Mental Distress and Associated Factors Among Hospitalized Medical Surgical Adult Inpatients in Public Hospitals, Addis Ababa, Ethiopia, 2020. Cross-sectional Study

Shegaw Tesfa
  Wolkite University (WKU), Wolkite, Ethiopia.
Berhanu Wordofa Giru (✉ w.berhanu@yahoo.com)
  Addis Ababa University school of Nursing and Midwifery   https://orcid.org/0000-0003-2620-8785
Tadesse Bedada
  Addis Ababa University school of Nursing and Midwifery

Abstract

Background: Mental distress is a mental or psychological syndrome, which influences the health status and treatment effectiveness, getting quality of care in a hospitalized medical surgical inpatient. It is more common in hospital setting than community setting population. Thus, this study aimed to assess the prevalence of mental distress and associated factors among hospitalized medical surgical adult inpatients in public hospitals, Addis Ababa, Ethiopia, 2020.

Methods: Institutional based cross-sectional study was conducted with a total of 408 study subjects from March 1-30, 2020. Systematic random sampling technique was used and data was collected using interviewer administered questionnaire. Data was collected by trained nursing students and collected data was entered into Epi-data 3.1 and exported to SPSS version 26 for analysis, and then binary and multiple logistic regressions was performed to check the association between dependent and independent variable.

Result: The prevalence of mental distress among hospitalized medical surgical adult inpatients in public hospitals was 53.1% with (95%CI; 48%, 58%). Variables of being married [AOR=2.67; 95%CI(1.065,6.683)], private employee [AOR=2.21; 95%CI(1.001, 4.900)], daily laborer [AOR=4.70; 95%CI(1.218, 18.215)], rural residence [AOR=1.85; 95%CI(1.047,3.264)], taking alcohol [AOR=1.68; 95%CI(1.025, 2.740)], previous psychiatric illness [AOR=3.40; 95%CI(1.078, 10.737)] and co-morbidity [AOR=1.93; 95%CI (1.200, 3.094)] were found to be significantly associated with mental distress; while age, sex, ethnicity, religion, educational status, income, smoking, chat, social support, living condition, history of hospitalization, ward admitted and length of hospital stay were not significantly associated.

Conclusion: The prevalence of mental distress was high and being married, private employee, daily laborer, residence in rural area, previous history of psychiatric illness, alcohol used and comorbidity disorder were associated with mental distress among hospitalized adult inpatients. Therefore, health care providers should provide special consideration to those group of patients admitted to the hospital.

Background

According to world health organization (WHO), mental health is a state of well-being in which an individual can realize his or her own abilities, interact positively with others, cope with stressors of life and work productively, fruitfully and contribute to his or her family and community. WHO noted not exclusively the absence of mental illness, but also addresses the concept of mental wellness, no health without mental health(1).

American Psychiatric Association's Diagnostic and Statistical Manual of mental disorders fourth edition (DSM-IV) define mental disorder is a clinically important behavioral or psychological syndrome in a person associated with present distress or disability with a significantly increased risk of suffering death, pain, disability. It is a specific diagnosis made by a trained mental health professionals after formal psychiatric assessment(2).

Although mental disorders often have been neglected disorder because of non-specificity in diagnosis and clinical manifestation, long term treatment require and various sociocultural myths and belief systems associated with it(3).

Mental distress is a wider concept of mental health problem which comprises mental disorders that may not fall in to a specific standard diagnostic criteria (4). Mental distress is a public health issue conceptualized by stress, confusion, emotions, hallucination, depression, anxiety, panic or somatic and other psychiatric symptoms and mostly symptoms experience in persons without actually being ill in a medical sense and interfere in their day to day activity (5).

Mental distress is a collection of mental health abnormalities that may not be grouped into standard diagnostic criteria, which is characterized by symptoms of anxiety, depression, insomnia, fatigue, irritability, forgetfulness, difficulty in concentrating, and somatic symptoms such as sleep problems, headache and backache (6).

Mental distress is more common in hospital setting than community setting; which influences the health status, treatment effectiveness and getting quality of care in a hospitalized admitted patients(7). Surveys showed that 20 to 60% of patients admitted in a hospital setting suffer from the most common mental disorders like stress, depression and anxiety(8). Therefore, the purpose of this study was to assess the prevalence of mental distress and its associated factors among hospitalized medical surgical adult inpatients in public hospitals, Addis Ababa, Ethiopia, 2020.

Methods

Study area and period

Addis Ababa, capital city of the Federal Democratic Republic of Ethiopia, located at the center of the country that had 10 sub-cities and 116 Woredas with a total population of around 3.4 million according to Ethiopian population projection for all regions in Wereda level from 2014–2017 (9). Its area was estimated to be 530 Km^2 with altitude ranging from 2200 to 3000 meter above sea level, average temperature of 22.8 °C and average rainfall of 1,180.4 mm^3. Addis Ababa had 53 hospitals of which 13 were public and 40 were private. Setting of study were in four randomly selected hospitals from Addis Ababa public hospitals of Ethiopia; which were Tikur Anbessa Specialized Hospital (Black Lion Specialized Hospital) had a total of 646 inpatients from this 374 were adult inpatients, St.paulos hospital had total of 502 inpatients from this 237 were adult inpatients, Yikatit 12 hospitals had a total of 359 inpatients from this 139 were adult inpatients and Zewuditu hospitals had a total of 208 inpatients from this 72 were adult inpatients at a time. The study was conduct from March1 to 30, 2020.

Study design-An institution based cross - sectional study design was used.

Source population- All hospitalized medical surgical adult inpatients at selected public hospitals.

Study population- Randomly selected hospitalized medical surgical adult inpatients available during the study period and who fulfilled the inclusion criteria.

Inclusion criteria- All medical surgical inpatients greater than or equal to 18 years old present during data collection.

Exclusion criteria- Medical surgical adult inpatients unable to communicate with critical illnesses, physical impairment to speech, mental disability and post anesthesia were excluded.

Sample size determination-The sample size was calculated by using single population proportion formula, considering the following assumptions; prevalence of mental distress 58.6% which done in Gondar University hospitals among medical surgical adult inpatients,95% confidence interval and 5% margin of error (10).

$$n = (Z_{\alpha/2})^2\,(pq)/d^2 = \frac{(1.96)(1.96)(0.59)(1-0.59)}{(0.05)(0.05)}$$ = 372 with 10% non-response rate the total sample size were 408.

Sampling procedure
Four hospitals selected using of simple random sampling lottery method, which were TASH (Tikur Anbessa Specialized Hospital), St.paulos hospital, Yikatit hospital and Zewuditu hospital and a total of 408 study subjects were selected from 822 reference population using systematic random sampling every k = 2 interval.

Study variables

The dependent variable was mental distress and the independent variables included sociodemographic factors (age, sex, religion, ethnicity, residence, occupation, monthly income, marital status, education status), Substance use related variables (tobacco use, alcohol use, chat use, illegal drug use), Psychosocial variables (social support, living condition), clinical related variable (previous psychiatric history, psychiatric illness after admission, psychiatric consultation, family history of psychiatric illness, previous hospital admission, ward admitted, comorbidity, hospital stay).

Data collection tool and procedure

Amharic version of the questionnaire was used for data collection. First the questionnaire was prepared in English language then translated to Amharic and back to in English. Two clinical staffs as supervisor and four nursing students as a data collector with half day time training were used. Self-Reporting Questionnaire; dichotomous type scale to determine the prevalence of mental distress in adult inpatients. The SRQ-25 was a standardized questionnaire having 25 item questions adapting the SRQ for Ethiopian Populations for culturally-sensitive psychiatric screening instrument. This tool was validated in Ethiopia and other low socioeconomic countries. In Ethiopia, sensitivity of 86% and specificity of 84% with a cut-off point of 8 (11).

Data processing and analysis

First the data was checked for its completeness and consistency, and then it was coded and entered in EPI data version 3.02 software. After entry, data was exported to statistical package for social science (SPSS) version 26 for analysis. Descriptive analysis using frequencies, proportions, graphs was performed to describe number and percentage of socio-demographic characteristics of the sample and other variables. Binary logistic regression analyses model was used to identify associated factors of mental distress. This was done by odds ratio and p value with 95% confidence interval (CI). Explanatory variables with p-value ≤0.25 in the bivariate logistic regression was entered into multivariate logistic regression analysis to control possible confounding. Hosmer-Lemeshow's test was found to be insignificant (p-value = 0.999) and Omnibus tests was significant (P-value = 0.001) which indicate the model was fitted. P-value of less than 0.05 was used to declare level of statistically significant and adjusted odd ratio (AOR) with 95% CI was estimated to identify significantly associated variables with the dependent variable, mental distress. Finally, the results were presented in text, tables and graphs based on the types of data.

Result

Socio-demographic characteristics of the study participants

In this study, the data was collected from 401 respondents through face-to-face interviews with the response rate of 98.3%. Among those 214(53.4%) were men, 89(22.2%) were in the age group of 25–34 and the mean age of the study participants was 40.8 years with standard deviation of ± 15.72. From the study participants 157(39.2%) were Amhara ethnicity and 260(64.8%) live in urban, 239(59.6%) were orthodox religion, 237(59.1%) were married, 104(25.2%) have primary education and 98(24.4%) were farmer. Majority of the respondents have low income213 (53.1%) (Table 1).

Table 1
Sociodemographic characteristics of study participants in public hospitals, Addis Ababa, Ethiopia, 2020 (n=408).

Variables	Category	Frequency	Percent (%)
Age	18 to24	69	17.2
	25 to 34	89	22.2
	35 to 44	79	19.7
	45 to 54	72	18.0
	55 to 64	58	14.5
	65 and more	34	8.5
Sex	Female	187	46.6
	Male	214	53.4
Religion	Orthodox	239	59.6
	Muslim	90	22.4
	Protestant	60	15.0
	Catholic	8	2.0
	Others	4	1.0
Marital status	Single	116	28.9
	Married	237	59.1
	Divorced	22	5.5
	Windowed	26	6.5
Ethnicity	Amhara	157	39.2
	Oromo	114	28.4
	Tigray	33	8.2
	Gurage	45	11.2
	Silte	25	6.2
	Others	27	6.7
Residence	Rural	141	35.2
	Urban	260	64.8
Education	Can't read and write	84	20.9
	Can read and write	61	15.2
	Primary	101	25.2
	Secondary	87	21.7
	Higher education	68	17.0
Occupation	Governmental worker	68	17.0
	Private employee	84	20.9
	Merchant	61	15.2
	Farmers	98	24.4
	Housewives	49	12.2
	Daily laborers	16	4.0
	Others	25	6.2
Income	Low income	213	53.1
	High income	188	46.9

Substance use related factors of mental distress

From the study participants 49(12.2%) were used chat, 132(32.9%) used alcohol, 18(4.5%) smoked and 3(0.7%) were used other illegal substances like hashish (Table 2).

Table 2
Substance used related factors of study participants in public hospitals, Addis Ababa, Ethiopia, 2020 (n = 408).

Variables	Category	Frequency	Percent (%)
Chat used	Yes	49	12.2
	No	352	87.8
Alcohol used	Yes	132	32.9
	No	269	67.1
Tobacco used	Yes	18	4.5
	No	383	95.5
Other drugs used	Yes	3	0.7
	No	398	99.3

Psychosocial factors of mental distress

Among the study participants 332(82.8%) were living with their family, 59(14.7%) were live alone and 10(2.5%) were live with others. From this study 277(69.1%) had low social support and 124(30.9%) had high social support (Table 3).

Table 3
Psychosocial factors of study participants in public hospitals, Addis Ababa, Ethiopia, 2020 (n = 408).

Variables	Category	Frequency	Percent (%)
Living condition	Alone	59	14.7
	Family	332	82.8
	Others	10	2.5
Social support	low social support	277	69.1
	high social support	124	30.9

Clinical related factors of mental distress

Among the study participants 213(53.1%) were admitted in medical ward, 199(49.6%) had previous history of hospitalization, 157(39.2%) had comorbid disorder, 144(35.9%) were stay at the hospital for < 1 week,119(29.7) stay for 1 to 2 week and 138(34.4) stay for more than 2 weeks, 61 (15.2%) had family history of psychiatric illness, 17(4.2%) had got psychiatric counseling, 18(4.5%) had previous history of psychiatric condition and 6 (1.5%) had current psychiatric condition (Table 4).

Table 4
Clinical related factors of study participants in public hospitals, Addis Ababa,
Ethiopia, 2020 (n = 408).

Variables	Category	Frequency	Percent (%)
Previous history of psychiatric condition	Yes	18	4.5
	No	383	95.5
Having psychiatric condition	Yes	6	1.5
	No	395	98.5
Contact to psychiatric counseling	Yes	17	4.2
	No	384	95.8
Family history of psychiatric illness	Yes	61	15.2
	No	340	84.8
Ward admitted	Medical	213	53.1
	Surgical	188	46.9
Previous history of hospitalization	Yes	199	49.6
	No	202	50.4
Comorbidity disorder	Yes	157	39.2
	No	244	60.8
Time stayed in hospital	< 1 week	144	35.9
	1–2 week	119	29.7
	> 2 weeks	138	34.4

The Prevalence of mental distress

The prevalence of mental distress among hospitalized medical surgical inpatient in public hospitals, Addis Ababa, Ethiopia, 2020 (n = 408) was 213(53.1%). (Fig. 1)

Factor associated with mental distress

Those variables with a P-value of ≤ 0.25 in the binary logistic analysis was entered to multiple logistic analysis using enter method to identify the independent factors associated with mental distress among hospitalized inpatients. In bivariate analysis the covariates: marital status, educational status, occupation, monthly income, alcohol use, previous history of psychiatric condition, contact to psychiatric counseling, family history of psychiatric illness, having comorbid disorder and time of hospital stay were associated with mental distress among hospitalized inpatients. In multiple logistic regression analysis, covariates: marital status, residence, occupation, alcohol, previous history of psychiatric illness and comorbidity disorder were associated with 95% confidence interval.

Marital status of being married was almost 2.7 times more likely to develop mental distress relative to being unmarried [AOR = 2.67; 95% CI (1.065, 6.683)]. Participants living in rural area were nearly two times associated with mental distress compared with those living in urban area [AOR = 1.85; 95%CI (1.047, 3.264)]. Those respondents who have been private employee have higher than two-fold to develop mental distress [AOR = 2.21; 95%CI (1.001, 4.900)] and who are being daily laborers were greater than4times likely to develop mental distress relative to those who have been governmental employee [AOR = 4.70; 95%CI (1.218, 18.215)].

Regarding substance use study participants who drink alcohol were almost 1.7 times more likely to develop mental distress than those who were not drink [AOR = 1.68; 95%CI (1.025, 2.740)].

Study participants who had history of previous psychiatric illness were 3.4 times more likely to develop mental distress than having no history [AOR = 3.40; 95%(1.078, 10.737)] and inpatients who had comorbid disorder were more than twice likely to develop mental disorder than had no co-morbidity disorder [AOR = 1.93; 95%CI (1.200, 3.094)] (Table 5).

Table 5
Binary and multiple logistic regression analysis of factors associated with mental distress among hospitalized medical surgical adult inpatients in public hospitals, Addis Ababa, Ethiopia, 2020.

Variables	Category	Mental distress		Crude Odd Ratio	Adjusted Odd Ratio
		Yes	No		
Marital status	Single	53	63	1.35(0.564,3.214)	1.74(0.638, 4.756)
	Married	136	101	2.15 (0.939,4.946)	**2.67(1.065,6.683)**
	Divorced	14	8	2.80 (0.865, 9.060)	2.70(0.755, 9.689)
	Widowed	10	16	1.00	1.00
Residence	Rural	89	52	1.88(1.234, 2.857)	**1.85(1.047, 3.264)**
	Urban	124	136	1.00	1.00
Education	Can't read and write	54	30	2.57(1.332,4.963)	1.14(0.438,2.953)
	Can read and write	32	29	1.58(0.785,3.165)	0.77(0.304,1.965)
	Primary	54	47	1.64(0.882, 3.055)	0.89(0.385,2.057)
	Secondary	45	42	1.53(0.807,2.904)	0.86(0.382,1.946)
	Higher education	28	40	1.00	1.00
Occupation	Government employee	25	43	1.00	1.00
	Private worker	48	36	2.29(1.191, 4.417)	**2.21(1.001,4.900)**
	Merchant	27	34	1.37(0.674, 2.767)	**1.57(0.651,3.790)**
	Farmers	61	37	2.84(1.495, 5.379)	1.62(0.636,4.108)
	Housewives	29	20	2.50(1.174,5.297)	1.93(0.729, 5.089)
	Daily laborers	11	5	3.78(1.179, 12.148)	**4.70(1.218, 18.215)**
	Others	12	13	1.59(0.629,4.010)	1.82(0.590, 5.616)
	Low	125	88	1.61(1.087,2.397)	1.17(0.681,1.994)
	High	88	100	1.00	1.00
Monthly income	Yes	78	55	1.29(0.844,1.964)	**1.68(1.025, 2.740)**
	No	135	133	1.00	1.00
Alcohol	Yes	14	4	3.24 (1.046, 10.009)	**3.40(1.078,10.737)**
	No	199	184	1.00	1.00
Previous history of psychiatric illness	Yes	12	5	2.19(0.755, 6.322)	1.53(0.413,5.685)
	No	201	183	1.00	1.00
Psychiatric counseling	Yes	40	21	1.84(1.040, 3.249)	1.82(0.972,3.413)
	No	173	167	1.00	1.00
Family history of psychiatric illness	Yes	100	57	2.03(1.348,3.068)	**1.93(1.200, 3.094)**
	No	113	131	1.00	1.00
Comorbidity	< 1 week	69	75	1.00	1.00
	1−2 week	66	53	1.35(0.831, 2.204)	1.18(0.691, 2025)
	> 2 week	78	60	1.41(0.884, 2.259)	1.13(0.672,1.896)

Discussion

Prevalence of mental distress

The prevalence of mental distress in the current study was 53.1% with (95% CI, 48%-58%), 52.6% in medical ward and 53.7% in surgical ward. This finding was relatively comparable with study reported from Korea among surgical inpatients, South Africa hospitals and elsewhere in Ethiopia in hospitalized inpatient care givers were 48%, 49.7%, 54.6% and56.7% respectively(12−15).

The prevalence of this study was relatively lower than from the studies conducted in Pakistan, Harari Regional State, Debre Markos and Felege Hiwot hospitals and Gondar University hospitals, Ethiopia were 87.9%, 59.7%, 61% and 58.6% respectively(16−19). This variation might be resulted from making

mental health as global prioritizing problems, change in improving policy, service development and management protocol on mental health related problems(20,21) and life style modification of patients, change in patient safety with in and after discharge the hospitals, relatively increase mental and psychological counseling and even change in methodological approach might be also the possible difference.

The prevalence of this study was relatively higher than the studies reported from Saudi Arabia, Iran, India, United Kingdome, Northeast Brazil, South Brazil, Uganda and Nigeria hospitalized patients were 25.5%, 34.8%, 44.1%, 8.1%, 27.1%, 33.7%, 22.5% and 22% respectively (22–29) and similarly higher than the studies reported from Vietnam, Jazan Province of Saudi Arabia, Southern Taiwan, Hawassa, Ethiopia, Amanuel mental health hospital, Ethiopia, Menlike II hospital, Ethiopia were 5.4%, 20.6%,38%, 22.1%, 27.1% and 23.2% respectively (5,30–34). This variation might be resulted from change in methodological difference, study population; which were data taken from chronic medical surgical and trauma inpatients including intensive care unit inpatients, difference in screening and diagnostic questionnaire tool used; some researchers used like Kessler scale, Burden Assessment Scale, Hospital Depression, Anxiety and Stress Scale to measure mental distress and other sociodemographic and environmental factors may increase the prevalence of mental distress on this study.

Factors associated with mental distress in hospitalized inpatient

In this study marital status of being married was an important factor; which was statistically associated with mental distress with almost2.7 times more positively associated with distress than being unmarried. This result of the study was similarly consistent to the study reported from Korea, Gondar University hospital, Ethiopia respectively (10,31). The reason that being married marital status more likely to develop mental distress were might be due to holding more responsibility to their home, family and child care, imbalance of demand and supply of resources to their family during being paired and poor communication and socialization relationship with in the family and other socioeconomically factors might be the possible difference.

Inpatients living in rural area have been two times significantly associated with mental distress than living in urban but, in other studies living in rural residence have not been significantly associated with mental distress. This might be resulted from patients living in rural district might have low perception on life style modification, relaxation, recreation and other luxuries for the management of distress and low seeking behavior to get psychological and mental health counselor or consultation.

In this study being private employee were more than 2 times positively associated with mental distress compared to being a governmental employee and this association was also similarly in line with the study revealed from Vietnam (5); this also might be resulted from poor life style enjoyment and devote their time in the working place and work load, payment payed to them, poor administration and management system and relatively having low awareness. Being daily laborer were the highest statistically associated variable; which was almost five times more highly associated with mental distress compared to being governmental employee; which might be resulted from having low income to fulfill their daily allowance, live alone and far from their family, sometimes lack of work and work load at a point of time could be the possible reason.

Inpatients who drink alcohol had near to 1.7 times more likely associated with mental distress than those who were not drink alcohol. This result was extended to the study done in Australia, Gondar University hospital, Ethiopia(10,35). The reason might be resulted from people with alcohol abuse are responsible for neuropsychiatric disorders, domestic violence, child abuse and neglecting and productivity loss and also meets the diagnostic criteria for majority of mental disorders and sometimes they may develop distress in their life after a time(36).

Participants who had previous history of psychiatry illness were highly increase the venerability of mental distress. Previous history of psychiatric illness had been 3.4 times more highly associated with mental distress than those who had no previous history of illness. This might be due to patients who had history of psychiatric illness were not fully recover and well healthy from their illness; some negative and positive psychiatric symptoms may present and may include the screening tool diagnostic criteria and positively associated with mental distress.

Respondents with co-morbid disorder had been twice significantly associated with mental distress than those who had no comorbid disorder. This result was similar with the studies reported from Jeddah of Saudi Arabia, Jazan province of Saudi Arabia, India, South Africa, Menlike II hospital, Hawassa and Harari Regional State hospitals of Ethiopia respectively (13,17,22,24,30,32,34). This outcome might be resulted from inpatients with two or more chronic comorbid disorder might have different physical illness and the self-reporting questionnaire diagnostic tool also included some symptoms of physical illness and patients with comorbid disorder were limited from their daily physical activities; which might result to high report of mental distress(11).

Strength

- Standardized and valid questionnaires were used.
- Many different variables were assessed and new variables were also added to assess.

Limitation

- Medical surgical hospitalized adult inpatients in private hospitals were not included.
- The study was cross-sectional study and did not describe cause- effect relationship.

Conclusion

The prevalence of mental distress among medical surgical hospitalized inpatients in Addis Ababa public hospitals was high. Being married, rural residence, occupational status of being private employee and daily laborer, drinking alcohol, previous history of psychiatric illness and co-morbidity disorder were statistically associated with mental distress among hospitalized medical surgical adult inpatients. Those health care providers who are working in hospital should give special consideration for inpatients who are being married, employees working in private area, daily laborers, drink alcohol, patients who have

previous history of psychiatric illness and comorbid disorders through their assessment and screening protocols by Scheduled and ongoing psycho-educational intervention that helps to cope distress, empowering in patients with knowledge and develop their competence in handling their illness and enhance their chance of living a life that is as healthy as possible.

Abbreviations

AAU: Addis Ababa University; AIDS: Acquired Immune Deficiency Syndrome; AOR: Adjusted Odd Ratio; BSc: Bachelor of Science; CI: Confidence Interval; COR: Crude Odd Ratio; DSM-IV: Diagnostic and Statistical Manual four; ETB: Ethiopian Birr; HFSUH: Hiwot Fana Specialized University Hospital; HIV: Human Immune Virus; MSc: Master of science; PI: Principal Investigator; SPSS: Statistical Package for Social Sciences; SRQ: Self-Reporting Questionnaire; SSQ: Social Support Questionnaire; TASH: Tikure Anbessa Specialized Hospital; USA: United States of America; WHO: World Health Organization

Declarations

Acknowledgements

Availability of Data and Materials

Up on reasonable request, data is available from the corresponding Authors only.

Authors' Contributions

Shegaw Tesfa conceived the study, involved in proposal development, collected and analyzed data. Berhanu Wordofa Giru and Tadesse Bedada supervised, mentored, and reviewed the proposal, final draft and manuscript contents. All authors contributed substantial input to the article and approved the final version of the manuscript to be published.

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Ethics approval and consent to participate

Ethical clearance was obtained from respective institution and permission was sought from ethical review committee of each units. Verbal consent was obtained from each selected participant to confirm their willingness. Explanation of the survey purpose, description of the benefits and an offer to answer all inquiries were made to the respondents. Also, affirmation that they were free to withdraw consent and to discontinue participation without any form of prejudice was made. Privacy and confidentiality of collected information was ensured throughout the process as no name was written. Patients who had severe mental distress due to mental illness was linked to psychiatry unit within their hospital for intervention.

Consent for publication

Not applicable

Competing of interest

All authors declared that they had no competing of interest.

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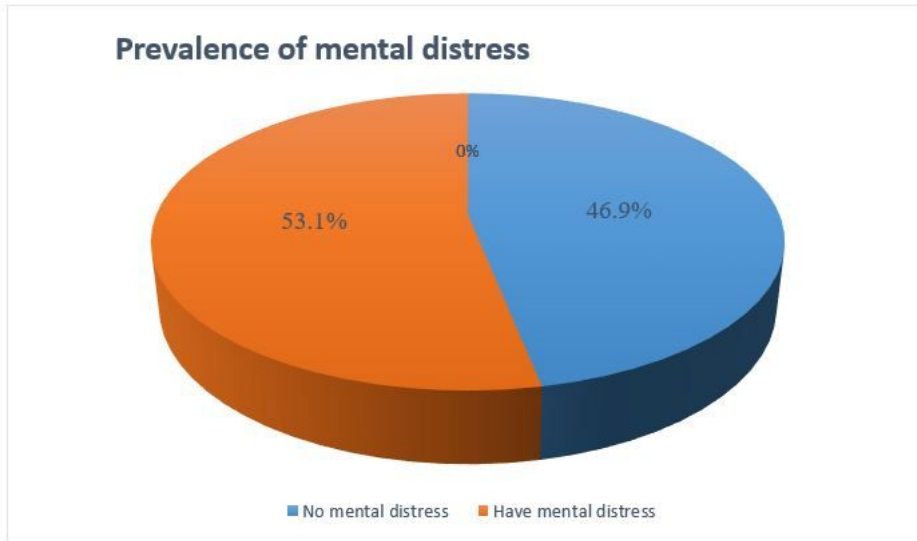
Figures

Figure 1

shows prevalence of mental distress among hospitalized medical surgical inpatient in public hospital, Addis Ababa, Ethiopia, 2020 (n=408).