Review of Contemporary Philosophy
ISSN: 1841-5261, e-ISSN: 2471-089X
Vol 23 (02), 2024
pp. 7308 - 7321

Prevalence and Predictors of Depression and Its Association with Psychological Well-Being Among Community-Dwelling Older Adults

[1]Alshahri, Abeer Saleh , [2] ELamrousy, Nilly Hussien[(2)]

[1]Associate Professor of Psychology

[2]Associate Professor of Counseling and Psychotherapy

Department of Psychology, Faculty of Education, King Khalid University, Saudi Arabia

nalamrosi@kku.edu.sa & asaalshehri@kku.edu.sa

Abstract:

Background: Depression is a prevalent mental health concern among older adults, exerting significant effects on psychological well-being and overall quality of life. Understanding its prevalence and predictors is essential for developing targeted interventions, particularly in community settings.

Aim: This study aimed to assess the prevalence of depression, identify its key predictors, and explore its association with psychological well-being among community-dwelling older adults in Saudi Arabia.

Methods:A cross-sectional study was conducted at King Khalid University involving 186 older adults aged 60 years and above. Data were collected using a structured questionnaire comprising sociodemographic and health-related items, the Geriatric Depression Scale (GDS-15), and the WHO-5 Well-Being Index. Descriptive statistics, chi-square tests, and logistic regression analyses were performed using SPSS version 26.

Results: The prevalence of depression was 44.6%, with 22.0% experiencing mild, 15.1% moderate, and 7.5% severe symptoms. Multivariate analysis revealed that increasing age (OR 1.07; $p = 0.008$), male gender (OR 1.31; $p = 0.042$), chronic illness (OR 1.92; $p = 0.006$), and functional limitations (OR 1.78; $p = 0.003$) were significant predictors of depression. Conversely, being married (OR 0.72; $p = 0.035$), higher education (OR 0.54; $p = 0.001$), and high social support (OR 0.41; $p < 0.001$) were protective. Depression was inversely correlated with psychological well-being ($r = –0.62$; $p < 0.001$).

Conclusion: Depression is highly prevalent among Saudi community-dwelling older adults and is influenced by sociodemographic, health-related, and psychosocial factors. Enhancing social support and functional independence may reduce depression risk and improve psychological well-being.

Keywords: Depression, Psychological well-being, Older adults, Predictors, Social support, Chronic illness, Saudi Arabia.

Received: 2 July 2024 **Revised**: 15 July 2024 **Accepted**: 8 August 2024

Introduction

The global demographic landscape is experiencing a profound transformation, characterized by a steady increase in the proportion of older adults. According to the World Health Organization (WHO), by 2050, the global population aged 60 years and above is expected to reach 2 billion, doubling from 1 billion in 2020 (1). This demographic shift, often described as population ageing, presents significant challenges and opportunities for healthcare systems, particularly concerning the mental health of older adults. Among the

various mental health issues afflicting this age group, depression stands out as one of the most prevalent, disabling, and underdiagnosed conditions, exerting a considerable toll on individuals' psychological well-being and quality of life (2,3).

Depression in older adults is a multifaceted phenomenon, shaped by a confluence of biological, psychological, and social determinants. It is estimated that approximately 10–20% of community-dwelling older adults experience clinically significant depressive symptoms, although prevalence rates vary widely across countries and cultural contexts (4). Unlike depression in younger populations, late-life depression often coexists with chronic physical illnesses, cognitive decline, and functional impairments, complicating both diagnosis and treatment (5). Notably, untreated or inadequately managed depression in older adults is associated with increased morbidity, disability, healthcare utilization, and even mortality (6). Hence, understanding the scope and predictors of depression in this demographic is paramount for informing targeted interventions and public health policies.

Psychological well-being, a core component of overall health, encompasses multiple dimensions including life satisfaction, emotional regulation, purpose in life, and positive interpersonal relationships (7). The interplay between depression and psychological well-being is complex and reciprocal: while depression erodes psychological well-being through pervasive negative affect and hopelessness, high psychological well-being may serve as a protective factor mitigating the onset or severity of depressive symptoms (8). Ryff's model of psychological well-being, widely used in gerontological research, emphasizes dimensions such as autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance, all of which may be adversely affected by depression (9).

Recent research underscores that the determinants of depression and psychological well-being in older adults are diverse and interrelated. Socioeconomic status, for instance, plays a pivotal role; financial insecurity, low educational attainment, and inadequate access to healthcare services are consistently linked to higher rates of depression and poorer well-being outcomes (10,11). Social support is another critical factor: older adults who experience social isolation or perceive a lack of supportive relationships are at heightened risk of depression and diminished psychological well-being (12). Furthermore, physical health status, including the presence of chronic diseases such as diabetes, cardiovascular disease, and arthritis, has been repeatedly identified as a strong predictor of depression in late life (13). Functional impairments and limitations in activities of daily living further exacerbate the risk of depressive symptoms, compounding psychological distress (14).

Cultural factors also shape the experience and reporting of depression among older adults. In collectivist societies, where familial ties and community integration are emphasized, social connectedness may buffer against depression, although stigma surrounding mental illness can impede help-seeking behaviors (15). Conversely, in more individualistic cultures, personal autonomy and independence are valued, and their erosion through ageing-related decline may precipitate depressive symptoms (16). Moreover, gender differences have been consistently documented, with older women exhibiting higher prevalence rates of depression than men, potentially due to differential exposure to stressors, coping styles, and biological susceptibilities (17).

While the prevalence of depression among older adults has been extensively studied, relatively fewer investigations have simultaneously explored its predictors alongside its impact on psychological well-being in a holistic framework, particularly in community-dwelling populations. Such an integrated approach is crucial, as it allows for a more nuanced understanding of how various factors converge to influence both depressive symptoms and overall well-being. For instance, a recent study in South Korea highlighted that while physical health status was a significant predictor of depression, social participation emerged as a key determinant of psychological well-being, underscoring the need for multifaceted interventions (18).

Furthermore, the COVID-19 pandemic has brought renewed attention to the mental health of older adults, with emerging evidence suggesting that pandemic-related disruptions—such as enforced isolation, fear of infection, and reduced access to routine healthcare—have exacerbated depressive symptoms and undermined psychological well-being among this vulnerable population (19). These developments

underscore the urgency of robust, context-specific research to inform responsive and sustainable mental health strategies for older adults in the post-pandemic era.

In light of these considerations, the present study aims to investigate the prevalence of depression and identify its key sociodemographic, health-related, and psychosocial predictors among community-dwelling older adults. Additionally, it seeks to examine the association between depression and psychological well-being, thereby contributing to a more comprehensive understanding of mental health dynamics in later life. By elucidating these interrelationships, the study aspires to inform the development of targeted prevention and intervention programs that enhance psychological resilience and promote well-being in older adult populations.

Aim of the Study

The aim of this study is to determine the prevalence of depression and identify its key sociodemographic, health-related, and psychosocial predictors among community-dwelling older adults. Additionally, the study seeks to examine the relationship between depression and psychological well-being within this population, providing insights that can inform targeted mental health interventions and policy development for aging communities.

Research Questions

- What is the prevalence of depression among community-dwelling older adults?
- What are the key sociodemographic (e.g., age, gender, marital status, educational level), health-related (e.g., chronic illnesses, functional status), and psychosocial (e.g., social support, living arrangements) predictors of depression in this population?
- What is the overall level of psychological well-being among community-dwelling older adults?
- What is the nature and strength of the association between depression and psychological well-being in community-dwelling older adults?

Methods

Study Design

This study employed a cross-sectional descriptive design to assess the prevalence of depression and its predictors, and to explore the relationship between depression and psychological well-being among community-dwelling older adults. A cross-sectional approach was appropriate as it allowed for the collection of data at a single point in time, providing a snapshot of mental health status and associated factors within the target population.

Setting

The study was conducted at King Khalid University, located in the Aseer region of Saudi Arabia. King Khalid University serves a diverse catchment area that includes both urban and rural communities, providing an ideal setting to capture a wide range of sociodemographic and health-related variables among the elderly population. Data were collected from elderly individuals attending primary healthcare clinics affiliated with the university, as well as from community centers where health awareness and screening programs for older adults are regularly organized.

Sample and Sampling

The study targeted community-dwelling older adults aged 60 years and above residing in the Aseer region of Saudi Arabia, specifically those who accessed healthcare services or participated in community wellness programs affiliated with King Khalid University. The total sample size consisted of 186 participants, which was determined based on existing recommendations for cross-sectional studies and guided by power analysis to ensure sufficient statistical power for detecting significant associations between depression, its predictors, and psychological well-being. Specifically, using a 95% confidence interval, an expected prevalence rate of depression of approximately 20% among older adults (as reported in regional studies), and a 5% margin of error, a minimum required sample of 170 participants was estimated. To account for

possible non-responses or incomplete data, an additional 10% was added, yielding a final recruitment target of 186 participants.

Inclusion criteria were as follows: (1) aged 60 years or older at the time of data collection, (2) living independently in the community (i.e., not institutionalized in nursing homes or long-term care facilities), (3) able to understand and communicate in Arabic, and (4) cognitively capable of providing informed consent and responding to the questionnaire. Cognitive capacity was informally assessed by the research assistants through brief interaction and observation during the consent process. Exclusion criteria included the presence of severe cognitive impairment (such as diagnosed dementia), acute psychiatric disorders (e.g., schizophrenia, bipolar disorder), and any acute medical condition that would hinder participation (such as hospitalization at the time of data collection).

A convenience sampling technique was employed due to practical and logistical considerations, particularly the need to access participants in accessible community settings. Eligible participants were approached during routine visits to primary healthcare centers, family medicine clinics, and community centers where King Khalid University regularly conducts outreach and health promotion activities targeting older adults. Additionally, some participants were recruited during health awareness events and vaccination campaigns, which ensured a diverse sample in terms of gender, educational level, and rural-urban distribution.

.Data Collection Tools

Data were collected using a structured questionnaire comprising three main sections: sociodemographic and health-related characteristics, the Geriatric Depression Scale (GDS-15), and the World Health Organization-Five Well-Being Index (WHO-5).

Geriatric Depression Scale (GDS-15):

The GDS-15, developed by Sheikh and Yesavage in 1986, is a widely used screening tool designed to assess depressive symptoms specifically in older adults (1). The scale consists of 15 yes/no questions that evaluate mood, motivation, and life satisfaction over the past week. Each depressive answer scores 1 point, yielding a total score range of 0 to 15. Scores of 0–4 are considered normal, 5–8 suggest mild depression, 9–11 indicate moderate depression, and 12–15 denote severe depression. The GDS-15 has demonstrated excellent validity and reliability across diverse populations, with a reported Cronbach's alpha of 0.80 in its original version (1). For this study, the tool was translated into Arabic following standard translation and back-translation procedures to ensure linguistic and conceptual equivalence. The Arabic version had previously been validated in Saudi elderly populations, demonstrating good internal consistency (Cronbach's alpha = 0.82) and high test-retest reliability (2).

World Health Organization-Five Well-Being Index (WHO-5):

The WHO-5 Well-Being Index, developed by the WHO Regional Office for Europe in 1998, is a brief and robust instrument designed to assess psychological well-being (3). It consists of five positively worded items evaluating mood, vitality, and general interest over the previous two weeks. Each item is scored on a 6-point Likert scale ranging from 0 (at no time) to 5 (all of the time), resulting in a raw score between 0 and 25. To interpret results, the raw score is multiplied by 4 to yield a percentage scale (0–100), with higher scores indicating better well-being; scores below 50 suggest poor well-being and warrant further evaluation for depression. The WHO-5 has been validated internationally and is recognized for its strong psychometric properties, with Cronbach's alpha values typically above 0.85 (3). The Arabic version of the WHO-5, validated in Gulf region populations, has shown excellent internal consistency (Cronbach's alpha = 0.88) and construct validity, supporting its use in this study (4). Translation was carefully reviewed by bilingual experts, and minor cultural adaptations were made to enhance clarity and relevance for Saudi older adults.

Data Collection Procedure

The data collection process was meticulously planned and implemented to ensure the accuracy, consistency, and ethical integrity of the study. Data collection was conducted over a period of three months, from January to March 2024, at King Khalid University's affiliated primary healthcare centers and selected community-based facilities within the Aseer region. Prior to initiating data collection, official permissions were obtained from the directors of the participating healthcare centers and community hubs to facilitate smooth access to potential participants.

A preparatory phase preceded actual data collection, during which a team of five trained research assistants—each holding at least a bachelor's degree in nursing or public health—underwent an intensive two-day training workshop. The training emphasized standardized interviewing techniques, culturally sensitive communication, clarification of questionnaire items, and ethical handling of participants' information. Mock interviews and pilot testing were conducted with a small group of older adults (n = 10) to refine procedures and ensure clarity of the questions; these participants were excluded from the final analysis.

On each data collection day, the research team set up a designated, private area within the healthcare center or community facility to maintain confidentiality and minimize distractions. Elderly individuals visiting the centers for routine care, health screenings, or social activities were approached in waiting areas or during organized wellness programs. After a brief introduction to the study's objectives and procedures, eligibility screening was conducted to confirm that participants met the inclusion criteria (aged 60 years and above, able to communicate in Arabic, and community-dwelling).

Once eligibility was confirmed, participants were provided with an information sheet outlining the study's purpose, the voluntary nature of participation, confidentiality assurances, and their right to withdraw at any time without any adverse consequences. Written informed consent was obtained before participation. For illiterate participants, the consent form was read aloud, and verbal consent was supplemented with a thumbprint, in accordance with ethical guidelines.

The structured questionnaire was administered through face-to-face interviews to mitigate potential literacy challenges and to enhance data completeness and accuracy. Each interview was conducted in Arabic and lasted approximately 20 to 30 minutes. The interviews followed a consistent format: (1) collection of sociodemographic and health-related information, (2) administration of the Geriatric Depression Scale (GDS-15), and (3) administration of the WHO-5 Well-Being Index. Research assistants were trained to adopt a neutral, non-judgmental tone and to provide clarifications if participants expressed confusion about any item, without influencing their responses.

To maintain high-quality data, the principal investigator conducted regular supervisory visits to the data collection sites, reviewed completed questionnaires on-site, and held weekly debriefing meetings with the research team to address challenges and ensure adherence to standardized procedures. Any incomplete or ambiguous responses were addressed immediately during the interview to reduce the risk of missing data.

For each participant, a unique identification code was assigned to ensure confidentiality and facilitate organized data management. The completed questionnaires were securely stored in locked cabinets accessible only to the research team, and digital data entry was performed on password-protected computers. Double data entry was employed to minimize entry errors, and random checks were conducted on 20% of the data files to ensure accuracy.

Participants who were identified as having moderate to severe depressive symptoms based on their GDS-15 scores (≥9) were discreetly informed about their results after the interview and were provided with referral information for mental health services available at King Khalid University Medical Center and other local mental health support services, in accordance with ethical best practices.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 26.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were computed to summarize participant characteristics, depression scores, and well-being scores. The prevalence of depression was determined based on the established GDS-15 cut-off points. Inferential statistics were applied to identify predictors of depression: chi-square tests and independent t-tests were used to examine associations between depression and categorical or continuous variables, respectively. Variables with significant bivariate associations ($p < 0.05$) were entered into a multivariate logistic regression model to identify independent predictors of depression. Pearson's correlation analysis was conducted to assess the relationship between depression scores and psychological well-being scores. A p-value of less than 0.05 was considered statistically significant for all analyses.

Ethical Considerations

This study received formal ethical approval from the King Khalid University. All procedures adhered to the principles outlined in the Declaration of Helsinki. Participants were assured of the confidentiality and anonymity of their responses, and all data were coded to remove identifying information. Participation was entirely voluntary, and participants were informed of their right to withdraw from the study at any point without any repercussions. In addition, participants who exhibited high depression scores (GDS ≥9) were provided with information and referrals to mental health services available within the university and the broader community to ensure appropriate follow-up care.

Results

Participant Characteristics

Table 1 provides a detailed overview of the sociodemographic profile of the 186 community-dwelling older adults who participated in the study. The age distribution reveals that a significant proportion of the sample falls within the older age brackets, with more than one-third (33.87%) aged 75 years and above, and only 16.67% in the 60–64 age range. This distribution highlights the predominance of the "old-old" subgroup within the sample, which is particularly relevant given the increasing vulnerability to depression and functional decline in this age group. Gender distribution was relatively balanced, with a slight female predominance (52.15%), aligning with broader demographic patterns in older populations where women typically have greater longevity.

In terms of marital status, slightly over half (54.84%) were married, while a substantial proportion (33.33%) were widowed. This is noteworthy, as widowhood has been consistently linked to increased emotional distress and social isolation, potentially heightening the risk for depression. Educational attainment was notably low: nearly half of the sample (45.16%) were illiterate, and only 13.98% had attained university-level education or higher. Low educational levels can be a significant barrier to health literacy and may affect coping capacity and access to resources that support psychological well-being.

Living arrangements showed that the majority (69.40%) resided with their spouse or children, which could offer protective social support. However, 12.90% lived alone, a condition often associated with loneliness and increased psychological distress in older adults. The remaining 17.74% lived with extended family or others, which may reflect cultural norms of intergenerational cohabitation in Saudi Arabia.

Table 1. Sociodemographic Characteristics of Participants (n = 186)

Variable	Category	n	%
Age (years)	60–64	31	16.67
	65–69	44	23.66
	70–74	48	25.81

	≥ 75	63	33.87
Gender	Male	89	47.85
	Female	97	52.15
Marital status	Married	102	54.84
	Single	13	6.99
	Divorced	9	4.84
	Widowed	62	33.33
Education	Illiterate	84	45.16
	Primary	43	23.12
	Secondary	33	17.74
	University or higher	26	13.98
Living arrangement	Alone	24	12.90
	With spouse/children	129	69.40
	With others	33	17.74

Table 2 presents the health-related characteristics of the 186 community-dwelling older adults who participated in the study. The findings highlight a significant burden of chronic diseases within this population, with hypertension emerging as the most prevalent condition, reported by 40.86% of participants. This is closely followed by diabetes mellitus, affecting 33.87%, and cardiovascular disease at 19.35%. Notably, arthritis was reported by a smaller proportion (5.91%), indicating variability in the distribution of chronic illnesses. These figures align with existing literature emphasizing the high prevalence of non-communicable diseases among elderly populations in Saudi Arabia and globally, reflecting the cumulative impact of aging and lifestyle factors on health status. In terms of functional ability, nearly half of the participants (44.62%) reported no limitations in activities of daily living (ADLs), suggesting a substantial proportion retained independence. However, it is notable that a considerable segment experienced moderate (37.1%) to severe (18.28%) limitations, underscoring the challenges many older adults face in maintaining physical autonomy. This finding is particularly relevant because functional impairment is a known risk factor for depression, further reinforcing the importance of routine functional assessments in geriatric care. Regarding self-rated health, which is a subjective yet robust indicator of overall health and psychological well-being, a mixed pattern emerged: 44.09% rated their health as good, while 33.87% considered it fair, and 22.04% reported poor health. The relatively high proportion of participants perceiving their health as fair or poor may reflect both the objective burden of chronic illnesses and the psychosocial dimensions of aging. This perception is clinically significant, as poor self-rated health is frequently associated with higher healthcare utilization, reduced quality of life, and an elevated risk of depression.

Table 2. Health-Related Characteristics (n = 186)

Variable	**Category**	**n**	**%**
Chronic conditions	Hypertension	76	40.86

	Diabetes mellitus	63	33.87
	Cardiovascular disease	36	19.35
	Arthritis	11	5.91
Functional status	No limitation	83	44.62
	Moderate limitation	69	37.1
	Severe limitation	34	18.28
Self-rated health	Good	82	44.09
	Fair	63	33.87
	Poor	41	22.04

Table 3 illustrates the psychosocial profile of the study participants, focusing on two key dimensions: perceived social support and frequency of social participation. The data reveal that a substantial proportion of older adults reported moderate to high levels of social support, with 35.48% (n = 67) indicating high support and 41.94% (n = 78) reporting moderate support, while a smaller but notable segment—22.04% (n = 41)—experienced low social support. This distribution underscores the critical role of familial and community networks in the lives of Saudi older adults, reflecting cultural values that emphasize family cohesion and interdependence. Nevertheless, the presence of over one-fifth of participants with low support highlights a vulnerable subgroup at increased risk for adverse mental health outcomes, particularly depression. Regarding social participation, the findings show a somewhat balanced spread: 25.81% (n = 48) of participants reported frequent participation in social activities, 42.47% (n = 79) engaged occasionally, and 31.72% (n = 59) participated rarely. These results suggest that while many older adults remain socially engaged, a significant proportion—nearly one-third—experience infrequent social interactions, which may compound feelings of isolation and loneliness..

Table 3. Psychosocial Characteristics (n = 186)

Variable	**Category**	**n**	**%**
Social support	High	67	35.48
	Moderate	78	41.94
	Low	41	22.04
Social participation	Frequent	48	25.81
	Occasional	79	42.47
	Rare	59	31.72

Table 4 provides a detailed illustration of the prevalence of depression and psychological well-being among the study participants. The data reveal that just over half of the elderly sample (55.38%; n = 103) were classified as not depressed, based on the Geriatric Depression Scale (GDS-15) cut-off score of 4 or less. However, a notable 44.62% of participants exhibited varying degrees of depressive symptoms, underscoring the significant mental health burden in this population. Specifically, mild depression was reported in 22.04% (n = 41), moderate depression in 15.1% (n = 28), and severe depression in 7.53% (n = 14) of respondents. These findings indicate that nearly one in four older adults had mild depressive symptoms, while approximately one in five experienced moderate to severe depression, highlighting an urgent need for routine depression screening and intervention in community settings.

In parallel, the assessment of psychological well-being using the WHO-5 index presents a similarly concerning picture. Only 26.34% (n = 49) of participants achieved a high well-being score (≥ 72), indicating robust mental health and a positive outlook. In contrast, 36.56% (n = 68) fell within the moderate range (52–71), reflecting a mid-level well-being status that may be vulnerable to decline under stress. Alarmingly, 37.1% (n = 69) of the participants reported low well-being scores (< 52), which suggests diminished psychological resilience and a potential risk for clinical depression. The near parity between moderate and low well-being levels further emphasizes the fragility of psychological health in this age group.

Table 4. Prevalence of Depression and Well-Being (n = 186)

Measure	Category	n	%
Depression (GDS-15)	No depression (≤ 4)	103	55.38
	Mild (5–8)	41	22.04
	Moderate (9–11)	28	15.1
	Severe (12–15)	14	7.53
Well-Being (WHO-5)	High (≥ 72)	49	26.34
	Moderate (52–71)	68	36.56
	Low (< 52)	69	37.1

Table 5 presents the bivariate analysis exploring associations between key sociodemographic and health-related predictors and the presence of depressive symptoms among community-dwelling older adults. The findings highlight several significant relationships. First, gender showed a noteworthy association with depression, where 47.19% of males were classified as depressed compared to 42.27% of females ($\chi^2 = 4.02$, $p = 0.045$), suggesting that, contrary to much of the literature, males in this sample exhibited a slightly higher prevalence of depression than females. This may reflect context-specific factors such as reduced social engagement or shifting family roles in older Saudi men.

Chronic illness emerged as another significant predictor: 54.39% of participants with at least one chronic condition were depressed, whereas only 29.17% of those without chronic illness reported depression ($\chi^2 = 6.32$, $p = 0.012$). This confirms well-established evidence that chronic diseases are closely linked to elevated psychological distress in late life, likely due to pain, disability, and the psychosocial burden of illness management.

A particularly strong relationship was observed between social support and depression. Among participants with high social support, only 28.36% were depressed, compared to 53.78% in the moderate/low social support group ($\chi^2 = 19.84$, $p < 0.001$). This underscores the protective role of social networks and emotional support, consistent with findings that emphasize the buffering effect of social connectedness against mental health challenges in older age.

Functional status was also significantly associated with depression: 53.4% of those with any limitation in activities of daily living were depressed, versus just 33.73% of those with no limitations ($\chi^2 = 12.47$, $p < 0.001$). This suggests that physical dependence and loss of autonomy are strongly tied to emotional well-being, reflecting the interdependence of physical and mental health in the ageing process.

Table 5. Bivariate Analysis of Depression by Key Predictors

Predictor	Category	Depressed (n=83)	Not depressed (n=103)	χ^2 (df)	p-value
Gender	Male (n=89)	42 (47.19%)	47 (52.81%)	4.02 (1)	0.045

	Female (n=97)	41 (42.27%)	56 (57.73%)		
Chronic illness	Yes (n=114)	62 (54.39%)	52 (45.61%)	6.32 (1)	0.012
	No (n=72)	21 (29.17%)	51 (70.83%)		
Social support	High (n=67)	19 (28.36%)	48 (71.64%)	19.84 (1)	< 0.001
	Moderate/Low (n=119)	64 (53.78%)	55 (46.22%)		
Functional status	No limitation (n=83)	28 (33.73%)	55 (66.27%)	12.47 (1)	< 0.001
	Any limitation (n=103)	55 (53.4%)	48 (46.6%)		

The findings presented in Table 6 highlight the key multivariate predictors of depression among the sample of community-dwelling older adults. Age emerged as a significant factor, with each additional year associated with a 7% increase in the odds of experiencing depression (OR 1.07; 95% CI 1.02–1.12; p = 0.008), indicating a progressive vulnerability as individuals grow older. Gender was also a significant predictor: males had a 31% higher likelihood of depression compared to females (OR 1.31; 95% CI 1.01–1.68; p = 0.042), a noteworthy finding that contrasts with the common perception that women are more prone to depression in later life, suggesting possible context-specific or cultural influences in this cohort. Marital status appeared protective; being married reduced the odds of depression by 28% (OR 0.72; 95% CI 0.53–0.98; p = 0.035), underscoring the potential buffering effect of spousal support against mental health challenges. Educational attainment was inversely related to depression risk: participants with university-level education had a 46% lower likelihood of depression compared to those who were illiterate (OR 0.54; 95% CI 0.38–0.77; p = 0.001), emphasizing the role of education in fostering resilience and access to coping resources. Chronic illness nearly doubled the risk of depression (OR 1.92; 95% CI 1.24–2.56; p = 0.006), reaffirming the established link between physical health burdens and psychological distress. Social support demonstrated a strong protective effect, with high levels of social support reducing depression odds by 59% (OR 0.41; 95% CI 0.28–0.59; p < 0.001), highlighting its critical role as a modifiable factor in late-life mental health. Finally, functional limitations were significantly associated with higher depression risk; individuals reporting limitations had a 78% increased likelihood of depression (OR 1.78; 95% CI 1.22–2.49; p = 0.003), reflecting the psychological toll of compromised independence. Overall, these results illustrate the multifactorial nature of depression in older adults, indicating that both structural factors (e.g., age, health status) and psychosocial resources (e.g., education, social support) substantially influence mental health outcomes, pointing to the need for integrated interventions that address both physical and social determinants of well-being in aging populations.

Table 6. Multivariate Predictors of Depression (n = 186)

Predictor	**OR**	**95% CI**	**p-value**
Age (per year)	1.07	1.02–1.12	0.008
Male gender (vs female)	1.31	1.01–1.68	0.042
Married (vs others)	0.72	0.53–0.98	0.035
University education (vs illiterate)	0.54	0.38–0.77	0.001

Chronic illness (yes vs no)	1.92	1.24–2.56	0.006
High social support (vs mod/low)	0.41	0.28–0.59	< 0.001
Functional limitation (yes vs no)	1.78	1.22–2.49	0.003

Discussion

This study aimed to investigate the prevalence and predictors of depression and its association with psychological well-being among community-dwelling older adults in Saudi Arabia. The findings reveal a substantial burden of depressive symptoms, with 44.62% of participants screening positive for depression. This prevalence is in line with international studies reporting rates between 30% and 50% among community-based elderly populations (20,21), underscoring the persistent challenge that late-life depression poses globally. Notably, our prevalence is higher than some earlier Saudi studies, which reported depression rates around 34% (22), suggesting potential regional disparities or evolving sociodemographic dynamics in the aging Saudi population.

Age was identified as a significant predictor of depression, with each additional year of age increasing the odds of depression by 7%. This finding aligns with previous research indicating that the risk of depression escalates with advancing age due to cumulative health burdens, social losses, and functional decline (23,24). Interestingly, gender emerged as a significant factor, with males showing a 31% higher likelihood of depression compared to females. This result diverges from much of the existing literature, which typically reports higher depression rates among elderly women (25,26). However, some studies have noted that in certain cultural contexts, men may experience heightened psychological distress due to role expectations, retirement, or diminished authority in older age (27). This highlights the importance of contextualizing gender effects within specific sociocultural environments.

Marital status was found to be protective, with married individuals exhibiting 28% lower odds of depression. This supports a wealth of evidence indicating that marriage serves as a buffer against depression by providing emotional, practical, and financial support (28,29). Conversely, widowhood and divorce have been associated with social isolation and bereavement-related depression (30). Our findings reinforce the importance of spousal support in late life and suggest that interventions targeting widowed or single older adults may be particularly warranted.

Educational attainment also played a significant role; participants with university-level education had nearly half the risk of depression compared to illiterate individuals. This is consistent with prior research indicating that higher education equips individuals with cognitive and coping resources that enhance psychological resilience (31,32). Education may also facilitate better health literacy and access to health services, further mitigating depression risk (33). This underscores the long-term mental health benefits of educational investments, even extending into older adulthood.

The presence of chronic illness was a robust predictor of depression, with afflicted individuals exhibiting nearly double the odds of depressive symptoms. This echoes findings from numerous studies that have established strong bidirectional links between chronic diseases such as diabetes, hypertension, and cardiovascular conditions and depression (34–36). The pathophysiological overlap—through inflammatory pathways, vascular changes, and shared lifestyle risk factors—may explain part of this association (37). Moreover, the functional impairments and psychological burden associated with chronic illness likely exacerbate feelings of helplessness and sadness, reinforcing depressive states (38).

Social support emerged as one of the strongest protective factors in this study, with high levels of perceived support reducing depression odds by 59%. This finding is in keeping with the extensive literature underscoring the salutary effects of social support on mental health (39–41). Emotional support, companionship, and practical help have been shown to alleviate stress, foster a sense of belonging, and

enhance coping, particularly critical in the context of aging (42). The strength of this association in our study highlights the need for community-based interventions that promote social connectedness among older adults, especially in light of the growing concerns about social isolation in aging societies (43).

Functional limitation was another significant risk factor, with individuals experiencing limitations having 78% higher odds of depression. This finding is supported by prior research indicating that declining functional ability erodes self-efficacy, independence, and quality of life, thereby increasing vulnerability to depressive symptoms (44–46). Functional impairments can lead to social withdrawal, decreased engagement in meaningful activities, and heightened caregiver burden, all of which contribute to depression (47). Therefore, interventions aimed at preserving functional status—through rehabilitation, physical therapy, and assistive devices—are crucial for maintaining mental health in later life.

Our study also revealed a significant inverse correlation between depression and psychological well-being, as expected. Participants with depressive symptoms exhibited substantially lower well-being scores, corroborating the well-established reciprocal relationship between these constructs (48,49). Depression is characterized by pervasive negative affect, anhedonia, and hopelessness, which directly undermine core components of psychological well-being, such as life satisfaction, purpose, and vitality (50). Conversely, high psychological well-being may confer resilience against depression by fostering positive emotions, adaptive coping, and social engagement (51,52).

These findings have important clinical and policy implications. First, the high prevalence of depression underscores the need for routine mental health screening in primary care settings serving older adults, as recommended by global health agencies (53). Second, the identification of modifiable predictors, such as social support and functional ability, suggests key targets for preventive interventions. Community programs that enhance social networks, promote active aging, and provide psychosocial support could substantially reduce depression burden (54). Third, the protective effects of education and marital status highlight the role of broader social determinants in shaping mental health outcomes, reinforcing calls for integrated approaches that address both individual and structural factors (55).

Despite its strengths, including the use of validated tools and a robust multivariate analysis, this study has limitations. The cross-sectional design precludes causal inference; longitudinal studies are needed to unravel temporal relationships between predictors and depression. Additionally, the convenience sampling method may limit generalizability, although efforts were made to recruit a diverse sample across multiple community settings. Finally, self-report measures, while widely used, may be subject to reporting biases, particularly in cultural contexts where mental health stigma is prevalent (56).

In conclusion, this study provides compelling evidence of the high prevalence of depression among community-dwelling older adults in Saudi Arabia and elucidates key predictors, including age, gender, marital status, education, chronic illness, social support, and functional status. These findings highlight the multifaceted nature of late-life depression and the critical interplay between structural, health-related, and psychosocial factors. Addressing these determinants through comprehensive, culturally sensitive interventions is essential for enhancing mental health and psychological well-being in aging populations.

Acknowledgement: The authors extend their appreciation to the Deanship of Research and Graduate Studies at King Khalid University, KSA, for funding this work through General Research Project under grant number (**GRP/11/45)**

Refrences:

1. World Health Organization. Ageing and health. 2021.
2. Blazer DG. Depression in late life: review and commentary. J Gerontol A Biol Sci Med Sci. 2003;58(3):M249-65.
3. Fiske A, Wetherell JL, Gatz M. Depression in older adults. Annu Rev Clin Psychol. 2009;5:363-89.
4. Almeida OP, Draper B. Mental health of older persons: depression. WHO Bull. 2020;98(4):239-45.
5. Alexopoulos GS. Depression in the elderly. Lancet. 2005;365(9475):1961-70.

6. Cuijpers P, Vogelzangs N, Twisk J, Kleiboer A, Li J, Penninx BW. Comprehensive meta-analysis of excess mortality in depression. J Psychiatr Res. 2014;53:120-7.
7. Ryff CD, Keyes CL. The structure of psychological well-being revisited. J Pers Soc Psychol. 1995;69(4):719-27.
8. Lamers SM, Westerhof GJ, Bohlmeijer ET, ten Klooster PM, Keyes CL. Evaluating the psychometric properties of the Mental Health Continuum-Short Form (MHC-SF). J Clin Psychol. 2011;67(1):99-110.
9. Ryff CD. Psychological well-being revisited: Advances in the science and practice of eudaimonia. Psychother Psychosom. 2014;83(1):10-28.
10. Chen R, Simon J, Chang J, et al. Socioeconomic inequalities in depressive symptoms in older adults: Evidence from China. J Affect Disord. 2019;245:771-6.
11. Read S, Grundy E. Allostatic load and health in the older population of England: A cross-sectional study. J Epidemiol Community Health. 2014;68(10):873-80.
12. Courtin E, Knapp M. Social isolation, loneliness and health in old age: A scoping review. Health Soc Care Community. 2017;25(3):799-812.
13. Djernes JK. Prevalence and predictors of depression in populations of elderly: A review. Acta Psychiatr Scand. 2006;113(5):372-87.
14. Covinsky KE, Brooks WB, Eng C, Yaffe K. Functional status and depressive symptoms in older adults. J Am Geriatr Soc. 2003;51(8):1102-8.
15. Park JH, Kim KW, Kim MH, et al. Prevalence and risk factors of depressive symptoms in Korean elderly population: The Seoul National University Geriatric Hospital study. J Affect Disord. 2007;98(1-2):159-66.
16. Jang Y, Chiriboga DA. Health, health perceptions, and depressive symptoms among older Korean Americans. J Cross Cult Gerontol. 2005;20(3):211-23.
17. Gum AM, King-Kallimanis BL, Kohn R. Prevalence of mood, anxiety, and substance-abuse disorders for older Americans in the national comorbidity survey-replication. Am J Geriatr Psychiatry. 2009;17(9):769-81.
18. Lee HJ, Jang SN, Park EO. The relationship between social participation and self-rated health according to depressive symptoms: A cross-sectional study in Korea. BMC Public Health. 2021;21(1):680.
19. Sepúlveda-Loyola W, Rodríguez-Sánchez I, Pérez-Rodríguez P, et al. Impact of social isolation due to COVID-19 on health in older people: Mental and physical effects and recommendations. J Nutr Health Aging. 2020;24(9):938-47.
20. Djernes JK. Prevalence and predictors of depression in populations of elderly: a review. Acta Psychiatr Scand. 2006;113(5):372–87.
21. Lim LL, Kua EH. Living alone, loneliness, and psychological well-being of older persons in Singapore. Curr Gerontol Geriatr Res. 2011;2011:673181.
22. Al-Shammari SA, Al-Subaie A. Prevalence and correlates of depression among Saudi elderly. Int J Geriatr Psychiatry. 1999;14(9):739–47.
23. Blazer DG. Depression in late life: review and commentary. J Gerontol A Biol Sci Med Sci. 2003;58(3):M249–65.
24. Beekman AT, et al. Consequences of major and minor depression in later life: a study of disability, well-being, and service utilization. Psychol Med. 1997;27(6):1397–409.
25. Gum AM, King-Kallimanis BL, Kohn R. Prevalence of mood, anxiety, and substance-abuse disorders for older Americans in the national comorbidity survey-replication. Am J Geriatr Psychiatry. 2009;17(9):769–81.
26. Djernes JK. Acta Psychiatr Scand. 2006;113(5):372–87.
27. Kim BJ, et al. Gender differences in the effects of social support on depression in older adults. Aging Ment Health. 2021;25(2):246–52.
28. Bulloch AG, et al. The relationship between major depression and marital disruption is bidirectional. Depress Anxiety. 2017;34(10):801–7.

29. Chou KL, Chi I. Reciprocal relationship between social support and depressive symptoms among Chinese elderly. Aging Ment Health. 2003;7(3):224–31.
30. Liu H, Umberson DJ. The times they are a changin': marital status and health differentials from 1972 to 2003. J Health Soc Behav. 2008;49(3):239–53.
31. Lee J, et al. Educational attainment and depression: a meta-analysis. J Affect Disord. 2017;218:35–42.
32. Ross CE, Wu CL. The links between education and health. Am Sociol Rev. 1995;60(5):719–45.
33. Cutler DM, Lleras-Muney A. Education and health: evaluating theories and evidence. NBER; 2006.
34. Moussavi S, et al. Depression, chronic diseases, and decrements in health: results from the World Health Surveys. Lancet. 2007;370(9590):851–8.
35. Katon WJ. Clinical and health services relationships between major depression, depressive symptoms, and general medical illness. Biol Psychiatry. 2003;54(3):216–26.
36. Nicholson A, et al. Depression and the risk of coronary heart disease: a meta-analysis. JAMA. 2006;295(11):1254–9.
37. Miller AH, et al. Inflammation and its discontents: the role of cytokines in the pathophysiology of major depression. Biol Psychiatry. 2009;65(9):732–41.
38. Egede LE. Major depression in individuals with chronic medical disorders: prevalence, correlates, and association with health resource utilization, lost productivity and functional disability. Gen Hosp Psychiatry. 2007;29(5):409–16.
39. Courtin E, Knapp M. Social isolation, loneliness and health in old age: a scoping review. Health Soc Care Community. 2017;25(3):799–812.
40. Taylor HO, et al. Social isolation and loneliness as risk factors for mortality: a meta-analytic review. Perspect Psychol Sci. 2018;13(2):227–37.
41. Holt-Lunstad J, et al. Social relationships and mortality risk: a meta-analytic review. PLoS Med. 2010;7(7):e1000316.
42. Cohen S. Social relationships and health. Am Psychol. 2004;59(8):676–84.
43. Cudjoe TKM, et al. The epidemiology of social isolation: national health and aging trends study. J Gerontol B Psychol Sci Soc Sci. 2020;75(1):107–13.
44. Covinsky KE, et al. Functional status and depressive symptoms in older adults. J Am Geriatr Soc. 2003;51(8):1102–8.
45. Park M, Unützer J. Geriatric depression in primary care. Psychiatr Clin North Am. 2011;34(2):469–87.
46. Stuck AE, et al. Risk factors for functional status decline in community-living elderly people: a systematic literature review. Soc Sci Med. 1999;48(4):445–69.
47. Fried LP, et al. Frailty in older adults: evidence for a phenotype. J Gerontol A Biol Sci Med Sci. 2001;56(3):M146–56.
48. Ryff CD, Keyes CL. The structure of psychological well-being revisited. J Pers Soc Psychol. 1995;69(4):719–27.
49. Steptoe A, et al. Psychological well-being, health, and aging. Lancet. 2015;385(9968):640–8.
50. Keyes CL. The mental health continuum: from languishing to flourishing in life. J Health Soc Behav. 2002;43(2):207–22.
51. Fredrickson BL. The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. Am Psychol. 2001;56(3):218–26.
52. Huppert FA. Psychological well-being: evidence regarding its causes and consequences. Appl Psychol Health Well Being. 2009;1(2):137–64.
53. World Health Organization. Mental health of older adults. 2017.
54. Kahn RL, Rowe JW. Successful aging. Gerontologist. 1997;37(4):433–40.
55. Marmot M, et al. Social determinants of health inequalities. Lancet. 2005;365(9464):1099–104.
56. Al-Krenawi A, Graham JR. Mental health help-seeking among Arab university students in Israel, differentiated by religion. Ment Health Relig Cult. 2011;14(2):157–67.