

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

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

Methods: An institutional-based cross-sectional study was conducted among a total of 408 study subjects from March 1 to 30, 2020. The study participants were recruited by systematic random sampling technique and data were collected using an interviewer-administered questionnaire. The collected data were entered into EpiData 3.1 and exported to SPSS version 26 for analysis, and then binary and multiple logistic regressions were performed to check the association between dependent and independent variables.

Results: The prevalence of mental distress among hospitalized medical-surgical adult inpatients in public hospitals was 53.1%. 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)], drinking alcohol [AOR = 1.68; 95% CI (1.025, 2.740)], previous psychiatric illness [AOR = 3.40; 95% CI (1.078, 10.737)] and comorbidity [AOR = 1.93; 95% CI (1.200, 3.094)] were found to be significantly associated with mental distress.

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

Keywords: mental distress, hospitalized medical-surgical adult inpatients, public hospitals

Introduction

According to the world health organization (WHO), mental health is a state of well-being in which an individual can realize his or her 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) defines mental disorder as a clinically important

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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 trained mental health professionals after formal psychiatric assessment.²

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

Mental distress is a wider concept of mental health problems which comprises mental disorders that may not fall into specific standard diagnostic criteria.⁴ It is a public health issue conceptualized by stress, confusion, emotions, hallucination, depression, anxiety, panic or somatic and other psychiatric symptoms, and mostly symptoms are experienced by 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 It is more common in a hospital setting than community setting; which influences the health status, treatment effectiveness, and quality of care in hospitalized patients.⁷ Surveys showed that 20 to 60% of patients admitted to a hospital 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 and Materials

Study Area and Period

Addis Ababa, the capital city of the Federal Democratic Republic of Ethiopia, located at the center of the country with 10 sub-cities and 116 Woredas has a total population of around 3.4 million according to Ethiopian population projection for all regions in Wereda level from 2014–2017.⁹ Its land area is estimated to be 530 Km² with altitude ranging from 2200 to 3000 meters above sea level, with average temperature of 22.8°C and an average rainfall of 1180.4 mm³. It has 53 hospitals of which 13 are public and 40 are private. The setting of the study was in

four randomly selected Addis Ababa public hospitals of Ethiopia: Tikur Anbessa Specialized Hospital (Black Lion Specialized Hospital) had a total of 646 inpatients, from this 374 were adult inpatients; St. Paulos hospital had a total of 502 inpatients, from this 237 were adult inpatients; Yekatit 12 hospital had a total of 359 inpatients, from this 139 were adult inpatients and Zewditu hospital had a total of 208 inpatients, from this 72 were adult inpatients at the time. The study was conducted from March 1 to 30, 2020.

Study Design and Population

An institution-based cross-sectional study was conducted. All randomly selected hospitalized medical-surgical adult (18 years and above) inpatients available at selected public hospitals during the study period were included, except patients who were unable to communicate, with critical illnesses, physical speech impairment, mental disability, and post-anesthesia during the data collection period.

Sample Size Determination and Sampling Procedure

The sample size was calculated by using the single population proportion formula, considering the following assumptions; the prevalence of mental distress was 58.6% in Gondar University hospital among medical-surgical adult inpatients,¹⁰ 95% confidence interval, and 5% margin of error. The final sample size including the non-response rate yielded 408 patients. Four hospitals were selected using the simple random sampling lottery method, which was TASH (Tikur Anbessa Specialized Hospital), St. Paulos hospital, Yekatit 12 hospital, and Zewditu hospital. A total of 408 study subjects were selected from 822 reference populations 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 variables (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

The Amharic version of the questionnaire was used for data collection. First, the questionnaire was prepared in the English language then translated to Amharic and back to English. Two clinical staff members were used as supervisors and four nursing students were used as data collectors with half-day training. Self-Reporting Questionnaire was a dichotomous type scale to determine the prevalence of mental distress in adult inpatients. The SRQ-25 was a standardized questionnaire with 25 item questions adapting the SRQ for Ethiopian Populations for culturally sensitive psychiatric screening instruments. This tool was validated in Ethiopia and other low socioeconomic countries. In Ethiopia, there was a sensitivity of 86% and specificity of 84% with a cut-off point of 8.¹¹

Data Processing and Analysis

First, the data were checked for its completeness and consistency, and then coded and entered in EpiData version 3.02 software. After entry, data were exported to statistical package for social science (SPSS) version 26 for analysis. Descriptive analysis using frequencies, proportions, graphs were performed to describe the number and percentage of socio-demographic characteristics of the sample and other variables. A binary logistic regression analysis 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 a p-value of ≤ 0.25 in the bivariate logistic regression were entered into a multivariate logistic regression analysis to control possible confounding. Hosmer-Lemeshow's test was found to be insignificant (p-value = 0.999) and Omnibus tests were significant (P-value = 0.001) which indicates the model was fitted. A p-value of less than 0.05 was used to declare a level of statistical significance and an adjusted odds 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.

Results

Socio-Demographic Characteristics of the Study Participants

In this study, the data were collected from 401 respondents through face-to-face interviews with a 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 a standard deviation of ± 15.72 . From the study participants, 157 (39.2%) were of Amhara ethnicity and

260 (64.8%) lived in urban areas, 239 (59.6%) were orthodox religion, 237 (59.1%) were married, 104 (25.2%) had primary education, and 98 (24.4%) were farmers. The majority of the respondents had low income: 213 (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	Cannot 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	Government worker	68	17.0
	Private employee	84	20.9
	Merchant	61	15.2
	Farmer	98	24.4
	Housewife	49	12.2
	Daily laborer	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%) used chat, 132 (32.9%) used alcohol, 18 (4.5%) smoked, and 3 (0.7%) used other illegal substances like hashish (Table 2).

Psychosocial Factors of Mental Distress

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

Clinical-Related Factors of Mental Distress

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

Table 2 Substance Use 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

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

Table 4 Clinical-Related Factors of Study Participants in Public Hospitals, Addis Ababa, Ethiopia, 2020 (n=408)

Variables	Category	Frequency	Percent (%)
Previous history of a psychiatric condition	Yes	18	4.5
	No	383	95.5
Current psychiatric condition	Yes	6	1.5
	No	395	98.5
Contact with 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	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 inpatients in public hospitals, Addis Ababa, Ethiopia, 2020 (n=408) was 213 (53.1%).

Factor Associated with Mental Distress

Those variables with a p-value of ≤ 0.25 in the binary logistic analysis were entered into 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 a psychiatric condition, contact with psychiatric counseling, family history of psychiatric illness, having a comorbidity, 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 were associated with a 95% confidence interval.

Those who were married were 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 areas were nearly two times more associated with mental distress compared with those living in urban areas [AOR=1.85; 95% CI (1.047, 3.264)]. Those respondents who were private sector employees had higher than two-fold risk of developing mental distress [AOR= 2.21; 95% CI (1.001, 4.900)] and those who were daily laborers had greater than 4 times risk of developing mental distress relative to those who were government employees [AOR=4.70; 95% CI (1.218, 18.215)].

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

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

Discussion

Prevalence of Mental Distress

The prevalence of mental distress in the current study was 53.1% (52.6% in the medical ward, and 53.7% in the surgical ward). This finding was relatively comparable with the study reported from Korea among surgical inpatients, South African hospitals, and elsewhere in Ethiopia in hospitalized inpatient caregivers were 48.0%, 49.7%, 54.6%, and 56.7% respectively.^{12–15} The prevalence in this study was relatively lower than that from the studies conducted in Pakistan, Harari Regional State, Debre Markos, Felege Hiwot hospital, and Gondar University hospital, Ethiopia was 87.9%, 59.7%, 61%, and 58.6% respectively.^{16–19} This variation might be as a result from global prioritizing of mental health 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 within and after discharge from hospitals, relative increase in mental and psychological counseling and even change in methodological approach.

The prevalence in this study was relatively higher than the studies reported from Saudi Arabia, Iran, India, United Kingdom, Northeast Brazil, South Brazil, Uganda, and Nigeria which was 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, Menelik II hospital, Ethiopia which was 5.4%, 20.6%, 38%, 22.1%, 27.1%, and 23.2% respectively.^{5,30–34} This variation might have resulted from a methodological difference or study population, where data were taken from chronic medical-surgical and trauma inpatients including intensive care unit inpatients, difference in screening and diagnostic questionnaire tool used; some researchers used Kessler scale, Burden Assessment Scale, Hospital Depression, Anxiety and Stress Scale to measure mental distress and other sociodemographic and environmental factors may have increased the prevalence of mental distress in this study.

Factors Associated with Mental Distress in Hospitalized Inpatients

In this study, marital status of being married was an important factor which was statistically associated with mental distress with almost 2.7 times more positively associated with distress than being unmarried. This result of the study was similarly consistent with the study reported from Korea, Gondar University hospital, Ethiopia, and Geneva University Hospital, Switzerland respectively.^{10,31,35,36} The reason that those who were married were more likely to develop mental distress might be because they held more responsibility in their home, eg, family and child care, imbalance of demand and supply of resources for their family during being paired and poor communication and socialization within the family and other socioeconomic factors might have caused the possible difference..

Inpatients living in rural areas were two times more significantly associated with having mental distress than those living in urban areas but, in other studies living in rural areas was not significantly associated with mental distress. This might have resulted from patients living in the rural districts possibly having a poor perception of lifestyle modification, relaxation, recreation, and other luxuries for the management of distress and low levels of seeking psychological and mental health counselors or consultations.

In this study being a private employee was more than 2 times positively associated with mental distress compared to being a government employee and this association was also similar and in line with the studies revealed from

Table 5 Factors Associated with Mental Distress Among Study Participants in Public Hospitals, Addis Ababa, Ethiopia, 2020 (n=408)

Variables	Category	Mental Distress		Crude Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
		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, 4.94)	2.67 (1.065, 6.683)*
	Divorced	14	8	2.80 (0.865, 9.06)	2.70 (0.755, 9.689)
	Widowed	10	16	1.00	1.00
Residence	Rural	89	52	1.88 (1.234, 2.85)	1.85 (1.047, 3.264)*
	Urban	124	136	1.00	1.00
Education	Cannot 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, 3.05)	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, 4.41)	2.21 (1.001, 4.900)*
	Merchant	27	34	1.37 (0.674, 2.76)	1.57 (0.651, 3.790)*
	Farmer	61	37	2.84 (1.495, 5.37)	1.62 (0.636, 4.108)
	Housewife	29	20	2.50 (1.174, 5.297)	1.93 (0.729, 5.089)
	Daily laborer	11	5	3.78 (1.17, 12.15)	4.70 (1.218, 18.215)*
	Others	12	13	1.59 (0.629, 4.010)	1.82 (0.590, 5.616)
Monthly income	Low	125	88	1.61 (1.087, 2.397)	1.17 (0.681, 1.994)
	High	88	100	1.00	1.00
Alcohol	Yes	78	55	1.29 (0.844, 1.964)	1.68 (1.025, 2.740)*
	No	135	133	1.00	1.00
Previous history of psychiatric illness	Yes	14	4	3.24 (1.05, 10.01)	3.40 (1.078, 10.737)*
	No	199	184	1.00	1.00
Psychiatric counseling	Yes	12	5	2.19 (0.75, 6.32)	1.53 (0.413, 5.685)
	No	201	183	1.00	1.00
Family history of psychiatric illness	Yes	40	21	1.84 (1.040, 3.24)	1.82 (0.972, 3.413)
	No	173	167	1.00	1.00
Comorbidity	Yes	100	57	2.03 (1.348, 3.068)	1.93 (1.200, 3.094)*
	No	113	131	1.00	1.00
Hospital stay	< 1 week	69	75	1.00	1.00
	1–2 week	66	53	1.35 (0.831, 2.204)	1.18 (0.691, 2.025)
	>2 week	78	60	1.41 (0.88, 2.259)	1.13 (0.672, 1.896)

Note: *Statistically significant at p-value < 0.05.

Abbreviation: CI, confidence interval.

Vietnam and Switzerland.^{5,35,36} This might be as a result from poor lifestyle enjoyment and devoting their time to the work place and workload, payment paid to them, poor administration and management system and having relatively low awareness. Being a daily laborer was the highest statistically associated variable, which was almost five times more highly associated with mental distress compared to being a government employee, which might be as

a result of having low income to fulfill their daily allowance, living alone and far from their family, sometimes lacking work and workload at a point of time.

Inpatients who drank alcohol were almost 1.7 times more likely to be associated with mental distress than those who did not drink alcohol. This result was extended to the study done in Australia, Gondar University hospital, Ethiopia, and Geneva University Hospital, Switzerland.^{10,37,38} The reason

might have resulted from the fact that people with alcohol abuse are responsible for neuropsychiatric disorders, domestic violence, child abuse, and neglect and productivity loss and also meet the diagnostic criteria for the majority of mental disorders, and sometimes they may develop distress in their life after time.³⁹

Participants who had a previous history of psychiatric illness had highly increased vulnerability to mental distress. Those with previous history of psychiatric illness were 3.4 times more highly associated with mental distress than those who had no previous history of illness. This might be because patients who had a history of psychiatric illness may not have fully recovered from their illness; some negative and positive psychiatric symptoms may have been present and may have been included in the screening tool diagnostic criteria and positively associated with mental distress.

Respondents with comorbidities were twice as likely to be associated with mental distress as those who had no comorbidity. This result was similar to the studies reported from Jeddah of Saudi Arabia, Jazan Province of Saudi Arabia, India, South Africa, Menelik II hospital, Hawassa, and Harari Regional State hospitals of Ethiopia respectively.^{13,17,22,24,30,32,34} This outcome might have resulted because inpatients with two or more chronic comorbidities might have a different physical illness and the self-reporting questionnaire diagnostic tool also included some symptoms of physical illness and patients with comorbidity were limited in their daily physical activities; which might result in a high report of mental distress.¹¹

Strengths and Limitations

This study has a couple of strengths. One, it used standardized and valid questionnaires. Secondly, many different variables were assessed and new variables were also added to assess mental distress among medical-surgical hospitalized adult inpatients. Our study also has some limitations. Firstly, medical-surgical hospitalized adult inpatients in private hospitals were not included. Secondly, the study was a cross-sectional study and did not describe a cause-effect relationship. Prospective and experimental studies are warranted.

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 a private employee and daily laborer, drinking alcohol, previous history of psychiatric illness, and comorbidities were statistically associated with mental

distress among hospitalized medical-surgical adult inpatients. Those healthcare providers who are working in hospitals should give special consideration to inpatients who are married, employees working in a private sector, daily laborers, those who drink alcohol, patients who have a previous history of psychiatric illness and comorbidities through their assessment and screening protocols by scheduling ongoing psycho-educational intervention that helps patients to cope with distress, empowering inpatients with knowledge and developing 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 odds ratio; BSc, Bachelor of Science; CI, confidence interval; COR, crude odds 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, Tikur Anbessa Specialized Hospital; USA, United States of America; WHO, World Health Organization.

Data Sharing Statement

Upon a reasonable request, data are available from the corresponding authors only.

Ethics Approval and Consent to Participate

Ethical clearance was obtained from Addis Ababa University, School of Nursing, and Midwifery Institutional Review Board and permission was sought from each data collection site. Written informed consent was obtained from each selected participant to confirm their willingness, and the study was conducted following the Declaration of Helsinki. Explanation of the survey purpose, description of the benefits, and an offer to answer all inquiries was made to the respondents. Also, the 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 were ensured throughout the process as no names were written down. Patients who had severe mental distress due to mental illness were linked to the psychiatry unit within their hospital for intervention.

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Author Contributions

All authors contributed to data analysis, drafting or revising the article, gave final approval of the version to be published, agreed to the submitted journal, and agree to be accountable for all aspects of the work.

Disclosure

The authors report no conflicts of interest in this work.

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