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Prevalence of Depression, Its Determinants, and Association with Life Satisfaction Among Elderly Residents of an Assisted Living Facility in Addis Ababa, Ethiopia: A Cross-Sectional Study

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ABSTRACT

Background: Depression poses a significant public health challenge for institutionalized elderly populations in low-resource settings. In Ethiopia, care homes frequently lack integrated mental health services, and the burden of depression remains inadequately characterized. This study aimed to determine the prevalence of depression, identify its determinants, and examine its association with life satisfaction among elderly residents of an assisted living facility in Addis Ababa, Ethiopia.

Methods: An institution-based cross-sectional study was conducted from June to September 2025 among 197 elderly residents (aged ≥ 60 years) selected via systematic random sampling at Mekedonia Humanitarian Association (Ayat Branch). Depression and life satisfaction were assessed using the validated 15-item Geriatric Depression Scale (GDS-15) and Satisfaction with Life Scale (SWLS), respectively. Data were analyzed using SPSS version 24. Bivariate and multivariate logistic regression analyses identified factors associated with depression (GDS score ≥ 5). One-way ANOVA examined differences in life satisfaction by depression status.

Results: The prevalence of clinically significant depression was 56.9% (n=112; 95% CI: 49.8%-63.7%). Multivariate analysis identified three independent predictors: Chronic illness (AOR=3.85; 95% CI: 1.98-7.49; p<0.001), Mobility Limitation (AOR=2.34; 95% CI: 1.26-4.35; p=0.007), and Lack of Social Support (AOR=2.12; 95% CI: 1.13-3.98; p=0.020). A strong negative correlation was found between depression scores and life satisfaction (r=-0.68; p<0.001). Depressed residents had significantly lower mean SWLS scores (15.4±5.8) compared to non-depressed residents (23.1±6.4; F=126.7; p<0.001). Over half of residents (56.3%) reported being dissatisfied with their lives.

Conclusions: Depression is highly prevalent and strongly associated with low life satisfaction among institutionalized elderly in Ethiopia. The condition is driven by a triad of Chronic Illness, Mobility Impairment, and Social Isolation. These findings underscore the urgent need for integrated care models combining routine mental health screening, Chronic disease management, Mobility support, and structured psycho-social programs in assisted living facilities.

Keywords: Depression, Elderly, Assisted Living Facility, Life Satisfaction, Geriatric Depression Scale

BACKGROUND

The global population of older adults (aged ≥ 60 years) is expanding rapidly, with projections indicating that by 2050, approximately 2.1 billion individuals will be aged 60 years or older, with nearly 80% residing in low and middle-income countries [1, 2]. This demographic transition presents substantial challenges to healthcare systems worldwide, particularly regarding mental health service provision for vulnerable populations.

Depression represents a major public health concern among the elderly; characterized by persistent sadness, diminished interest in activities, fatigue, sleep disturbances, and feelings of worthlessness [3]. The World Health Organization estimates that over 7% of older adults experience depressive disorders, with prevalence rates considerably higher among institutionalized populations [1]. Untreated depression in the elderly can precipitate poor chronic disease management, cognitive decline, decreased physical functioning, and elevated suicide risk [4].

Within assisted living facilities (ALFs), depression prevalence is particularly elevated due to multiple contributing factors, including loss of independence, social isolation, and exposure to adverse

experiences [5]. Depression in older adults often presents atypically with somatic manifestations rather than overt sadness, contributing to substantial under diagnosis and inadequate treatment [6].

In Ethiopia, previous studies have reported depression prevalence exceeding 40% among both community-dwelling and institutionalized elderly populations [7-9]. Research conducted in Bahir Dar identified depressive symptoms affecting 57% of elderly participants [8], while investigations in Addis Ababa care homes have documented rates exceeding 60% [10].

Established risk factors include chronic diseases, mobility impairment, reduced autonomy, and inadequate social support [11-13]. Cultural stigma and systemic barriers, including resource limitations and insufficient caregiver training, further impede effective mental health service delivery [14, 15]. Despite these findings, limited research has specifically examined the relationship between depression and life satisfaction within Ethiopian institutional settings. Life satisfaction, representing the cognitive component of subjective well-being, encompasses an individual's conscious evaluation of their quality of life [16]. Understanding this association is crucial for developing holistic interventions that address both symptom reduction and quality of life enhancement.

Mekedonia Humanitarian Association (MHA) in Addis Ababa provides shelter and basic services to approximately 400- 450 elderly residents, many of whom have been abandoned by family members or originate from circumstances of extreme poverty. This population confronts multiple stressors simultaneously including: physical decline, institutionalization, and disruption of familiar social structures. However, the precise magnitude of depression and its relationship with life satisfaction within this facility remains inadequately characterized.

This study aimed to: (1) determine the prevalence of clinically significant depressive symptoms among elderly residents of MHA, (2) identify factors independently associated with depression, and (3) examine the relationship between depression severity and life satisfaction levels.

METHODS

Study Design, Setting, and Period

An institution-based cross-sectional study was conducted from June to September 2025 at Makedonia Humanitarian Association (Ayat Condominium Branch) in Addis Ababa, Ethiopia. MHA is an indigenous non-governmental, non-profit organization established in 2010 that provides shelter, clothing, food, and basic services to elderly individuals, people with disabilities, and homeless adults. The facility houses approximately 400-450 residents, primarily aged ≥ 60 years.

Study Population

The source population comprised all elderly individuals (aged ≥ 60 years) residing at MHA. The study population included elderly residents who met the following inclusion criteria: age ≥ 60 years, residence in the facility for at least three months, willingness to participate, and adequate mental capacity to comprehend and respond to interview questions.

Exclusion criteria encompassed: diagnosed mental illness or current follow-up for mental disorders, severe hearing or speech impairment, critical illness or extreme frailty, severe cognitive impairment or dementia, and refusal to provide informed consent.

Sample Size and Sampling Technique

Sample size was calculated using the single population proportion formula with finite population correction, assuming 50% prevalence (conservative estimate), 95% confidence level, and 5% margin of error:

$$n_0 = Z^2 \times p \times (1-p) / d^2 = (1.96)^2 \times 0.5 \times 0.5 / (0.05)^2 = 384$$

With finite population correction (N=400):

$$n = n_0 / [1 + (n_0 - 1)/N] = 197$$

A 5% contingency was incorporated for potential non-response. Systematic random sampling was employed, with the first respondent selected using a random number generator and subsequent participants selected at regular sampling intervals.

Data Collection Tools and Procedures

Data were collected using a semi-structured questionnaire comprising four sections:

Section A: Socio-demographic and health characteristics – age, gender, education level, marital status, length of facility stay, chronic illness presence, mobility status, smoking, and khat use.

Section B: Geriatric Depression Scale (GDS-15) – a 15-item screening instrument validated for use in Ethiopian elderly populations [17]. Scores of 0-4 indicate no depression, 5-10 indicate mild to moderate depression, and 11-15 indicate severe depression. The primary outcome, clinically significant depression, was defined as GDS-15 score ≥ 5 . The GDS-15 was originally developed by Sheikh and Yesavage [36].

Section C: Satisfaction with Life Scale (SWLS) – a 5-item scale measuring global life satisfaction [16]. Each item is rated from 1 (strongly disagree) to 7 (strongly agree). Scores range from 5-35, with higher scores indicating greater life satisfaction. The SWLS was developed by Diener et al. [37].

Section D: Social factors – Family visitation frequency, Engagement in activities, Challenges encountered, Experiences of mistreatment, and Availability of someone with whom to share thoughts.

The questionnaire was initially prepared in English, translated into Amharic, and subsequently back-translated to ensure accuracy and cultural appropriateness. Data were collected through face-to-face interviews using tablet-based Google Forms administered by trained data collectors.

The instrument was pre-tested on 5% of the sample to assess clarity, comprehensibility, and appropriateness.

The full English version of the questionnaire, including the GDS-15 and SWLS, is provided as a Supplementary File.

Operational Definitions

Depression: GDS-15 score ≥ 5 . Severity classification: 0-4 (no depression), 5-10 (mild to moderate), 11-15 (severe).

Life Satisfaction: SWLS score categories: 5-9 (extremely dissatisfied), 10-14 (dissatisfied), 15-19 (slightly dissatisfied), 20 (neutral), 21-25 (slightly satisfied), 26-30 (satisfied), 31-35 (extremely satisfied).

Social Support: Perceived availability of emotional, informational, or tangible support from family members, friends, or facility staff.

Mobility Limitation: Self-reported need for assistance with ambulation or complete dependence on others for mobility.

Chronic Illness: Presence of one or more self-reported chronic medical conditions (e.g., hypertension, diabetes mellitus, arthritis).

Data Quality Control

Data collectors received standardized training on interview techniques and ethical conduct. The questionnaire was pre-tested, and necessary amendments were implemented prior to full-scale data collection. The principal investigator reviewed completed questionnaires daily for accuracy, completeness, and consistency. Double data entry was performed for 10% of questionnaires to verify accuracy.

Data Analysis

Data were analyzed using SPSS version 24. Descriptive statistics (frequencies, percentages, means, standard deviations) were computed for all variables. Prevalence of depression was calculated with 95% confidence intervals using the Wilson score method.

Bivariate analysis using chi-square tests examined associations between independent variables and depression. Variables with $p < 0.25$ in bivariate analysis were entered into multivariate logistic regression to identify independent predictors of depression. Adjusted odds ratios (AOR) with 95% confidence intervals were calculated, and statistical significance was set at $p < 0.05$.

Model fit was assessed using the Hosmer-Lemeshow goodness-of-fit test, with $p > 0.05$ indicating adequate model calibration. Nagelkerke R^2 was calculated to estimate the proportion of variance explained by the model. Pearson correlation coefficient examined the relationship between GDS-15

and SWLS scores. One-way ANOVA compared mean SWLS scores across depression categories.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Board of Tikur Anbessa Specialized Hospital, Addis Ababa University. Permission was obtained from MHA administration. Written informed consent was obtained from all participants after thorough explanation of study objectives, procedures, and confidentiality protections. Participants were informed of their right to refuse or withdraw at any time without consequence. Privacy and confidentiality were maintained throughout by using unique participant identifiers rather than names.

RESULTS

Participant Characteristics

A total of 197 elderly residents participated in the study, yielding a 100% response rate. Table 1 presents the socio-demographic and health characteristics of participants. The majority were male (153, 77.7%). Mean age was 71.4 years ($SD \pm 8.2$), with most participants aged 60-69 years (85, 43.1%). Over half (106, 53.8%) had no formal education. The majority of participants (155, 78.7%) had been married at some point during their lives.

Regarding health status, 124 participants (62.9%) reported having one or more chronic illnesses, and 112 (56.9%) experienced mobility limitation (requiring assistance or being completely dependent for ambulation). Length of facility stay varied considerably, with 85 participants (43.2%) having resided at the facility for more than three years. Family visitation patterns revealed substantial social isolation: 90 participants (45.7%) reported never receiving family visits.

Table 1: Socio-demographic and Health Characteristics of Elderly Residents (N=197)

Characteristic	Category	Frequency	Percentage	95% CI
Age (years)	60-69	85	43.1%	36.3%-50.2%
	70-79	67	34.0%	27.6%-41.0%
	80-89	35	17.8%	12.9%-23.7%
	≥ 90	10	5.1%	2.6%-9.1%

Gender	Male	153	77.7%	71.3%-83.1%
	Female	44	22.3%	16.9%-28.7%
Education	No formal	106	53.8%	46.8%-60.7%
	Primary	54	27.4%	21.5%-34.1%
	Secondary	25	12.7%	8.6%-18.2%
	College/University	12	6.1%	3.3%-10.3%
Length of Stay	<6 months	25	12.7%	8.6%-18.2%
	6 months–1 year	31	15.7%	11.1%-21.6%
	1–3 years	56	28.4%	22.4%-35.1%
	>3 years	85	43.2%	36.3%-50.3%
Marital Status	Ever married	155	78.7%	72.4%-84.0%
	Never married	42	21.3%	16.0%-27.6%
Chronic Illness	Yes	124	62.9%	55.9%-69.5%
	No	73	37.1%	30.5%-44.1%
Mobility	Independent	85	43.1%	36.3%-50.2%
	Need help/Dependent	112	56.9%	49.8%-63.7%
Family Visits	Never	90	45.7%	38.8%-52.8%
	Yearly/Monthly/Weekly	107	54.3%	47.2%-61.2%

Prevalence of Depression

The prevalence of clinically significant depression (GDS-15 score ≥ 5) was 56.9% (n=112; 95% CI: 49.8%-63.7%). The mean GDS score was 6.2 (SD $\pm$ 3.1), indicating that the average participant scored above the clinical threshold for depression.

Among depressed participants, 78 (69.6%) exhibited mild to moderate depression (scores 5-10), while 34 (30.4%) demonstrated severe depression (scores 11-15).

Table 2: Prevalence of Depression Among Elderly Residents

Depression Status	Frequency	Percentage	95% CI
Depressed (GDS ≥ 5)	112	56.9%	49.8%-63.7%
Not Depressed (GDS < 5)	85	43.1%	36.3%-50.2%

Life Satisfaction Levels

Life satisfaction was generally low among participants, with a mean SWLS score of 18.7 (SD $\pm$ 7.2), placing the average resident in the "slightly dissatisfied" category. Only 20 participants (10.1%) reported being "satisfied" or "extremely satisfied" with their lives. The majority (111, 56.3%) scored within the dissatisfied range (scores < 20), indicating widespread discontent with current life circumstances.

Table 3: Life Satisfaction Levels Among Elderly Residents

SWLS Category	Score Range	Frequency	Percentage	95% CI
Extremely dissatisfied	5–9	28	14.2%	9.8%-19.9%
Dissatisfied	10–14	45	22.8%	17.4%-29.3%
Slightly dissatisfied	15–19	38	19.3%	14.2%-25.5%
Neutral	20	31	15.7%	11.1%-21.6%
Slightly satisfied	21–25	35	17.8%	12.9%-23.7%
Satisfied	26–30	15	7.6%	4.5%-12.2%
Extremely satisfied	31–35	5	2.5%	0.9%-5.8%

Factors Associated with Depression

Bi-variate Analysis

Bi-variate analysis revealed several factors significantly associated with depression at the $p < 0.05$ threshold (Table 4). Chronic illness demonstrated the strongest association with depression (OR=4.67; 95% CI: 2.58-8.45; $p < 0.001$). Mobility limitation (OR=2.93; 95% CI: 1.70-5.05; $p < 0.001$) and lack of Social support (OR=2.96; 95% CI: 1.68-5.22; $p < 0.001$) were also strongly associated. Additional significant factors included no formal education (OR=1.97; $p = 0.015$), absence of family visits (OR=2.21; $p = 0.007$), and reported abuse (OR=6.43; $p < 0.001$).

Factor	Category	Depressed (n=112)	Not Depressed (n=85)	COR (95% CI)	p-value
Chronic Illness	Yes	90 (72.6%)	34 (27.4%)	4.67(2.58-8.45)	<0.001
	No	22 (30.1%)	51 (69.9%)	1.00	
Mobility	Limited*	79 (70.5%)	33 (29.5%)	2.93(1.70-5.05)	<0.001
	Independent	33 (38.8%)	52 (61.2%)	1.00	
Social Support	No	81 (69.2%)	36 (30.8%)	2.96(1.68-5.22)	<0.001
	Yes	31 (38.8%)	49 (61.3%)	1.00	
Education	No formal	68 (64.2%)	38 (35.8%)	1.97 (1.14-3.41)	0.015
	Primary+	44 (48.4%)	47 (51.6%)	1.00	
Family Visits	Never	62 (68.9%)	28 (31.1%)	2.21(1.24-3.93)	0.007
	Any visits	50 (46.7%)	57 (53.3%)	1.00	
Abuse Reported	Yes	30 (88.2%)	4 (11.8%)	6.43(2.21-18.73)	<0.001
	No	82 (50.3%)	81 (49.7%)	1.00	

Table 4: Bi-variate Analysis of Factors Associated with Depression

*Limited mobility includes those needing some assistance or completely dependent

Multivariate Analysis

Following adjustment for potential confounders in multivariate logistic regression, three factors remained statistically significant independent predictors of depression (Table 5).

Chronic illness maintained the strongest association (AOR=3.85; 95% CI: 1.98-7.49; $p<0.001$). Mobility limitation persisted as a significant predictor (AOR=2.34; 95% CI: 1.26-4.35; $p=0.007$), and lack of social support remained an independent risk factor (AOR=2.12; 95% CI: 1.13-3.98; $p=0.020$). Education level (AOR=1.65; $p=0.110$), absence of family visits (AOR=1.58; $p=0.163$), and reported abuse (AOR=2.45; $p=0.124$) lost statistical significance following adjustment, suggesting their effects may be mediated through other variables or confounded by factors retained in the final model.

Table 5: Multivariate Logistic Regression Analysis for Predictors of Depression

Variable	Category	AOR	95% CI	p-value
Chronic Illness	Yes vs No	3.85	1.98-7.49	<0.001
Mobility Limitation	Yes vs No	2.34	1.26-4.35	0.007
Social Support	No vs Yes	2.12	1.13-3.98	0.020
Education Level	No formal vs Primary+	1.65	0.89-3.05	0.110
Family Visits	Never vs Any visits	1.58	0.83-3.01	0.163
Age	≥75 vs <75 years	1.21	0.63-2.32	0.566
Abuse Reported	Yes vs No	2.45	0.78-7.68	0.124

Coping Mechanisms and Activities

Religious activities constituted the most commonly reported coping mechanism, engaged in by 124 residents (62.9%), followed by social chatting (89, 45.2%). Notably, 67 residents (34.0%) reported no regular activities, suggesting limited engagement in meaningful occupations. The most frequently reported challenges were health problems (147, 74.6%) and loneliness (112, 56.9%), aligning with identified risk factors for depression.

Table 6: Engagement in Activities and Reported Challenges

Variable	Category	Frequency	Percentage	95% CI
Activities*	Religious activities	124	62.9%	56.0%-69.5%
	Social chatting	89	45.2%	38.3%-52.2%
	No regular activities	67	34.0%	27.6%-41.0%
	Arts/crafts/reading	23	11.7%	7.7%-17.1%
	Other activities	42	21.3%	16.1%-27.5%
Challenges	Health problems	147	74.6%	68.1%-80.4%
	Loneliness	112	56.9%	49.8%-63.7%
	Leisure inactivity	42	21.3%	16.1%-27.5%
	Food/meal problems	31	15.7%	11.1%-21.6%
	Other challenges	28	14.2%	9.8%-19.9%

*Percentages sum to >100% as participants could engage in multiple activities

Association Between Depression and Life Satisfaction

A strong negative correlation was observed between GDS-15 scores and SWLS scores ($r=-0.68$; $p<0.001$), indicating that higher depression levels were associated with lower life satisfaction. One-way ANOVA revealed a significant difference in mean life satisfaction between depressed and non-depressed residents ($F=126.7$; $p<0.001$). Depressed residents demonstrated significantly lower mean SWLS scores (15.4 ± 5.8) compared to non-depressed residents (23.1 ± 6.4), representing a mean difference of 7.7 points (95% CI: 6.0-9.4).

Table 7: Life Satisfaction by Depression Status

Depression Status	Mean SWLS Score $\pm$ SD	F-statistic	p-value
Depressed (n=112)	15.4 $\pm$ 5.8	126.7	<0.001
Not Depressed (n=85)	23.1 $\pm$ 6.4		

DISCUSSION

This study provides compelling evidence of a substantial mental health burden among institutionalized elderly in Addis Ababa, documenting a depression prevalence of 56.9%. This figure substantially exceeds community-based estimates in Ethiopia (42%) reported by Kasa et al. [7] and aligns closely with the 57% prevalence identified in Bahir Dar care homes [8]. The finding is consistent with studies from other Sub-Saharan African institutional settings, where prevalence rates range from 45% to 65% [18, 19], confirming that institutionalization itself constitutes a major risk factor for depression.

The elevated prevalence can be understood through the framework of institutionalization syndrome—the constellation of psychological sequelae including apathy, dependency, and depression arising from the losses and environmental rigidity characteristic of long-term care [20]. Residents confront multiple stressors simultaneously: loss of autonomy, separation from familiar social networks, exposure to illness and death of peers, and frequently, feelings of abandonment.

Independent Predictors of Depression

Multivariate analysis identified three independent predictors forming a mutually reinforcing cycle of vulnerability.

- **Chronic Illness (AOR=3.85):** The powerful association between chronic conditions and depression underscores a critical double burden of chronicity [21]. Within this setting, conditions such as Hypertension, Diabetes Mellitus, and Arthritis represent not merely managed physical ailments but continuous sources of pain, functional limitation, and apprehension, directly eroding psychological resilience. The finding that 74.6% of residents identified health problems as a major challenge aligns with this interpretation. This corroborates Ethiopian studies by Alemu et al. [22], who noted that multi-morbidity constituted a central driver of depressive symptoms in nursing home populations. The biomedical focus of chronic disease management in institutional settings, often prioritizing disease control over holistic well-being, may inadvertently heighten feelings of frailty and dependency.
- **Mobility Limitation (AOR=2.34):** Impaired mobility emerged as more than a physical handicap—it represented a direct conduit to psychological distress. This finding exemplifies compounded disablement, wherein physical limitation cascades into social and psychological restrictions [23]. Residents requiring mobility assistance (56.9%) are frequently deprived of autonomy-affirming activities: navigating their environment independently, seeking social interaction on their own terms, or engaging in spontaneous activities. This forced dependency cultivates helplessness and worthlessness—core features of depression. These results strongly advocate for mobility-centered care, which posits that preserving functional movement is fundamental to preserving mental health and person-hood in geriatric care [24].
- **Lack of Social Support (AOR=2.12):** The critical role of social support highlights deficiencies in the psycho-social environment. While absence of family visits was significant in bivariate analysis, its effect was mediated in the final model by the broader measure of perceived daily social support. This nuanced finding suggests that quality of daily proximal connections may buffer the impact of distal familial abandonment. It points to the potential importance of horizontal support from peers and reliable vertical support from empathetic staff, as described in Ethiopian institutional contexts by

Dessie et al. [25]. Nevertheless, the reality that 45.7% of residents never receive family visits represents a profound rupture of cultural and emotional bonds—a severe risk factor for depression across African care homes [26].

Depression and Life Satisfaction

The study powerfully quantified the relationship between mental state and life evaluation. The strong inverse correlation ($r=-0.68$; $p<0.001$) between depression scores and life satisfaction demonstrates that depression does not merely coexist with unhappiness—it actively constructs a negative cognitive filter through which life is judged. This aligns with global well-being models distinguishing between distress alleviation and positive appraisal cultivation [27]. The mean SWLS score of 18.7 ("slightly dissatisfied") and the finding that only 10.1% of residents reported satisfaction reveals a population deprived of hedonic well-being. The 7.7 point difference in mean SWLS scores between depressed and non-depressed residents is clinically significant, representing the difference between dissatisfaction and neutrality.

Lived Experience and Coping

The high prevalence of loneliness (56.9%) directly validates social isolation as a risk factor. Reliance on religious activities (62.9%) as a primary coping mechanism is culturally consonant and represents a vital existing strength and potential intervention portal, consistent with Taye's findings [10]. However, the most concerning finding is that 34.0% of residents engage in no regular activities. This activity vacuum signifies an environment lacking meaningful opportunities—those providing purpose, mastery, and engagement [27]. Structured meaningful activity constitutes a recognized therapeutic tool to combat depression and enhance life satisfaction in care homes [28]. Its absence represents a major modifiable deficit.

The Vicious Cycle

The institutionalized elderly in this study appear trapped in a vicious cycle: chronic illness predisposes to functional decline (mobility loss), which restricts social engagement and independent pursuit of meaning, leading to isolation and activity deprivation. This combined biopsychosocial burden manifests as depression, which cognitively negates life satisfaction. This cycle is perpetuated by a care model adequate for basic physical needs but insufficiently attuned to psycho-social and functional

determinants of mental health.

Strengths and Limitations

Strengths: This study addresses a critical gap by focusing on institutionalized elderly, an underrepresented population in Ethiopian mental health research. Inclusion of life satisfaction as an outcome adds depth and contextual relevance. Use of validated instruments (GDS-15, SWLS) enhances reliability and comparability. The logistic regression model demonstrated good fit (Hosmer-Lemeshow $p=0.554$), supporting the validity of identified associations.

Limitations: First, the cross-sectional design precludes causal inference. Second, findings are specific to one facility in Addis Ababa, limiting generalizability to other institutions or community settings with different sociocultural or organizational characteristics. Third, self-report measures may be subject to recall and social desirability bias. Fourth, exclusion of individuals with severe cognitive impairment may have underestimated true prevalence. Fifth, the use of screening instruments rather than clinical diagnostic interviews means prevalence reflects clinically significant symptoms rather than confirmed depressive disorders.

CONCLUSIONS

This study assessed the prevalence of depression, its determinants, and its association with life satisfaction among institutionalized older adults in Addis Ababa, Ethiopia. The findings reveal a depression prevalence of 56.9% (95% CI: 49.8%–63.7%)—more than half of the residents screened positive for clinically significant depressive symptoms. This prevalence substantially exceeds community-based estimates in Ethiopia ($\approx 42\%$) and aligns with the highest rates documented in Sub-Saharan African institutional settings.

Three independent determinants of depression were identified: chronic illness (AOR = 3.85), mobility limitation (AOR = 2.34), and lack of perceived social support (AOR = 2.12). These factors form a mutually reinforcing cycle: chronic disease drives functional decline, mobility loss restricts social engagement, and isolation deepens depression, which in turn accelerates physical deterioration. The loss of statistical significance for education, family visits, and abuse after multivariate adjustment indicates that these distal factors exert their effects through the three core determinants—an optimistic finding because chronic illness, mobility, and social support are modifiable targets for intervention.

Regarding the association with life satisfaction, a strong negative correlation was observed between depression severity and life satisfaction scores ($r = -0.68$; $p < 0.001$). Depressed residents reported significantly lower mean Satisfaction with Life Scale scores (15.4 ± 5.8) compared to non-depressed residents (23.1 ± 6.4), representing a clinically meaningful difference of 7.7 points. Only 10.1% of residents expressed satisfaction with their lives, underscoring the profound impact of depression on subjective well-being.

In summary, depression is highly prevalent among older adults in this assisted living facility, driven by a triad of chronic illness, mobility limitation, and lack of social support, and is strongly associated with low life satisfaction. These findings call for integrated, person-centered interventions that combine routine mental health screening, chronic disease and mobility support, and structured psycho-social programming. With appropriate action, the suffering documented here is not inevitable but preventable and treatable.

Recommendations

Facility-Level Interventions:

1. Implement mandatory mental health screening using GDS-15 at admission and semi-annually.
2. Establish a basic psycho-social activity program with a designated Activity Coordinator.
3. Train care giving staff to recognize depression signs and promote dignity-preserving communication.
4. Develop integrated care plans linking chronic disease management with mobility and social participation goals.
5. Formalize peer support networks (buddy systems, resident councils) to foster horizontal social support.
6. Conduct environmental audits to remove mobility barriers and establish safe walking paths.

Policy-Level Recommendations:

1. Advocate for inclusion of minimum mental health standards in licensing and evaluation of assisted living facilities.
2. Foster partnerships between ALFs, universities, and community health centers for capacity building.

Research Recommendations:

1. Conduct intervention studies testing effectiveness of structured activity programs and staff training.
2. Undertake longitudinal studies to track depression trajectories and intervention impacts.
3. Perform qualitative research exploring lived experience and resident-defined concepts of "good care".

LIST OF ABBREVIATIONS

Abbreviation	Full form
AAU	Addis Ababa University
ALF	Assisted Living Facility
AOR	Adjusted Odds Ratio
CI	Confidence Interval
FMOH	Federal Ministry of Health
GDS 15	Geriatric Depression Scale (15 items)
IRB	Institution Review Board
MHA	Mekedonia Humanitarian Association
OR	Odds Ratio
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
SWB	Subjective Well Being
SWLS	Satisfaction with Life Scale
WHO	World Health Organization

DECLARATIONS

Ethics Approval and Consent to Participate

Ethical approval was obtained from the Institutional Review Board of Tikur Anbessa Specialized Hospital, Addis Ababa University. Permission was obtained from Mekedonia Humanitarian Association administration. Written informed consent was obtained from all participants. The study was conducted in accordance with the Declaration of Helsinki.

Consent for Publication

Not applicable (no individual person's data presented).

Availability of Data and Materials

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Competing Interests

The authors declare that they have no competing interests.

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Authors' Contributions

BA conceptualized the study, designed the methodology, supervised data collection, analyzed data, and drafted the manuscript. SG contributed to study design, methodology, and manuscript revision. All authors read and approved the final manuscript.

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