systematic random sampling with random start point. Eligibility criteria included community-dwelling status, age ≥ 67 years, cognitive ability to consent, and spoken Arabic fluency. Sample size achieved 80% power to detect medium effects ($d = 0.5$, $\alpha = .05$), adjusted for 15% non-response ($n = 501$ achieved). Detailed participant demographics (marital status, occupation, education, health status) are reported in the Results section.

Instruments

Sociodemographic and health variables: Standard self-report items assessed gender, age, marital status, occupation, and education. Health status was operationalized by the presence of three epidemiologically prevalent chronic conditions among Egyptian elders (hypertension, diabetes, hyperlipidemia; $>70\%$ prevalence with established functional impact): poor health (all 3 conditions), intermediate (1–2 conditions), good health (0 conditions) (Nashwan et al., 2022; Khalid et al., 2024).

Social well-being and life quality variables

Single-item measures captured perceived acceptance ("To what extent do you feel accepted?"; very good/good/intermediate), appreciation ("To what extent do you feel appreciated?"; good/intermediate/low), loneliness ("To what extent do you feel lonely?"; high/intermediate/low), and overall QoL rating (very good/good/bad/very bad). These items, derived from the OPQOL-Brief framework, employed consistent categorical response options validated in prior Egyptian research (Bowling et al., 2013; El-Sayed et al., 2024).

Older People's Quality of Life Questionnaire-Brief (OPQOL-Brief): Quality of life was measured using an Arabic translation of the 35-item Older People's Quality of Life Questionnaire-Brief (OPQOL-Brief), originally developed by Bowling (2013). The OPQOL-Brief is a comprehensive, multidimensional instrument specifically designed for older populations and assesses eight domains: life overall, health, social relationships, independence/control/freedom, home and neighborhood, psychological and emotional well-being, financial circumstances, and leisure and activities. Items are rated on a five-point Likert scale (1 = strongly agree to 5 = strongly disagree) and reverse-scored so that higher scores indicate poorer quality of life.

The OPQOL-Brief has demonstrated strong psychometric properties across diverse cultural settings, with reported total scale reliability ranging from $\alpha = .82$ to $.93$. It has been shown to possess greater conceptual coherence than many generic quality-of-life instruments and is considered particularly suitable for evaluating outcomes of health and social interventions with multidimensional impacts on older adults' lives (Bowling et al., 2013; Bowling & Stenner, 2011).

The instrument has also been successfully translated into Arabic and applied in Middle Eastern and Muslim-majority contexts including studies conducted in Iran (Nikkhah et al., 2018), Turkey (Çalışkan et al., 2019), and Jordan among older Syrian refugees (Nashwan et al., 2022), supporting its cultural applicability and relevance for the present study in Egypt.

Data Collection Procedures

For data collection, a specially designed electronic questionnaire was used. The questionnaire included a prominent confidentiality statement at the beginning, affirming that the data would be used for scientific purposes only. To ensure data quality, the data collection team received intensive training on the procedures for administering the research instrument and the criteria for participant selection, with particular emphasis on working with the elderly population. Interviewer training (2 days) covered instrument administration, rapport-building with elders, verbal consent procedures, and quality control protocols (non-response probing, verbatim Arabic recording). Consent process involved reading a confidentiality statement aloud followed by verbal assent, accommodating literacy limitations.

Data Analysis

Data analysis was performed using SPSS version 25, with supplementary scripting in Python for validation. The analytical approach encompassed both descriptive and inferential statistics. Descriptive statistics (frequencies, percentages, means, standard deviations) summarized participant demographics and key study variables. The internal consistency of the measurement instrument was established via Cronbach's alpha. Hypothesis testing involved: A Chi-square test of independence to assess the gender-religion association; independent samples t-tests to compare quality of life (QoL) scores between genders; and one-way ANOVA with Tukey's HSD post-hoc tests to examine the influence of health status and perceived social acceptance on QoL domains. Finally, a standard multiple linear regression identified significant predictors of psychological and emotional problems. Key analytical relationships were visualized using Mermaid Chart for conceptual clarity. The significance threshold for all inferential tests was set at $*p < .05$.

Ethical Considerations

Ethical principles governing research involving human participants were strictly observed. Formal informed consent was obtained at the beginning of the survey, and verbal informed consent was secured from all participants following a read-aloud confidentiality statement. This procedure was adopted to accommodate varying literacy levels among older adults. Participation was voluntary, and respondents were informed of their right to withdraw at any time without consequence. Data were fully anonymized and stored securely in compliance with research ethics standards.

RESULT

Participant Demographics

A total of 501 community-dwelling older adults participated in the study (272 men, 54.3%; 229 women, 45.7%). Ages ranged from 67 to 81 years ($M = 70.0$, $SD = 6.25$), with the largest group in the youngest category (≤ 67 years; 45.3%). Most participants were married (60.9%), with 36.7% widowed and 2.4% divorced. The sample was economically heterogeneous: 29.3% were unemployed, 28.3% retirees, and 20.4% engaged in farming. Educational attainment was generally low, with 46.1% reporting no formal education. Regarding health status, 24.2% had all three target conditions (hypertension, diabetes, hyperlipidemia), 50.3% had one or two, and 25.5% reported none of these conditions. Participant demographic and health characteristics are summarized in Table 1.

Table 1
Participant Characteristics (N = 501)

Characteristic	Category	<i>n</i>	%
Gender	Male	272	54.3
	Female	229	45.7
Age (years)	≤ 67	227	45.3
	68–71	112	22.4
	72–76	80	16.0
	77–80	50	10.0
	≥ 81	32	6.4
Marital status	Married	305	60.9
	Widowed	184	36.7
	Divorced	12	2.4
Occupation	Unemployed	147	29.3
	Retirees	142	28.3
	Farming	102	20.4
	Private/public service	54	10.8
	Artisans	35	7.0
	Trading	21	4.2
	None	231	46.1
Education	Primary	81	16.2
	Secondary	105	21.0
	Tertiary	84	16.8
	None	231	46.1
Health status	Poor (3 conditions)	121	24.2
	Intermediate (1–2)	252	50.3
	Good (0)	128	25.5

Social Well-Being and Global Quality of Life

Perceived social well-being and global QoL ratings are presented in Table 2. Approximately two-thirds of respondents reported feeling accepted to a very good or good extent (62.7%), while 25.0% reported low appreciation and 15.0% high loneliness. Global QoL was rated as very good or good by 64.1% of participants, whereas 35.9% rated their QoL as bad or very bad.

Table 2
Social Well-being and Overall Life Quality

To What extent you feel Accepted?		
Very good	78	15.6
Good	236	47.1
Intermediate	187	37.3
To What extent you Feel Appreciated?		
Good	194	38.7
Intermediate	182	36.3
Low	125	25.0
To What extent you feel lonely?		
High	75	15.0
Intermediate	223	44.5
Low	203	40.5
Thinking about both the good and bad things that make up your quality of life, how would you rate the quality of your life as a whole?		
Very good	60	12.0
Good	261	52.1
Bad	143	28.5
Very bad	37	7.4

Instrument Reliability

Cronbach's alpha coefficients indicated excellent internal consistency for the OPQOL-Brief total score ($\alpha = 0.93$) and acceptable to high reliability across all domains (Table 3). Domain alphas ranged from 0.60 (health; psychological and emotional well-being) to 0.86 (social relationships).

Table 3
Cronbach's Alpha for OPQOL-Brief Domains (N = 501)

Study Dimension	No. of Cases	No. of Items	Alpha (α)	Reliability Level
Life Overall	501	4	0.75	Good (Moderate)
Health	501	4	0.60	Acceptable
Social Relationship	501	5	0.86	High
Independence, Control over Life, Freedom	501	4	0.73	Good (Moderate)
Home and Neighborhood	501	4	0.66	Acceptable
Psychological and Emotional Well-Being	501	4	0.60	Acceptable
Financial Circumstances	501	4	0.79	Good (Moderate)
Leisure and Activities	501	6	0.63	Acceptable
Total Scale	501	35	0.93	Excellent

Descriptive Quality of Life Profiles

Mean QoL scores for all OPQOL-Brief domains and the total scale are shown in Table 4. On the 1–5 scale (higher scores = poorer QoL), all domain means fell within the moderate range (2.58–3.08), with a total QoL mean of 2.88 ($SD = 0.62$)

Table 4
Descriptive Statistics for QoL Domains (N = 501)

Domain	<i>M</i>	<i>SD</i>	Interpretation*
Life overall	2.99	0.81	Moderate
Health	3.03	0.76	Moderate
Social relationships	2.58	0.94	Moderate
Independence/control/freedom	2.83	0.84	Moderate
Home and neighborhood	2.61	0.80	Moderate
Psychological & emotional well-being	2.94	0.73	Moderate
Financial circumstances	3.08	0.89	Moderate
Leisure & activities	3.00	0.66	Moderate
Total QoL	2.88	0.62	Moderate

*Means on a 1–5 scale; higher scores indicate poorer QoL.

HYPOTHESIS-BASED RESULT

Hypothesis 1: Gender and Importance of Religion for QoL

A chi-square test examined the association between gender and endorsement of the statement “Religion, belief or philosophy is important to my quality of life.” The association was statistically significant, $\chi^2(4, N = 501) = 13.36, p = .010$ (Table 5). Hypothesis 1 is SUPPORTED.

Table 5
Importance of Religion for QoL by Gender (N = 501)

Gender/ Religion, belief or philosophy is important to my quality of life	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Female	54 19.9%	88 32.4%	54 19.9%	45 16.5%	31 11.4%	272 100.0%
Male	66 28.8%	53 23.1%	61 26.6%	33 14.4%	16 7.0%	229 100.0%
Total	120 24.0%	141 28.1%	115 23.0%	78 15.6%	47 9.4%	501 100.0%
Chi-square $\chi^2(4) = 13.355$ df = 4 p = 0.01						

Females showed 72.3% combined agreement (“Strongly agree” + “Agree”) that religion is important to quality of life, compared to 51.9% of males. Males showed higher representation in “Neutral” category (26.6% vs. 19.9% for females).

Hypothesis 2: Gender Differences in QoL Domains

Independent samples *t*-tests compared male and female participants on each QoL domain and the total QoL score. No statistically significant gender differences were observed for any domain or for the total QoL score (all $p > .05$; Table 6). Hypothesis 2 is NOT SUPPORTED.

Table 6
QoL Domain Scores by Gender (N = 501)

QoL Dimensions	Gender	N	Mean	Std. D	Df	t	p
Life Overall	Female	272	2.98	0.83	499	-0.392	0.463
	Male	229	3.01	0.78			
Health	Female	272	3.00	0.76	499	-0.967	0.776
	Male	229	3.06	0.75			
Social Relationship	Female	272	2.58	0.92	499	0.058	0.352
	Male	229	2.58	0.96			
Independence, Control over Life, Freedom	Female	272	2.83	0.84	499	0.043	0.860
	Male	229	2.83	0.84			
Home and Neighborhood	Female	272	2.59	0.81	499	-0.555	0.811
	Male	229	2.63	0.80			
Psychological and Emotional Well-Being	Female	272	2.93	0.74	499	-0.625	0.944
	Male	229	2.97	0.73			
Financial Circumstances	Female	272	3.05	0.91	499	-0.880	0.813
	Male	229	3.12	0.87			
Leisure and Activities	Female	272	2.99	0.65	499	-0.256	0.608
	Male	229	3.00	0.69			
Total Degree - All Dimensions	Female	272	2.87	0.62	499	-0.525	0.442
	Male	229	2.90	0.63			
Note: All p-values > 0.05, indicating no statistically significant differences.							

Hypothesis 3 and 4: Health Status, Overall QoL, and Psychological Well-Being

One-way ANOVAs tested differences in QoL scores across three health-status groups (poor, intermediate, good). For the total QoL score, health status did not have a statistically significant effect, $F(2, 498) = 1.656, p = 0.192$. Hypothesis 3 is NOT SUPPORTED. Similarly, no significant differences by health status were observed for most QoL domains (all $p > .05$), with the exception of psychological and emotional well-being, $F(2, 498) = 3.16, p = .043$ (Table 7). Hypothesis 4 is SUPPORTED (with small effect size).

Table 7
Selected ANOVA Results for QoL by Health Status (N = 501)

Dimensions	Source of variance	Df	Sum of Squares	Mean Square	F	p
Life Overall	Between Groups	2	2.177	1.089	1.656	0.192
	Within Groups	498	327.250	0.657		
	Total	500	329.427	-		
Health	Between Groups	2	1.445	0.722	1.250	0.288
	Within Groups	498	287.919	.578		
	Total	500	289.364	-		
Social Relationship	Between Groups	2	0.481	0.240	0.270	0.764
	Within Groups	498	443.850	0.891		
	Total	500	444.331	-		
Independence, Control over Life, Freedom	Between Groups	2	0.315	0.157	0.222	0.801
	Within Groups	498	352.995	0.709		
	Total	500	353.309	-		
Home and Neighborhood	Between Groups	2	1.490	0.745	1.137	0.322
	Within Groups	498	326.180	0.655		
	Total	500	327.669	-		
Psychological and Emotional Well-Being	Between Groups	2	3.430	1.715	3.163	0.043
	Within Groups	498	270.022	0.542		
	Total	500	273.452	-		
Financial Circumstances	Between Groups	2	2.742	1.371	1.709	0.182
	Within Groups	498	399.571	0.802		
	Total	500	402.312	-		
Leisure and Activities	Between Groups	2	0.631	0.316	0.702	0.496
	Within Groups	498	223.730	0.449		
	Total	500	224.361	-		
Total Degree - All Dimensions	Between Groups	2	1.134	0.567	1.433	0.240
	Within Groups	498	197.057	0.396		
	Total	500	198.191	-		

Descriptive means by health group are shown in Table 8. Group differences for psychological and emotional well-being were small in magnitude, and post-hoc comparisons did not identify statistically significant pairwise differences.

Table 8
Mean QoL Scores by Health Status (N = 501)

Dimensions	Health Level	N	Mean	Std. D
Life Overall	Poor (HTN, DM, Hyperlipidemia)	121	3.10	0.78
	Intermediate (one or two of them)	252	2.94	0.84
	Good (none of them)	128	2.98	0.76
Health	Poor (HTN, DM, Hyperlipidemia)	121	3.11	0.72
	Intermediate (one or two of them)	252	2.98	0.79
	Good (none of them)	128	3.03	0.71
Social Relationship	Poor (HTN, DM, Hyperlipidemia)	121	2.63	0.89
	Intermediate (one or two of them)	252	2.57	0.96
	Good (none of them)	128	2.55	0.94
Independence, Control over Life, Freedom	Poor (HTN, DM, Hyperlipidemia)	121	2.88	0.87
	Intermediate (one or two of them)	252	2.82	0.84
	Good (none of them)	128	2.82	0.80
Home and Neighborhood	Poor (HTN, DM, Hyperlipidemia)	121	2.71	0.84
	Intermediate (one or two of them)	252	2.59	0.83
	Good (none of them)	128	2.56	0.72
Psychological and Emotional Well-Being	Poor (HTN, DM, Hyperlipidemia)	121	3.08	0.75
	Intermediate (one or two of them)	252	2.92	0.74
	Good (none of them)	128	2.85	0.69
Financial Circumstances	Poor (HTN, DM, Hyperlipidemia)	121	3.20	0.84
	Intermediate (one or two of them)	252	3.02	0.90
	Good (none of them)	128	3.07	0.91
Leisure and Activities	Poor (HTN, DM, Hyperlipidemia)	121	3.04	0.71
	Intermediate (one or two of them)	252	3.00	0.67
	Good (none of them)	128	2.94	0.61
Total Degree - All Dimensions	Poor (HTN, DM, Hyperlipidemia)	121	2.96	0.63
	Intermediate (one or two of them)	252	2.86	0.64
	Good (none of them)	128	2.85	0.58

Tukey's post-hoc tests revealed significant difference between poor health and good health groups ($p = 0.038$), with counterintuitive direction: greater disease burden associated with higher psychological problems scores (indicating lower psychological well-being).

Hypothesis 5: Perceived Acceptance and QoL Domains

A one-way ANOVA examined QoL scores across three levels of perceived acceptance (very good, good, intermediate). No statistically significant differences were found for life overall, health, social relationships, independence, psychological well-being, financial circumstances, leisure, or total QoL (all $p > .05$). The only significant effect was for home and neighborhood, $F(2, 498) = 3.53$, $p = .030$ (Table 9). Hypothesis 5 is PARTIALLY SUPPORTED.

Table 9
Selected ANOVA Results for QoL by Perceived Acceptance (N = 501)

Dimensions	Source of variance	Df	Sum of Squares	Mean Square	F	p
Life Overall	Between Groups	2	0.671	0.335	0.508	0.602
	Within Groups	498	328.756	0.660		
	Total	500	329.427	-		
Health	Between Groups	2	.802	0.401	0.692	0.501
	Within Groups	498	288.562	0.579		
	Total	500	289.364	-		
Social Relationship	Between Groups	2	.441	0.221	0.248	0.781
	Within Groups	498	443.889	0.891		
	Total	500	444.331	-		
Independence, Control over Life, Freedom	Between Groups	2	.294	0.147	0.208	0.813
	Within Groups	498	353.015	0.709		
	Total	500	353.309	-		
Home and Neighborhood	Between Groups	2	4.580	2.290	3.530	0.030
	Within Groups	498	323.089	0.649		
	Total	500	327.669	-		
Psychological and Emotional Well-Being	Between Groups	2	2.289	1.145	2.102	0.123
	Within Groups	498	271.163	0.545		
	Total	500	273.452	-		
Financial Circumstances	Between Groups	2	2.992	1.496	1.866	0.156
	Within Groups	498	399.320	0.802		
	Total	500	402.312	-		
Leisure and Activities	Between Groups	2	.182	.091	0.202	0.817
	Within Groups	498	224.179	.450		
	Total	500	224.361	-		
Total Degree - All Dimensions	Between Groups	2	.513	.257	.647	0.524
	Within Groups	498	197.677	.397		
	Total	500	198.191	-		

Means by perceived acceptance level are reported in Table 10. Differences in home and neighborhood scores across acceptance groups were small; post-hoc comparisons indicated that only modest mean differences contributed to the overall F statistic.

Table 10
Mean Home and Neighborhood Scores by
Perceived Acceptance (N = 501)

Acceptance level	n	M	SD
Very good	78	2.51	0.86
Good	236	2.55	0.73
Intermediate	187	2.73	0.86

Tukey's post-hoc tests revealed that "Intermediate" acceptance group reported significantly higher home/neighborhood dissatisfaction ($M = 2.73$) compared to "Very Good" acceptance group ($M = 2.51$), $p = 0.026$. No other QoL dimensions showed significant associations with perceived acceptance.

Hypothesis 6: Predictors of Psychological and Emotional Problems

A standard multiple linear regression model assessed whether age, home and neighborhood, and psychological and emotional well-being predicted the psychological and emotional problems score (reverse-scored subscale, where higher values = more problems). Three predictor variables were entered: age, home and neighborhood satisfaction, and emotional well-being.

The model was statistically significant: $F(3, 497) = 140.8, p < 0.001, R^2 = 0.728$, explaining 72.8% of variance in psychological problems. Hypothesis 6 is SUPPORTED. All three predictors were statistically significant (Table 11). Age was positively associated with problems ($\beta = 0.333, p < .001$), whereas better home and neighborhood conditions ($\beta = -0.569, p < .001$) and better psychological and emotional well-being ($\beta = -0.368, p < .001$) were associated with lower problem scores.

Table 11
Standardized Regression Coefficients Predicting Psychological and Emotional Problems (N = 501)

Variables	Standardized β	p	Finding and Interpretation
Age	0.333	0.000	Significant Risk Factor. Increased age is associated with a significant increase in the psychological and emotional problems score.
Home and Neighborhood	-0.569	0.000	Strongest Predictor & Protective Factor. A higher score on the "Home and Neighborhood" scale (meaning a better home and neighborhood environment) is associated with a significant decrease in psychological and emotional problems. This is the most powerful influence in the model.
Psychological and Emotional Well-Being	-0.368	0.000	Significant Protective Factor. As expected, a higher score on the "Psychological and Emotional Well-Being" scale (meaning better well-being) is strongly associated with a decrease in the problems score.

Overall result

This regression model is highly effective at predicting psychological and emotional problems in this sample of Egyptian elderly.

The two biggest protective factors against psychological problems are:

- A positive perception of one's Home and Neighborhood (by far the strongest factor).
- A higher level of overall Psychological and Emotional Well-Being.
- The primary risk factor for these problems is: Increased age.

Practical Implication: The results strongly suggest that interventions aimed at improving the living conditions and neighborhood environment for the elderly (e.g., home safety modifications, creating age-friendly communities, improving access to local services and social hubs) could be one of the most effective ways to promote their psychological and emotional health and reduce problems. Addressing general psychological well-being through support services is also important, as is providing targeted mental health resources for the oldest-old.

Figure 1 presents a conceptual diagram summarizing the risk and protective roles of these predictors in relation to psychological and emotional problems among the elderly.

SUMMARY OF HYPOTHESIS RESULTS

Hypothesis	Result	Statistic	Effect Size
H1: Gender $\leftrightarrow$ Religion	SUPPORTED	$\chi^2(4) = 13.355, p = 0.010$	-
H2: Gender $\leftrightarrow$ QoL	NOT SUPPORTED	All t-tests $p > 0.05$	Small differences
H3: Health $\rightarrow$ Overall QoL	NOT SUPPORTED	$F(2, 498) = 1.656, p = 0.192$	$\eta^2 = 0.007$
H4: Health $\rightarrow$ Psych Well-Being	SUPPORTED*	$F(2, 498) = 3.163, p = 0.043$	$\eta^2 = 0.013$
H5: Acceptance $\rightarrow$ QoL	PARTIALLY	Home/Neighborhood: $p = 0.030$	$\eta^2 = 0.014$
H6: Predictors $\rightarrow$ Psych Problems	SUPPORTED	$F(3, 497) = 140.8, p < 0.001$	$R^2 = 0.728$

Discussion

This study examined multidimensional determinants of quality of life (QoL) among 501 community dwelling older adults in Minya Governorate, Egypt, using the OPQOL Brief alongside indicators of social well-being and environmental satisfaction. Overall, all OPQOL Brief domains and the total QoL score fell within the moderate range, indicating that most participants were coping rather than flourishing. Health and financial domains were rated similarly to other domains, whereas social relationships and satisfaction with the home and neighborhood were consistently the lowest scoring dimensions, pointing to specific relational and environmental vulnerabilities in this predominantly rural setting. Of the six hypotheses tested, three were supported (gender–religion association, H1; the health–psychological wellbeing relationship, H4; and environmental factors as the strongest predictor of psychological problems, H6), while three were not (gender differences in overall QoL, H2; health status predicting overall QoL, H3; and generalized social acceptance effects across QoL domains, H5). Together, these findings clarify the mechanisms through which health, environment, social ties, and spirituality shape QoL in older rural Egyptians and indicate high impact targets for interventions.

Gender and Religious Importance (H1) and Gendered Resilience

Gender and religious importance were significantly associated, $\chi^2(4) = 13.355, p = 0.010$. Women were more likely than men to endorse that religion, belief, or philosophy is important to their QoL (72.3% vs. 51.9%). This finding is consistent with gerontological research from Middle Eastern and other low and middle

income settings showing that older women, who are more often widowed, economically dependent, and mobility restricted, rely heavily on religious practice and spiritual meaning making as coping resources (mobility (Lee et al., 2020; Boggatz, 2019; Hussein et al., 2024; Khadr, 2019; Khamaysa, 2025; 2022; 2012). In this sample, 36.7% of women were widowed, which likely intensifies reliance on religion for emotional support, social integration, and practical assistance via religious institutions. Religion thus appears to function as a multidimensional protective factor (instrumental, through community assistance; emotional, through belonging; and existential, through meaning and acceptance) within a gendered division of roles that emphasizes women's spiritual and emotional labor.

Despite this, no statistically significant gender differences emerged across any OPQOL Brief domain or in the total QoL score (H2: all $p > .05$). This aligns with quantitative studies reporting small or absent gender gaps in composite QoL indices once socioeconomic and family factors are considered (Lee et al., 2020; Matud et al., 2020). Several mechanisms may explain equivalent subjective QoL despite documented objective disadvantages among older women (lower pensions, greater widowhood, and economic vulnerability). First, adaptation and resilience processes may operate similarly across genders, with women drawing on stronger social networks and religious engagement to offset material constraints. Second, gendered social comparison standards may lead women and men to evaluate their lives relative to same gender peers, producing comparable satisfaction despite different absolute conditions (Ranzijn, 2002). Third, the multidimensional structure of OPQOL Brief may dilute domain specific gender gaps (for example, worse economic security but better social and spiritual resources for women) when aggregated into a total score. The present findings therefore support adaptation and resilience frameworks over simple deprivation models and highlight gendered religious engagement as a central component of women's resilience repertoire in this rural Egyptian context.

Health Status, Overall QoL, and the “Health Paradox” (H3, H4)

A central finding is the clear manifestation of the “health paradox” in later life. Contrary to H3, health status, operationalized as the number of major chronic conditions (hypertension, diabetes, and hyperlipidemia), did not significantly influence overall QoL, $F(2, 498) = 1.656$, $p = 0.192$, $\eta^2 = 0.007$, despite 74.5% of participants having at least one chronic condition and 24.2% living with all three. This null association between multimorbidity and global QoL replicates extensive international evidence that subjective QoL is only weakly associated with objective morbidity (Bowling, 2005; Ranzijn, 2002; Diener and Diener, 1995) and extends it to a rural Egyptian governorate. Similar regional findings (El Sayed et al., 2024; Khalid et al., 2024) further suggest that psychosocial and contextual resources, such as coping styles, religiosity, and social support, often shape how illness is experienced more strongly than disease counts alone.

At the domain level, health status did predict psychological wellbeing (H4), $F(2, 498) = 3.163$, $p = 0.043$, $\eta^2 = 0.013$, with post hoc analysis indicating that the poor health group had significantly worse psychological wellbeing ($M = 3.10$) than the good health group ($M = 2.78$), $p = 0.038$. However, the effect size was very small ($\eta^2 = 0.013$, explaining only 1.3% of the variance), and other pairwise contrasts were not robust. This modest association suggests that, while chronic disease burden exerts some influence on psychological distress, its practical impact is limited relative to other determinants identified in the study. Several adaptation mechanisms help explain the persistence of relatively stable QoL in the presence of health problems. Psychological adaptation enables older adults to recalibrate expectations and comparison standards after health decline (Diener and Diener, 1995), resilience and coping strategies support chronic disease management (Bowling, 2005; Moustafa et al., 2024), and religious and existential frameworks facilitate acceptance and meaning making around illness (Salem and Ibrahim, 2025). Social support, particularly emotional closeness and practical assistance, further buffers health related distress (Khadr, 2019). In rural contexts with limited healthcare access, health limitations may be normalized through community comparison, thereby reducing perceived deviation from peers.

Taken together, these results both confirm and nuance the “health paradox” in this setting. Disease burden is only weakly linked to global QoL and modestly associated with psychological problems, underscoring that interventions should not be disease focused alone. Instead, comprehensive strategies that combine chronic disease management with the strengthening of psychological resilience, social support, and environmental quality are more consistent with the observed pattern of associations.

Social Relationships, Perceived Acceptance, and Environmental Satisfaction (H5)

The social well being indicators and the OPQOL Brief social relationships domain jointly highlight a relational deficit in a predominantly family based society. Although most participants reported feeling accepted and only 15% reported high loneliness, one quarter felt appreciated to a low extent, and the social relationships domain recorded the lowest mean of all QoL dimensions. This resonates with literature demonstrating that formal network characteristics, such as being married or living with family, are insufficient to guarantee high quality support when everyday interactions lack appreciation, reciprocity, and emotional closeness (Bowling, 2005; Cornwell and Laumann, 2015; Holt-Lunstad, 2024; Van Tilburg et al., 2021). In rural Arab contexts, out migration of younger generations and shifting family structures can further weaken convoy networks and reduce the density of supportive ties (Kronfol et al., 2015; Moustafa et al., 2023), which is congruent with the relatively low social relationship scores observed despite high marriage rates.

Consistent with this nuanced picture, H5 was largely not supported. Perceived social acceptance did not significantly predict overall QoL or most OPQOL Brief domains. The only significant association was with the home and neighborhood domain, $F(2, 498) = 3.530$, $p = 0.030$, $\eta^2 = 0.014$, and even here the pattern was counterintuitive: participants reporting “intermediate” acceptance tended to express greater environmental dissatisfaction compared with those reporting “very good” acceptance. This paradox may partly reflect ceiling effects, whereby individuals with very high perceived acceptance provide uniformly positive ratings across life domains, including their environment, regardless of objective conditions. Conversely, those experiencing only intermediate acceptance may be more critically attuned to environmental shortcomings or may interpret environmental deficits, such as poor infrastructure and limited accessibility, as manifestations of lower social worth or marginalization. The absence of broad social acceptance effects across other QoL domains reinforces the view that different aspects of QoL have distinct determinants and that social processes may operate in more domain specific ways than initially hypothesized.

Environmental Quality as a Dominant Determinant of Psychological Problems (H6)

In contrast to the relatively weak role of chronic disease burden, environmental factors emerged as dominant correlates of psychological outcomes. Satisfaction with the home and neighborhood was among the lowest rated life areas and the strongest unique predictor of psychological problems (H6). In the regression model, home and neighborhood satisfaction ($\beta = -0.569$, $p < 0.001$) was 1.7 times more powerful than emotional wellbeing ($\beta = -0.368$) and approximately four times more powerful than age ($\beta = 0.333$) in predicting psychological problems, with the full model explaining 72.8% of the variance. This pattern provides robust empirical support for ecological and environmental gerontology, particularly Lawton's person–environment fit and environmental press formulations, which posit that wellbeing in later life depends on the balance between individual competences and environmental demands (Lawton & Nahemow, 1973; Lawton, 1989). Empirical work from Europe and North America similarly links neighborhood safety, walkability, access to services, and age-friendly design to better mental health and functional autonomy among older adults (Iwarsson & Ståhl, 2003; Oswald & Wahl, 2011; Wahl & Weisman, 2003; Wu et al., 2015; Yoon & Lee, 2017; Alecu et al., 2019; Black & Jester, 2020; Wahl et al., 2024).

In Minya's predominantly rural context, where 81.1% of participants reside, older adults often live in settings characterized by inadequate housing, poor utilities, limited accessibility, unsafe neighborhoods, and constrained transportation and services (Mosalem et al., 2009, 2023; UNFPA Egypt, 2024). Such conditions increase environmental press by imposing demands that exceed declining functional capacities, thereby producing stress, anxiety, depressive symptoms, and reduced psychological well-being. This study extends these theoretical frameworks to a low- and middle-income, Middle Eastern setting. The strong and independent association between environmental satisfaction and psychological problems underscores that, in this setting, how older adults live may matter more for mental health than what diseases they live with. Age also significantly predicted psychological problems ($\beta = 0.333$, $p = 0.001$), suggesting that the oldest old (80+) represent a particularly vulnerable group in whom person–environment mismatches may accumulate and intensify over time.

These findings have direct policy and practice implications. Environmental interventions such as housing improvements, accessibility modifications, neighborhood safety initiatives, transportation solutions, and the development of age friendly public and community spaces may represent high impact, cost effective strategies for mental health promotion among rural older Egyptians. National initiatives such as Egypt's Hayah Karima (Decent Life) program and Vision 2030, which emphasize infrastructure and rural development, could be explicitly leveraged to prioritize elderly focused improvements, including barrier free housing, reliable utilities, proximity to healthcare and social services, and community centers that facilitate social and spiritual engagement. Such approaches complement, rather than replace, medical and psychosocial services, and they resonate strongly with person–environment fit theory.

CONTRIBUTIONS TO FIELD

Taken together, the findings extend ecological gerontology and adaptation theory in several important ways. First, they demonstrate that in a rural Egyptian governorate, environmental satisfaction, particularly with the home and neighborhood, plays a more prominent role in shaping psychological problems than does the burden of chronic disease. This offers strong empirical support for person environment fit models beyond Western, urban, and high income settings (Wahl and Weisman, 2003; Yoon and Lee, 2017; Wahl et al., 2024). Second, they provide quantitative confirmation of the health paradox for the Middle Eastern and North African region through a validated multidimensional QoL instrument. The OPQOL Brief showed excellent total scale reliability ($\alpha = 0.93$) but only moderate internal consistency for the health, home and neighborhood, and psychological subscales ($\alpha = 0.60$), suggesting conceptual heterogeneity and areas for cultural refinement in Arabic speaking elderly populations (Bowling et al., 2013; Bowling, 2005). These results reinforce how social, spiritual, and environmental buffers can attenuate multimorbidities impact on subjective wellbeing (Park et al., 2018; El Sayed et al., 2024; Khalid et al., 2024).

Third, the stronger female endorsement of religions importance to QoL (72.3% vs. 51.9% for men), alongside absent gender differences in overall QoL scores, contributes novel quantitative evidence to spiritual coping frameworks. This pattern suggests gendered religious engagement functions primarily as a resilience resource rather than a source of disparity among older women in Muslim majority settings (Boggatz, 2019; Omara and Harby, 2023; Syed Elias et al., 2026; Hussein et al., 2024). Overall, these contributions refine adaptation theory by illustrating how contextual resources mitigate the health wellbeing relationship in later life, while validating the OPQOL Briefs utility with guidance for its further development in non-Western contexts (Diener and Diener, 1995; Halsall and Cook, 2017).

From a methodological perspective, the excellent internal consistency of the OPQOL Brief total scale in this sample supports its utility for multidimensional QoL assessment in Egypt. However, somewhat lower reliabilities in the health, home and neighborhood, and psychological domains suggest conceptual heterogeneity and call for further cultural adaptation and refinement in Arabic speaking elderly populations (Bowling et al., 2013; United Nations Economic and Social Commission for Western Asia, 2022).

Overall, the pattern of supported and unsupported hypotheses converges on a multidimensional, context sensitive understanding of QoL in later life. In this rural Egyptian setting, QoL is less about the mere presence of chronic disease and more about how older adults adapt to illness within relational, spiritual, and environmental contexts, particularly the extent to which their physical and social environments enable or constrain everyday functioning and dignity.

PRACTICAL IMPLICATIONS

The findings identify environmental interventions as the highest impact, most cost effective approach to elderly mental health promotion, justifying infrastructure investment prioritization in rural Upper Egypt. They also demonstrate the critical importance of integrating religious institutions into gerontological care systems to leverage womens stronger spiritual engagement as an accessible resilience pathway. Finally, these results provide actionable evidence for operationalizing Egypts Hayah Karima initiative and National Strategy on Aging 2020 2025, directly addressing documented policy implementation gaps such as low elderly health insurance coverage (only 16% of elderly women insured) and the absence of palliative and age friendly services nationwide.

LIMITATIONS

Several limitations should be considered when interpreting these results. First, the cross-sectional design precludes causal inference; associations between satisfaction with home and neighborhood and psychological problems may be bidirectional, with poorer mental health also shaping perceptions of the environment. Second, health status was defined using only three highly prevalent chronic conditions (hypertension, diabetes, hyperlipidemia), likely underestimating overall morbidity and omitting important contributors such as arthritis, sensory impairments, and cognitive decline. Third, all measures relied on self-report in interviewer-administered surveys, which may introduce social desirability and recall biases, especially for sensitive domains such as emotional problems and financial strain. Fourth, although rigorous translation and cultural adaptation procedures were undertaken, verbal administration in colloquial Arabic may have introduced subtle variability in item phrasing and interpretation across interviewers and respondents. Fifth while the OPQOL Brief total scale demonstrated excellent internal consistency, three subscales (health, home and neighborhood, psychological) showed only acceptable reliability ($\alpha = 0.60$). This item heterogeneity within dimensions may introduce measurement error and warrants further cultural refinement for Arabic speaking elderly populations. Finally, the sample was drawn from a single, largely rural governorate; although Minya is demographically important, the findings may not generalize to urban governorates or to other Arab countries with different welfare regimes, service infrastructures, and cultural norms.

IMPLICATIONS AND FUTURE DIRECTIONS

The prominence of environmental and relational determinants suggests several priorities for policy and practice. Interventions to improve the physical and social qualities of home and neighborhood environments such as small-scale housing adaptations, enhanced local infrastructure, safer walkways, and age-friendly public spaces are likely to yield substantial benefits for psychological well-being in older adults, particularly in rural and peri-urban communities. Community-based programs that foster meaningful social engagement, strengthen perceptions of appreciation, and address subtle forms of loneliness (for example, intergenerational initiatives, peer support groups, and neighborhood clubs targeting widowed or unmarried elders) are also indicated by the low social relationship scores and the proportion reporting low appreciation. Given the strong endorsement of religion as important for QoL, especially among women, collaborations with religious institutions and faith-based organizations could help embed psychosocial support, health promotion, and social inclusion activities within familiar community structures in culturally sensitive ways.

Future research should build directly on the empirical patterns identified in this study. Longitudinal cohort studies are needed to clarify the directionality of associations between environmental satisfaction, psychological well-being, and QoL, and to test whether changes in housing or neighborhood conditions translate into measurable improvements in mental health and functional trajectories. Quasi-experimental and intervention studies evaluating the impact of home modification, neighborhood upgrading, or age-friendly community initiatives in rural Egyptian governorates would provide stronger evidence for the causal role of environmental factors in later-life QoL. Qualitative and mixed-methods work should examine how older men and women understand and mobilize religious, familial, and community resources to sustain QoL in the context of multimorbidity, widowhood, and economic strain, thereby illuminating the mechanisms underlying the observed health paradox and the absence of gender differences in QoL scores. Finally, further psychometric research on the OPQOL-Brief in Arabic-speaking populations should explore whether alternative item formulations or domain structures better capture culturally specific understandings of health, environment, and emotional well-being.

CONCLUSION

This study offers multidimensional evidence concerning quality of life (QoL) among older adults living in the predominantly rural Minya Governorate of Egypt. The findings reveal that environmental satisfaction, social relationships, and psychosocial resources all exert stronger influence on subjective well-being than objective disease burden does. Despite the high prevalence of multimorbidity, where 74.5% of participants had at least one chronic condition, health status showed only a weak association with overall QoL. This pattern confirms the health paradox within this Middle Eastern context. Meanwhile, satisfaction with home and neighborhood emerged as the strongest predictor of psychological problems, with a beta coefficient of -0.569. These results underscore person-environment fit as central to mental health in later life. Gender differences appeared in the importance attached to religion, where women reported higher endorsement rates (72.3%) compared to men (51.9%). However, no such differences showed up in QoL scores. This points to spirituality functioning as a gendered resilience mechanism, working alongside adaptive coping strategies and social ties.

The study validates key frameworks from ecological gerontology and adaptation theory. It does so within an underrepresented rural Arab setting. These findings challenge traditional disease-centric approaches to aging. At the same time, they prioritize modifiable environmental factors as prime targets for intervention. Policy and practice should now emphasize several key areas. First, infrastructure improvements stand out as the highest-impact strategies for mental health. These include age-friendly housing, enhanced neighborhood safety, and better access to services, especially in rural Upper Egypt. Second, partnerships with religious institutions can leverage women's stronger spiritual engagement. Third, expanded psychosocial support services should address relational deficits and isolation among the elderly. Fourth, these efforts should integrate into national initiatives such as "*Hayah Karima*". Implementing these evidence-based recommendations holds real potential. It can meaningfully enhance QoL for Egypt's rapidly aging population. Beyond that, it offers transferable models for similar low- and middle-income contexts across the region.

Declarations

Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this paper.

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Author Contribution

A.J.N. and M.B. conceptualised the study, designed the research methodology, and conducted data collection. A.J.N. drafted the main manuscript text, including introduction section. M.B. and I.K. prepared the Results (tables) and contributed to the statistical analysis and Methods section. I.K. and A.A.H. developed the Discussion sections, theoretical framework, and conclusion. S.K. contributed to the Introduction, and final manuscript editing and reviewing. All authors (A.J.N., M.B., I.K., A.A.H., and S.K.) reviewed and approved the final manuscript.

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Data Availability

The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request.

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Figures

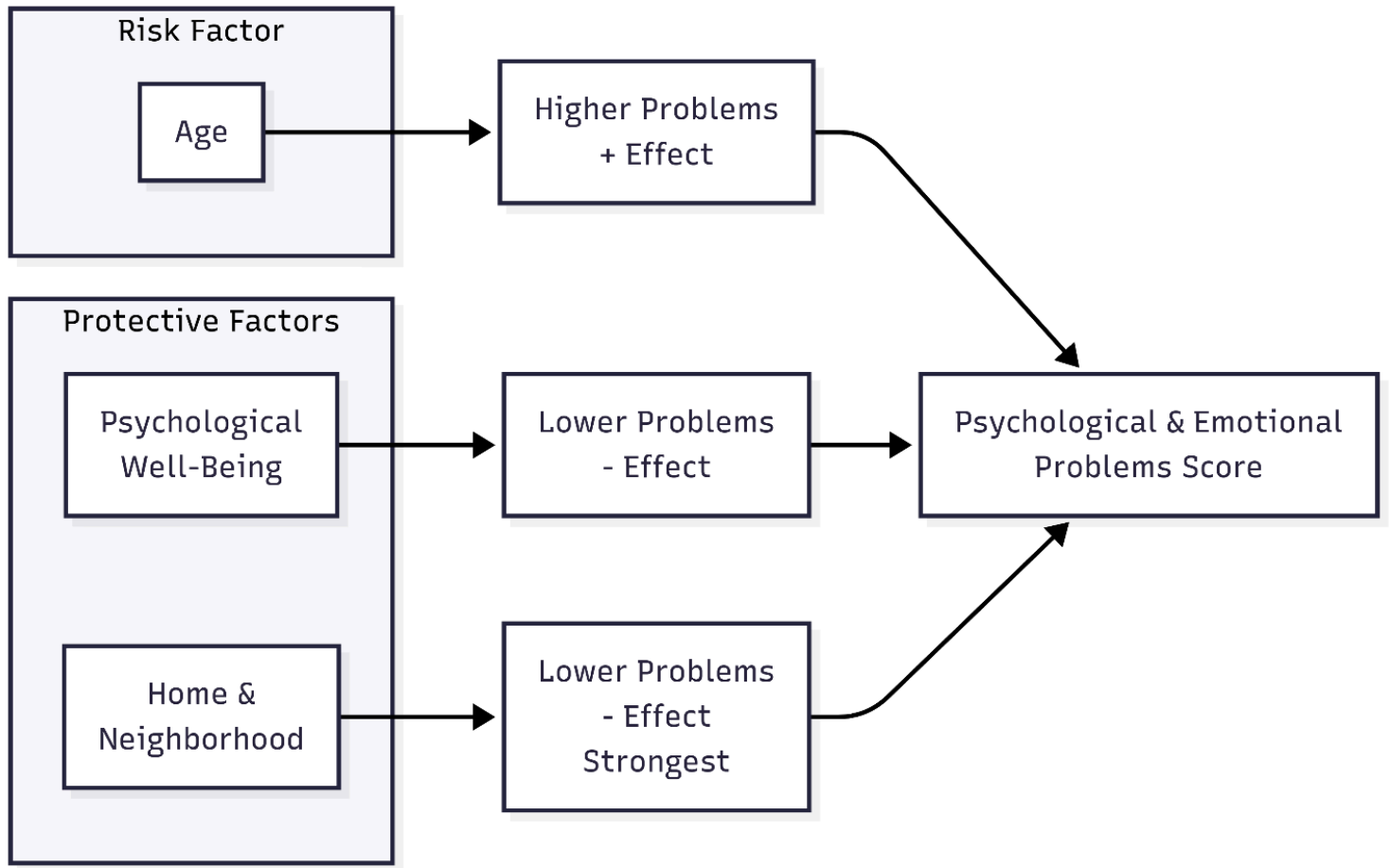


Figure 1

Risk and Protective Factors Influencing Psychological and Emotional Problems Among Elderly