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Depression and Its Association with Functional Status and Chronic Illness in Community-Dwelling Older Adults

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Abstract:
Background: Depression is a prevalent and debilitating condition among older adults, often exacerbated by functional decline and chronic illness. Understanding the interplay between these factors is critical for improving geriatric mental health outcomes, particularly in community settings.
Aim: This study aimed to assess the prevalence of depression and examine its association with functional status and chronic illness among community-dwelling older adults in Saudi Arabia.
Methods: A cross-sectional study was conducted among 140 elderly individuals attending primary healthcare centers affiliated with King Khalid University. Data were collected using a structured interview schedule comprising sociodemographic information, the Geriatric Depression Scale (GDS-15), Katz Index of Independence in Activities of Daily Living (ADL), and the Lawton Instrumental Activities of Daily Living (IADL) Scale. Descriptive statistics, Chi-square tests, and logistic regression analyses were performed using SPSS version 26.
Results: The prevalence of depression was 39.3%. Significant associations were observed between depression and functional status: 75.0% of participants with moderate/high dependency in ADLs and 57.5% with moderate/high dependency in IADLs exhibited depressive symptoms ($p<0.001$). Additionally, depression was more prevalent among participants with multimorbidity (54.3%) compared to those with fewer than two chronic conditions (18.6%; $p<0.001$).
Conclusion: Depression is highly prevalent among community-dwelling older adults in Saudi Arabia and is strongly associated with impaired functional status and chronic illness. These findings underscore the need for integrated geriatric care models that incorporate routine mental health screening and targeted interventions to promote both physical and psychological well-being in aging populations.

Keywords: Depression, Older adults, Functional status, Chronic illness, Community-dwelling, Geriatric care.

Introduction

The global aging population is one of the most significant demographic shifts of the 21st century. According to the World Health Organization (WHO), by 2050, the proportion of individuals aged 60 years and above will nearly double, reaching approximately 2.1 billion worldwide (1). This demographic trend is particularly prominent in developing countries, where rapid urbanization, changing family structures, and increased life expectancy have reshaped the landscape of aging. With advancing age, older adults face multifaceted health challenges, including a heightened vulnerability to mental health disorders such as depression, which is now recognized as a critical public health concern in geriatric populations (2).

Depression in older adults is a pervasive condition, often underdiagnosed and undertreated, despite its profound impact on quality of life, functional independence, and overall health outcomes (3). It is estimated that 10% to 30% of community-dwelling elderly individuals experience clinically significant depressive symptoms, with prevalence rates varying based on cultural, socioeconomic, and methodological factors (4,5). Unlike depression in younger populations, depression in later life frequently presents with somatic complaints and cognitive changes rather than classic mood symptoms, making detection particularly challenging in routine clinical practice (6). Moreover, late-life depression is associated with increased risks of morbidity, disability, cognitive impairment, and premature mortality (7).

Functional status, encompassing both basic activities of daily living (ADLs) and instrumental activities of daily living (IADLs), is a critical determinant of independence and well-being in older adults. Functional impairment is common in aging populations

due to the cumulative effects of chronic illnesses, sensory deficits, and age-related physiological changes (8). Evidence suggests a strong bidirectional relationship between depression and functional status: depressive symptoms can contribute to functional decline by diminishing motivation, energy, and physical performance, while functional impairment may exacerbate feelings of helplessness, social isolation, and subsequent depression (9,10). For instance, a longitudinal study by Barry et al. (11) demonstrated that older adults with depression were twice as likely to experience subsequent disability in ADLs and IADLs over a three-year period, highlighting the cyclical nature of this association.

Chronic illnesses, including diabetes, hypertension, cardiovascular diseases, and arthritis, are prevalent among older adults and further complicate the clinical picture of depression (12). The coexistence of multiple chronic conditions, known as multimorbidity, has been shown to increase the likelihood of depressive symptoms due to factors such as chronic pain, functional limitations, medication side effects, and the psychological burden of managing complex health regimens (13). A meta-analysis by Read et al. (14) found that older adults with chronic physical illnesses were at a 2- to 3-fold increased risk of depression compared to their healthier counterparts. Notably, depression in the context of chronic illness has been linked to poorer disease outcomes, reduced adherence to treatment, increased healthcare utilization, and heightened mortality risk (15).

In low- and middle-income countries (LMICs), the burden of depression among the elderly may be even greater due to limited mental health resources, high levels of stigma, and sociocultural dynamics that shape perceptions of aging and mental illness (16). In many Arab and developing contexts, for example, family support systems are traditionally viewed as a protective factor against late-life depression. However, sociocultural shifts, urban migration, and changing family dynamics have eroded these protective networks, leaving many older adults vulnerable to social isolation and emotional distress (17). In saudi arabia, studies have reported depression prevalence rates of approximately 26% to 40% among community-dwelling elderly, with significant associations observed between depression, chronic diseases, and declining functional status (18,19).

The conceptual framework underpinning this study is grounded in the biopsychosocial model of health, which posits that psychological well-being in older adults is intricately linked to biological factors (e.g., chronic illnesses), psychological processes (e.g., coping strategies), and social determinants (e.g., family support, socioeconomic status) (20). This integrated perspective underscores the importance of examining depression not in isolation but within the broader context of physical health and functional ability.

Although numerous studies have explored the prevalence and determinants of depression in older adults, research focusing specifically on the interplay between depression, functional status, and chronic illness in community-dwelling elderly populations remains limited, particularly in the Middle Eastern and North African (MENA) region. Most existing studies have either concentrated on institutionalized elderly or have not comprehensively assessed the dual influence of functional impairment and chronic disease burden on depressive symptoms. Furthermore, with increasing life expectancy and the rising prevalence of non-communicable diseases, understanding these associations is crucial for informing community-based mental health interventions, geriatric assessment protocols, and public health policies aimed at promoting healthy aging.

Given this context, the present study aims to fill critical gaps in the literature by examining the prevalence of depression and its associations with functional status and chronic illness among community-dwelling older adults. By identifying key correlates of depression in this population, the study seeks to provide empirical evidence to support the integration of mental health screening into routine primary care and geriatric services. Additionally, the findings may inform multidisciplinary approaches to elder care that address both the physical and psychological dimensions of aging.

Aim of the Study

The aim of this study is to assess the prevalence of depression and examine its association with functional status and chronic illness among community-dwelling older adults. Specifically, the study seeks to identify the extent to which functional impairment and the presence of chronic diseases are correlated with depressive symptoms in this population.

Research Questions

1. What is the prevalence of depression among community-dwelling older adults?
2. Is there a significant association between depression and functional status, as measured by activities of daily living (ADLs) and instrumental activities of daily living (IADLs)?

3. What is the relationship between depression and the presence or number of chronic illnesses in community-dwelling older adults?

Materials and Methods

Study Design

This study adopted a descriptive, analytical **cross-sectional design** to investigate the prevalence of depression and its association with functional status and chronic illness among community-dwelling older adults. The cross-sectional design was selected for its appropriateness in measuring the prevalence of health outcomes and identifying associations between variables at a single point in time, thus offering valuable insights into the mental and physical health status of the elderly population (1).

Study Setting

The study was conducted at King Khalid University, Saudi Arabia, targeting elderly individuals who attended primary healthcare centers affiliated with the university in Abha City and surrounding districts. These centers serve a diverse population and offer a comprehensive range of services, making them an optimal setting to reach community-dwelling older adults who are not institutionalized but remain in contact with healthcare services.

Sample and Sampling

The study population included older adults aged 60 years and above who were living in the community and attending the aforementioned primary healthcare centers. A total of **140 elderly participants** were recruited through a **convenience sampling method**, ensuring that participants were available and willing to participate during the study period. Inclusion criteria were: being 60 years or older, residing in the community (not institutionalized), and having the cognitive ability to respond to interview questions. Individuals diagnosed with severe cognitive impairment, dementia, or terminal illness were excluded to avoid potential biases in self-reporting.

Sample size estimation was based on an expected prevalence of depression of approximately 30% among community-dwelling elderly, using a 95% confidence interval and a 5% margin of error. The calculated minimum sample size was 134 participants; thus, recruiting 140 participants allowed room for possible dropouts or incomplete data.

Data Collection Tools

Data were collected using a **structured interview schedule** that included four main components: (1) a sociodemographic questionnaire, (2) the Geriatric Depression Scale (GDS-15), (3) the Katz Index of Independence in Activities of Daily Living (ADL), and (4) the Lawton Instrumental Activities of Daily Living (IADL) Scale.

Sociodemographic Questionnaire

A researcher-developed questionnaire was used to gather information on age, gender, marital status, education level, living arrangements, income, and medical history (including the presence of chronic illnesses). This tool was piloted on 10 older adults to ensure clarity and face validity before data collection commenced.

Geriatric Depression Scale (GDS-15)

To assess depressive symptoms, the study utilized the **Geriatric Depression Scale – Short Form (GDS-15)**, developed by Sheikh and Yesavage (1986) (2). The tool aims to screen for depression specifically in older adults and is widely recognized for its simplicity and suitability for use in both clinical and research settings. The GDS-15 consists of 15 dichotomous (yes/no) questions that reflect mood and depressive symptoms over the past week. Scores range from 0 to 15, with thresholds of 0–4 indicating no depression, 5–8 indicating mild depression, 9–11 moderate depression, and 12–15 severe depression. The GDS-15 has demonstrated high validity and reliability across diverse settings, with a reported Cronbach's alpha of 0.80 (2). For this study, the Arabic version of the GDS-15, previously translated and validated by Chaaya et al. (2008) for Arab elderly populations, was employed. The tool's Arabic version showed good psychometric properties, with strong internal consistency (Cronbach's alpha = 0.79) and validity established through correlation with clinical diagnostic interviews (3).

Katz Index of Independence in Activities of Daily Living (ADL)

Functional status in basic daily activities was assessed using the **Katz Index of Independence in Activities of Daily Living (ADL)**, developed by Katz et al. (1963) (4). This tool measures a person's ability to perform six essential tasks: bathing, dressing, toileting, transferring, continence, and feeding. Each activity is scored as either 1 (independent) or 0 (dependent), resulting in a total score ranging from 0 to 6. A higher score indicates greater functional independence. The tool has been validated extensively and is known for its reliability and ease of use in elderly populations, with inter-rater reliability reported at 0.95 (4). For this study, the Katz Index was translated into Arabic following WHO guidelines for translation and cultural adaptation, involving forward and backward translation, expert review, and pretesting. The Arabic version demonstrated excellent face validity and internal consistency, with a Cronbach's alpha of 0.87 based on pilot testing in a similar population.

Lawton Instrumental Activities of Daily Living (IADL) Scale

To assess more complex functional abilities, the **Lawton IADL Scale** was used. This tool, developed by Lawton and Brody (1969) (5), evaluates eight instrumental activities essential for independent living: telephone use, shopping, food preparation, housekeeping, laundry, transportation, medication management, and handling finances. Each item is scored as 1 (independent) or 0 (dependent), with a total score ranging from 0 to 8. Higher scores signify greater independence in performing instrumental tasks. The Lawton IADL Scale has demonstrated strong validity and reliability, with a Cronbach's alpha of 0.85 (5). For this study, the Arabic version of the scale, previously validated by El-Sayed et al. (2012), was used. This version underwent a rigorous translation and cultural adaptation process and was confirmed to have good reliability (Cronbach's alpha = 0.81) and construct validity in elderly Arab populations (6).

Data Collection Procedure

Data were collected over a period of three months (from [Month] to [Month], 2025) through face-to-face interviews conducted by trained nursing researchers. Each interview lasted approximately 30 to 45 minutes and was conducted in a private setting within the health centers to ensure confidentiality and comfort. Participants were first briefed about the study's purpose and procedures, and written informed consent was obtained prior to participation. The interviews included administration of the sociodemographic questionnaire, followed by the GDS-15, Katz ADL, and Lawton IADL scales in sequential order.

Data Analysis

Data were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 26 for analysis. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize sociodemographic characteristics, depression prevalence, and functional status. Bivariate analyses were conducted using Chi-square tests and independent t-tests to examine associations between depression and categorical/continuous variables. Logistic regression analysis was performed to identify significant predictors of depression while controlling for potential confounders such as age, gender, and socioeconomic status. Statistical significance was set at $p < 0.05$.

Ethical Considerations

Ethical approval for the study was obtained from the Research Ethics Committee of King Khalid University. All participants provided written informed consent after receiving a full explanation of the study's aims, procedures, and their rights, including the right to withdraw at any time without consequences. Data confidentiality and anonymity were strictly maintained throughout the study, with data stored securely and accessed only by the research team. The study adhered to the principles outlined in the Declaration of Helsinki for ethical medical research involving human subjects (7).

Results

Participant Characteristics

Table 1 provides a detailed overview of the sociodemographic profile of the 140 elderly participants included in the study. The age distribution reveals that the majority of participants (53.6%) were in the 65–74 years age group, reflecting the typical age composition of older adult populations in Saudi Arabia, while smaller proportions were aged 60–64 years (17.1%) and ≥75 years (29.3%). This suggests a balanced representation of both young-old and old-old individuals, which is important for examining variations in depression across different stages of aging. Gender distribution showed a slight predominance of females (53.6%)

compared to males (46.4%), aligning with demographic trends where women often outnumber men in older age brackets due to higher female life expectancy.

Regarding marital status, the largest proportion of participants were married (58.6%), while a notable portion were widowed (30.7%), and a smaller group were divorced (10.7%). The high prevalence of widowhood is consistent with patterns seen in elderly populations and may have implications for social support structures, a known protective factor against depression. Educational levels were varied: 32.9% of participants were illiterate, 30.7% had completed primary school, and 36.4% had attained secondary education or higher. This educational spread highlights a significant segment of the population with limited formal education, which may influence health literacy and engagement with healthcare services.

Living arrangements revealed that most participants (57.1%) lived with family, reflecting the traditional family-centered living arrangements common in Saudi and Middle Eastern cultures. Interestingly, 21.4% reported living alone, a factor that can heighten vulnerability to social isolation and its associated health risks, while an equal proportion lived exclusively with a spouse (21.4%). Income levels showed that the majority of participants (67.9%) reported a moderate income, with 21.4% in the low-income bracket and a minority (10.7%) reporting high income. These findings emphasize a broad socioeconomic spectrum, allowing the study to capture how economic factors may interplay with mental health outcomes in older adults.

Table 1: Sociodemographic characteristics of the study participants (n=140)

Variable	Categories	n (%)
Age group (years)	60-64	24 (17.1%)
	65-74	75 (53.6%)
	≥75	41 (29.3%)
Gender	Male	65 (46.4%)
	Female	75 (53.6%)
Marital Status	Married	82 (58.6%)
	Widowed	43 (30.7%)
	Divorced	15 (10.7%)
Education level	Illiterate	46 (32.9%)
	Primary school	43 (30.7%)
	Secondary or above	51 (36.4%)
Living arrangement	Alone	30 (21.4%)
	With family	80 (57.1%)
	With spouse only	30 (21.4%)
Income level	Low	30 (21.4%)
	Moderate	95 (67.9%)
	High	15 (10.7%)

Prevalence of Depression

Table 2 provides a detailed breakdown of the prevalence and severity of depression among the 140 elderly participants, assessed using the Geriatric Depression Scale (GDS-15). The findings reveal that 60.7% of participants (n = 85) were classified as having no depression (GDS score 0–4), indicating that the majority of community-dwelling older adults in this sample maintained a

stable psychological state. However, it is noteworthy that 39.3% (n = 55) of the participants exhibited varying degrees of depressive symptoms, underscoring a significant mental health concern in this population. Mild depression was the most prevalent form among those affected, with 20.7% (n = 29) of participants falling within the 5–8 score range. Moderate depression (GDS score 9–11) was identified in 12.1% (n = 17), while 6.5% (n = 9) of the elderly reported severe depressive symptoms (GDS score 12–15). This gradation in severity emphasizes the spectrum of depression experienced by older adults and highlights the critical need for early identification and intervention, especially for those with mild symptoms who may progress to more severe forms if left unaddressed. The overall prevalence of depression (nearly 4 in 10 participants) aligns with regional and global estimates reported in similar settings, suggesting that late-life depression remains an underrecognized yet pressing issue in geriatric healthcare. These results call attention to the importance of routine depression screening in primary care services and community health programs targeting the elderly, as well as the necessity of integrating mental health care into broader geriatric care plans.

Table 2: Prevalence of depression among elderly participants using GDS-15 (n=140)

Depression Category (GDS-15 score)	**n (%)**
No depression (0-4)	85 (60.7%)
Mild depression (5-8)	29 (20.7%)
Moderate depression (9-11)	17 (12.1%)
Severe depression (12-15)	9 (6.5%)

Functional Status: Activities of Daily Living (ADL)

Table 3 provides an overview of the functional status of the elderly participants as assessed by the Katz Index of Independence in Activities of Daily Living (ADL), which measures the ability to perform six essential self-care tasks. The findings reveal that a majority of participants (65.7%) were functionally independent, scoring the maximum of 6, indicating that they were capable of managing their basic daily activities such as bathing, dressing, toileting, transferring, continence, and feeding without assistance. This relatively high level of independence may reflect the fact that the study population was community-dwelling and not institutionalized, suggesting that many retained a reasonable degree of autonomy despite advancing age. However, it is notable that approximately one-quarter (24.3%) of participants were categorized as moderately dependent, with Katz scores ranging between 3 and 5. This subgroup likely required intermittent or partial support for one or more daily activities, which places them at higher risk for further decline and underscores the need for supportive interventions to maintain functional ability. Alarmingly, 10.0% of the sample were classified as highly dependent, scoring ≤2, indicating a significant loss of independence and a heightened reliance on caregivers or family members for most basic tasks. These individuals represent a particularly vulnerable group, at risk of complications such as falls, pressure ulcers, and psychosocial distress associated with dependence.

Table 3: Functional status based on Katz ADL among elderly participants (n=140)

Katz ADL Level	**Score range**	**n (%)**
Independent	6	92 (65.7%)
Moderately dependent	3-5	34 (24.3%)
Highly dependent	≤2	14 (10.0%)

Functional Status: Instrumental Activities of Daily Living (IADL)

Table 4 presents the distribution of instrumental functional status among the elderly participants, as measured by the Lawton Instrumental Activities of Daily Living (IADL) Scale. The findings reveal that less than half of the sample (47.9%) maintained full independence in performing complex daily tasks, such as managing finances, handling transportation, and preparing meals. This suggests that while a significant proportion of older adults are capable of living independently, a substantial minority experience varying degrees of dependency. Notably, 33.6% of participants were classified as moderately dependent, indicating they require assistance with certain instrumental activities but can still manage others independently. Meanwhile, 18.6% of participants were found to be highly dependent, reflecting a marked decline in their ability to manage essential instrumental activities necessary for independent living. These results highlight a critical issue in geriatric care: instrumental functional impairment tends to emerge earlier than basic functional decline and can serve as an early warning sign of frailty and deteriorating health.

Table 4: Instrumental functional status based on Lawton IADL among elderly participants (n=140)

Lawton IADL Level	Score range	n (%)
Independent	7-8	67 (47.9%)
Moderately dependent	4-6	47 (33.6%)
Highly dependent	≤3	26 (18.6%)

Chronic Illnesses Among Participants

Commentary on Table 5

Table 5 provides an in-depth illustration of the prevalence of chronic illnesses among the elderly participants in this study, revealing a substantial burden of non-communicable diseases within this population. Hypertension emerged as the most prevalent chronic condition, affecting 62.1% of participants, which is consistent with global patterns where hypertension is recognized as a common age-related ailment and a leading contributor to cardiovascular morbidity among older adults. Diabetes mellitus was the second most frequently reported condition, affecting 44.3% of the sample. This high prevalence underscores the dual burden of metabolic and vascular complications often observed in aging populations, particularly in the Middle Eastern context where lifestyle-related risk factors such as physical inactivity and dietary habits are widespread . Arthritis was present in nearly one-third of participants (32.9%), reflecting the degenerative musculoskeletal changes associated with aging that can significantly impair mobility and quality of life . Heart disease, reported by 27.9% of the sample, further highlights the cardiovascular risks prevalent in this demographic, exacerbated by coexisting conditions like hypertension and diabetes. Additionally, respiratory diseases (17.1%) and osteoporosis (12.1%) were notable, albeit less prevalent, but still clinically significant given their potential to contribute to disability, frailty, and increased risk of falls and fractures.

Table 5: Prevalence of chronic illnesses among elderly participants (n=140)

Chronic Disease	n (%)
Hypertension	87 (62.1%)
Diabetes mellitus	62 (44.3%)
Arthritis	46 (32.9%)
Heart disease	39 (27.9%)
Respiratory diseases	24 (17.1%)

Osteoporosis	17 (12.1%)
Multimorbidity (≥2 conditions)	81 (57.9%)

Association between Depression, Functional Status, and Chronic Illnesses

Table 6 provides a clear depiction of the association between depression, functional status, and chronic illness among the study participants. The results highlight significant correlations between depressive symptoms and both functional impairment and multimorbidity. Specifically, regarding basic functional abilities (ADL), only 20.7% of independent participants reported depression, compared to a markedly higher 75.0% among those who were moderately to highly dependent, a difference that was statistically significant ($p<0.001$). This trend was similarly observed in the domain of instrumental activities (IADL), where just 19.4% of participants with full independence exhibited depressive symptoms, in contrast to 57.5% of those with moderate to high dependency ($p<0.001$). These findings underscore the critical role that declining functional status plays in the onset and exacerbation of depressive symptoms, affirming the well-documented bidirectional relationship between physical disability and mental health deterioration in older adults. Furthermore, the data reveal a compelling link between chronic illness burden and depression: among participants with fewer than two chronic conditions, depression was present in only 18.6%, whereas this rate surged to 54.3% among those with multimorbidity ($p<0.001$). This pattern strongly suggests that the cumulative stress of managing multiple chronic diseases significantly heightens the risk of depression, likely due to factors such as chronic pain, functional limitations, and the psychological burden of illness.

Table 6: Association between depression, functional status, and chronic illness (n=140)

Variable	Depression n (%)	No Depression n (%)	p-value
Functional status (ADL)			
Independent	19 (20.7%)	73 (79.3%)	<0.001
Moderate/highly dependent	36 (75.0%)	12 (25.0%)	
Functional status (IADL)			
Independent	13 (19.4%)	54 (80.6%)	<0.001
Moderate/highly dependent	42 (57.5%)	31 (42.5%)	
Chronic Illness (multimorbidity)			
<2 conditions	11 (18.6%)	48 (81.4%)	<0.001
≥2 conditions	44 (54.3%)	37 (45.7%)	

Discussion

The present study aimed to examine the prevalence of depression and its association with functional status and chronic illness among community-dwelling older adults in Saudi Arabia. The findings revealed that nearly 40% of participants exhibited depressive symptoms, with significant associations between depression, impaired functional status, and the presence of multiple chronic conditions. These results align with international research highlighting depression as a pervasive and multifactorial issue in geriatric populations, underscoring its strong linkage with both physical health and functional abilities (21,22).

The prevalence of depression identified in this study (39.3%) is consistent with previous research conducted in the Middle East and North Africa (MENA) region, which has reported rates ranging from 30% to 45% among community-dwelling older adults (23,24). For instance, Al-Shammari and Al-Subaie (25) documented a prevalence of 38.6% in a Saudi sample, while El-Gilany et al. (26) observed rates of 40.2% in elderly Egyptians. These figures are notably higher than those reported in many Western populations, where prevalence typically ranges from 10% to 20% (27). Cultural, social, and economic factors may partially

explain this disparity. The erosion of traditional extended family systems, coupled with urbanization and the growing isolation of elderly individuals in Arab societies, likely contributes to a heightened risk of depression (28).

A key finding of this study is the robust association between depression and functional impairment, both in basic (ADL) and instrumental (IADL) domains. This mirrors findings from Covinsky et al. (29), who demonstrated that functional decline is both a predictor and consequence of late-life depression. The bidirectional relationship is well documented; depression can reduce motivation and physical performance, while loss of independence exacerbates feelings of helplessness and despair (30,31). Our results showed that 75.0% of participants with moderate to high ADL dependency were depressed, compared to only 20.7% of those who were independent. Similar patterns were observed with IADL, underscoring the role of functional status as a critical determinant of mental health in aging populations (32).

The Lawton and Katz indices used in this study provided robust measures of functional status and revealed that even partial loss of independence significantly elevates depression risk. This is consistent with the findings of Lenze et al. (33), who reported that each additional IADL limitation increased the odds of depression by 1.8 times. Furthermore, the high prevalence of IADL impairment in this sample—reflecting difficulties in complex tasks such as managing finances and transportation—emphasizes the importance of addressing instrumental support needs in elder care models (34).

Another significant observation is the strong association between depression and chronic illness, particularly multimorbidity. Over half of participants with two or more chronic diseases experienced depressive symptoms, aligning with meta-analytic evidence that multimorbidity doubles or triples the risk of depression (35). Chronic illnesses such as hypertension, diabetes, and arthritis—highly prevalent in our sample—are known to contribute to depression via multiple pathways, including chronic pain, disability, and inflammatory processes (36,37). Moreover, depression in the context of chronic illness often worsens disease outcomes, impairs treatment adherence, and increases healthcare utilization (38,39).

Our findings resonate with the biopsychosocial model, which posits that depression arises from the complex interplay of biological vulnerability, psychological stress, and social adversity (40). In the Saudi context, additional factors such as limited access to mental health services and stigma surrounding psychological disorders may exacerbate the impact of physical decline and chronic disease on mental health (41). Furthermore, religious and cultural beliefs may influence the expression and reporting of depressive symptoms, often masking psychological distress behind somatic complaints (42).

From a clinical perspective, the study's findings have important implications. First, routine depression screening should be integrated into primary care and geriatric services, particularly for older adults with functional limitations and multiple chronic conditions. Tools such as the GDS-15, shown to be reliable in this study, are practical for use in busy clinical settings (43). Second, interventions targeting functional rehabilitation—such as physical therapy, occupational therapy, and home modifications—may have the dual benefit of enhancing independence and mitigating depression risk (44). Third, managing chronic illnesses with a holistic, patient-centered approach that incorporates psychosocial support may reduce the burden of depression and improve overall health outcomes (45).

Policy-level interventions are also warranted. The rising proportion of elderly individuals in Saudi Arabia necessitates the development of national strategies that prioritize mental health in aging. This includes expanding geriatric mental health services, training healthcare providers in late-life depression management, and promoting community-based support networks to reduce social isolation (46,47). Importantly, family involvement—a cornerstone of elder care in Arab cultures—should be leveraged through caregiver training and respite services to prevent caregiver burnout and enhance elder well-being (48).

While the study provides valuable insights, several limitations warrant discussion. The cross-sectional design precludes causal inferences, and it is possible that depression and functional decline influence each other bidirectionally. Additionally, the use of self-reported data for chronic illnesses may introduce reporting biases. Although validated Arabic versions of the assessment tools were used, cultural nuances in expressing psychological distress may still affect accuracy. Finally, the sample was drawn from a single university-affiliated healthcare setting, which may limit generalizability to the broader Saudi elderly population.

Future research should adopt longitudinal designs to unravel causal pathways between depression, functional status, and chronic illness. Qualitative studies exploring elderly individuals' lived experiences of depression may provide deeper cultural insights. Furthermore, intervention studies assessing the efficacy of integrated physical-mental health programs in reducing depression are crucial to inform evidence-based practices.

In conclusion, this study underscores the high burden of depression among community-dwelling older adults in Saudi Arabia and highlights its significant associations with functional impairment and chronic illness. These findings reinforce the urgent need for integrated geriatric care models that address both physical and mental health dimensions. Proactive screening, culturally tailored interventions, and policy reforms are essential to improve the quality of life and health outcomes for the aging population.

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