Prevalence and factors associated with depression among hospital admitted patients in South Ethiopia: cross sectional study

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Abstract

Objective: Identifying factors associated with depression will help health care providers to design programs which improve quality of services provided to the inpatients. The aim of this study was to assess the prevalence and factors associated with depression among admitted patients at Adare General Hospital, Hawassa, Ethiopia, 2017/2018.

Result: The mean age of the respondents was 38 years (SD ± 15.39). The prevalence of depression was 38%. After adjusting for possible confounding variables; age category of 18–24 years [AOR = 1.24, 95 CI (1.08–5.73)], having cardiovascular disease [AOR = 2.20), 95 CI (1.38–7.28)] and being in surgical ward [AOR = 1.92), 95 CI (2.13–4.12)] had statistically significant association with depression.

Keywords: Prevalence, Depression, Associated factor, Inpatient, Ethiopia

Introduction

Depression is an emotional state which is experienced by most people sometime in life and can manifest as the blues or sadness, grief, mourning, no pathologic or neurotic or in the form of hyperactivity and manic behavior [1, 2]. The estimated of prevalence of depressive disorder is ranges 5–10% in care giving settings and it ranks the fourth leading causes of disability in world [3, 4]. Studies revealed that family history of depression, substance abuse, suicide, impulsive behavior, severe or chronic medical conditions, being female sex, intimate partner violence and sexual abuse are associated factors of depression [5, 6].

According to world health organization estimate, averagely 15% of global populations experience depression once or more in their stay of life [7, 8]. Depression could result significant morbidity and mortality to hospital admitted patients which is expected to be the second leading causes of disability-adjusted life years [9].

Depressive disorders are more common in hospital admitted patients. One study in Kenya revealed that 42% of inpatients experienced mild to severe depression [10].

In addition to this, other studies which are conducted in different setting on the prevalence of depression among admitted patients also showed that 48.5% in Pakistan [11], 29.4% in Addis Ababa, Ethiopia [12] and 54.6% in Mekele, Ethiopia [13]. Being female sex, age > 60 years, being divorced, being in age 35–44, being in surgical ward and medical ward are factors have statically significant association with depression [10–13]. Therefore, this study aimed to assess the prevalence and associated factors of depression in hospital admitted patient.

Main text

Study setting and population

Hospital based cross sectional study design was employed from May 2017 to June 2017 at Adare General Hospital, Hawassa, Ethiopia. Adare general hospital is one governmental hospitals in Hawassa, which is located 273 km away from Addis Ababa, the capital city of Ethiopia. A total 203 admitted patients who are ≥ 18 years were included for the study from those who were in the operation room during the study period were excluded from the study. We
had used stratified sampling technique to identify the specific ward of patient admission. Systematic sampling technique was used to recruit patients from each strata.

**Data collection**

We have used semi-structured questionnaire to collect socio-demographic, substance use, clinical factors and use Beck depression inventory scale to assess depression. Data was collected through face to face interview. Beck depression inventory scale was used as a screening tool for depression in many epidemiological studies across the world. It consists of 21 questions with a likert scale of 0–3 providing a total score of 63. According to the revised version of Beck-II in 1996, the score from 0–13 is considered as normal, 14–19 as mild, 20–28 as moderate and 29–63 as severe depression. Those patients who scored moderate and severe considered to have depression [14].

**Data processing and analyses**

The collected data was edited, coded, entered into EPI info version 7.1 and was analyzed using SPSS version 20. We had conducted binary logistic regression to identify risk factors of depression.

**Results**

**Socio-demographic characteristics of the study participants**

Among 203 study participants, 194 patients were involved in the study with mean age of 38 years (SD ± 15.39) and resulted a response rate of 95.6%. Out of 194 respondents, 105 (54.1%) were male and 96 (49.5%) were single (Table 1).

**Clinical and substance use related characteristics of the study participants**

From the total study participants, 31 (16%) were currently smoking cigarettes, 48 (24.7%) were drinking alcohol and 44 (22.7%) were chewing khat (chat) (Table 2).

**Prevalence and factors associated depressive symptom among the study participants**

Using Beck depression inventory scale with cut-off point ≥ 21 revealed that the prevalence of depression was 38%. Being in age category of 18–24, having cardiovascular disease and being admitted in surgical ward were associated with depressive symptom according to binary logistic regression analysis (Table 3).

**Discussion**

The findings of this study revealed that the overall prevalence of depression among hospital admitted patients was 38%. The study finding was lower than study conducted among hospital admitted patients in Ethiopia [13], in Spain [15], and in Western Asia [16]. On the other hand, the current finding is higher than the study conducted in Paris metropolitan area [17] and in Sweden [18]. The difference might be difference in sample size, data collection tool and socio-cultural difference.

Being in age category of 18–24 had significant association with depressive symptom. This finding is congruent
People aged 18–24 years have the highest prevalence of mental disorders of any age group. This is supported by many more literatures worldwide. There was no statistically significant association between depression and gender in this study.

Patients who had cardiovascular disorder were 2.2 times more likely to have depressive symptom when compared to the patients who had no cardiac problems. This is due to the fact that depression is more common in cardiac patients, this would seem that either depression leads to cardiovascular disorder or cardiovascular disorder leads to depression or may be both [19, 20].

Patients who were admitted in surgical ward for surgical management were 3.87 times more likely to have depression when compared to patient admitted to medical ward. This might be due to the fact that having surgical management by itself creates stress, admission in hospital is stressful and some other different factors like a kind of disease, hospital environment, patient’s concern about being away from their family and missing their job.

Conclusion
According to the current study finding, depression was high in admitted patients in the study setting. Being age category 18–24, having cardiovascular disorder and being in surgical ward had statistically significant association with depression. They recommends to have further research on probable risk factors of depression to strengthen the current result.

Limitation of the study
We didn’t do detailed validation study for Beck’s depression inventory scale. This might under or overestimate the study findings. The study didn’t include detailed clinical factors which might contribute for depressive symptom.

Authors’ contributions
ME and BD conceived the study and were involved in the study design, reviewed the article, analysis, report writing and drafted the manuscript. BD and JI were involved in the study design and analysis. All authors read and approved the final manuscript.

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Competing interests
The authors declare that they have no competing interests.

Availability of data and materials
All relevant data are within the paper.

Consent for publication
Not applicable.
Ethical approval and consent to participate
Ethical clearance for this study was obtained from the Institutional Research and Ethics Review Committee of College of Medicine and Health Sciences, Hawassa University, Ethiopia. Permission letter was obtained and submitted to Adare General Hospital, Hawassa, Ethiopia. Study participants were informed about their rights to interrupt the interview at any time and written informed consent was obtained from each study participant. Confidentiality was maintained at all levels of the study. Patients who were found to have moderate to severe depressive symptoms were referred to psychiatry clinics for further investigations.

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