Mental distress, perceived need and barriers to receive professional mental health care among university students

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Abstract

Context: There is limited evidence on the extent of the perceived need for professional mental health care and barriers to the delivery of mental distress services among university students in low and middle-income countries.

Objective: The current study was designed to assess the prevalence of mental distress, perceived need for professional mental health care and barriers to the delivery of the service for regular undergraduate university students.

Methods: A multi-stage sampling technique was used to recruit 1135 regular undergraduate university students. Symptoms of mental distress were evaluated using the Self-Reported Questionnaire (SRQ-20) and a score of eight and above was used to identify positive cases. The perceived need for professional mental health care was assessed using one question with binary responses, whereas barriers to mental health care were assessed using Barriers to Access to Care Evaluation (BACE-30) tool. The association of demographic variables with total mean scores of BACE-III sub-scales was modeled using multiple linear regression.

Results: The prevalence of mental distress symptoms was 34.6% and the perceived need for professional mental health care was 70.5%. The top five barriers to receiving professional mental health service were (a) thinking the problem would get better by itself, (b) being unsure where to go to get professional care, (c) wanting to solve the problem by own, (d) denying mental health problem, and (e) preferring to get alternative forms of mental care.

Conclusions: The high prevalence of mental distress, mental health care gap, and the report of barriers to professional mental health care among Ethiopian regular undergraduate students is a call for action.

Keywords: Mental distress, Perceived need, Barrier, and Professional mental health care.

Background

Mental distressesare the most common type of mental health problems characterized which are by a mixture of different complaints and short duration [1]. They are non-psychotic mental health problems which consist of symptoms of depression, anxiety, and somatoform that can adversely affect the day to day activities of most individuals across the world [2, 3]. The impacts of depression and anxiety in terms of lost health are huge; according to World Health Organization (WHO) 2015 reports, of the total population of the world, over 300 million (4.4%) and 264 million (3.6%) are estimated to suffer from depressive and anxiety disorders respectively [4].

In low- and middle-income countries (LMICs), the prevalence of depression and anxiety is high, which are mostly associated with risk factors of poverty and socio-economic problems [5]. The contribution of these disorders to the global mental health burden from LMICs is high [6]. However, the accessibility of mental health service is still very low, which accounts for 76–85% treatment gap [7]. This gap is linked to

the lack of skilled human powers, policy gap, lack of access to mental health services, economic, preferring to informal treatments, lack of mental health literacy, and fear of stigma [8–10]. As a result, the majority of people living with depression and anxiety in LMICs do not receive professional mental health care [11]. But, there is significant engagement with traditional and religious healers believing that mental illnesses are caused by spirit and demon possession [9].

Prevalence of mental distress is relatively higher among university students compared to the general population [12]. In particular, students in universities worldwide are at higher risk of developing depression and anxiety [13] and these symptoms interfere with their academic performance [14]. A research evidence shows that anxiety and depression are emerging public health problem among university students because of the range of challenging stressors they experience [15]. In a cross-sectional study in the Chinese university, the prevalence of depression and anxiety were 68.5% and 54.4%, respectively [16]. In another cross-cultural a web-based survey which covered 17,348 university students from 23 high, middle, and low-income countries reported an average depression prevalence of 20% [17]. Similarly, the prevalence of depression and anxiety among Ethiopian university students ranged from 21.6–49% [18, 19].

The possible explanations for the high prevalence of anxiety and depression among university students might be linked to the overlap of their young age with the known age onset of most mental health problems including depression and anxiety [20]. The other reason could be that students at this age begin to develop their own identity, form new relationships with peers, and experience both physical and social changes which can pave the way to face different challenges in emotional, behavioral, sexual, and social aspects [21]. This age is a transition period from adolescence to early adulthood, with challenges of being away from home for the first time, and the balancing of emerging autonomy and independence [22],academic pressure, problematic substance use [23] and financial difficulties [24]. These experiences can be overwhelming and contribute to the onset, worsening, or perpetuation of depression and anxiety.

Depressive and anxiety disorders may harm university students' academic performance, their physical and psychological well beings [23], and affect their overall quality of life24]. Clinically depressed and anxious college students have significantly poorer performance on exams compared to non-clinically depressed and anxious students [25]. The prevalence of depression and anxiety among undergraduate students is alarmingly high, similarly the proportion of professional mental health treatment gap is large ranging from 37% to 84% [26], where the majority do not receive any professional mental health service [27].

Previous studies reported various reasons for not receiving formal health service by undergraduate university students with mental distress [26, 28, 29]. For instance, a study which was conducted in St. Catherine University, US, reported the main reasons for not using university counseling center were receiving help from friends or family, preference for self-management, considering their problems as not serious enough, and thinking the problem would get better by itself [28]. In addition, commonly reported barriers to mental health service were lack of perceived need, being unaware of the existence of such

services, fear of stigma, concerns about privacy, lack of time, skepticism about treatment effectiveness, socioeconomic problem [26], denial and not wanting to be labeled as “crazy” [29]. Even though the existence of mental distress, associated risk factors, and barriers to receive mental health care among university students could be similar across the world, there might be higher prevalence, more complex risk factors, lower help-seeking behavior, and higher treatment gap in LMICs compared to developed countries. For example, although the prevalence of mental distress is high among university students in LMICs, the majority of themdo not receive professional mental health care, because of a lack of skilled human and financial resources [30, 31].

Like in any other LMICs, large numbers of people in Ethiopia are affected by depression and anxiety; they are slightly higher among women compared to men [32]. These disorders are highly prevalent in the community that accounts for the pooled prevalence of 22% [32]. Depression and anxiety are associated with risk factors such as food insecurity [33], low socioeconomic status, violence, migration, and substance use [34]. The burden of these disorders in Ethiopia is increasing. For example, depression alone contributes to about 6.5% of the burden of diseases [34]. However, only few people receive professional mental health service. For instance, a meta-analysis reported that the pooled prevalence of formal mental health help-seeking behaviors and intention of people with depression is 38% and 48%, respectively [35]. In Ethiopia, most people with mental illness first contact non-professional care providers such as religious leaders and herbalists [36]. But, when the problem remains untreated by these traditional healers and when it becomes more severe, they go to psychiatric care providers [36].

Barriers to receiving professional mental health services in Ethiopia include lack of accessibility of psychiatric care, low awareness about mental health literacy, low commitment from funders to access the service,preferring informal treatments, poverty, and stigma [36–38]. Even the existing professional mental health services are mainly concentrated in the capital city of Ethiopia, Addis Ababa [39]. To scale-up the limited mental health services across the country, the government has planned to expand 100% of mental health care in the current five years of by 2020 [40]. National Mental Health Strategy which was developed in 2012 by the Federal Ministry of Health aimed to decentralize and integrate mental health care at primary health care level to make the service accessible, acceptable, and affordable for all Ethiopians [39]. It is currently under revision.

Higher education in Ethiopia began in 1950 with the establishment of the University College of Addis Ababa [41]. At present, within the nine regions and the two city self-administrations, 45 public universities train students in regular, summer, extension, and distance programs. According to the Annual abstract report of the Ethiopian Ministry of Education in 2017, there were 679,299 undergraduate students were enrolled in all programs in all public universities. Of these, 392788 students (255657 male and 137131female) were enrolled in regular undergraduate programs. The majority of the students were adolescents, single, economically dependent on their family, live in the university dormitory, full-time learner, and they came from rural and urban areas of allover Ethiopia. Moreover, these students came from diversified cultures, religions, languages, and ethnicity.

Concerning the mental health status of undergraduate students in Ethiopia, the prevalence of anxiety and depression ranged from 21.6 - 49% [18, 19]. This high prevalence rate was associated with various risk factors. For example, exposure to the new environment, low social support, family history of mental illness, conflict with friends, academic stressors, peer pressure, economic problems, lack of break, loneliness, not attending religious services, being freshman, being female, and substance use [42–44]. On the other hand, there are protective factors from mental distress among these students that include: having high social support, having an interest in the field of study, having good religious practice, having a sound relationship with roommates, being male, free from substance use, and having enough pocket money [43]. The majority of undergraduate students with mental distress do not seek formal mental health care, rather they receive treatment from informal sources such as family, friends, relatives, herbalists, and religious leaders [45].

A number of university students in LMICs is growing [46] and most of the studies which were conducted in these universities, primarily focused on assessing the prevalence of mental distress than looking at the possible cause of hesitation or reluctance to receive professional help. Therefore, the current study aimed to assess the prevalence of mental distress, the perceived need for mental health care, and to identify barriers to professional mental health care among regular undergraduate university students in Wolaita Sodo University (WSU). The findings from the current study will contribute to the existing literature by filling the literature gap on professional help-seeking intention for mental distress and the barriers to receive the service among regular undergraduate university students in LMICs.

Methods

Study setting

The current study was conducted at WSU which is one of the 45 public universities in Ethiopia. The University is located in the Sodo town of Wolaita Sodo Zone in Southern Nations, Nationalities, and Peoples' Regional State (SNNPR) of Ethiopia. Sodo town is located 320 km south of Addis Ababa, the capital city of Ethiopia on the road crossing Butajira and Alaba towns heading to Wolaita Sodo. WSU was established in 2007 as a result of the rapid expansion of access to higher education in Ethiopia over the last twelve years. The university began with an intake of 801 students (609 male and 192 female) in four faculties and sixteen departments. Currently, the university runs undergraduate and graduate programs in six colleges and five schools. During the study period, a total of 12,028 (7321males and 4707 females) regular undergraduate students were registered. These students are qualified to join the university by passing national entrance exam which is set by Ministry of Education. They are characterized by a mean age of 22 year, came from rural and urban areas, economically dependent on their family, full-time learners, and almost all of them are provided with accommodation within WSU compound. WSU has two counseling offices that aimed to provide free mental health care for these students with mental health problems and two health care centers (Ottona hospital and students clinic) that provide both physical and mental health care service. Ottona hospital provides health care service for the community and for the students with severe mental health problem by providing medication.

Study design, objectives and study period

An institution-based cross-sectional survey was conducted among WSU regular undergraduate students from December 4 of 2017 to January 5 of 2018. The objective was to estimate the prevalence of mental health problems, perceived need, and to identify barriers for professional mental health care.

Sample size

Sample size of 1135 was estimated with assumed prevalence rate of mental distress 40.9% [43], precision of ±3%, 95% confidence interval, and 10% non-response considered. For the other two objectives (perceived need and barriers to receiving professional mental health care) separate sample size was not estimated. All participants who were screened positive for mental distress were used as the denominator to estimate the proportion of students having perceived need to receive professional mental health care. Those participants who had mental distress symptoms but who did not receive mental health services from professionals in the past three months were eligible to be part of the study.

Sampling and procedures

A stratified multistage sampling technique was used to recruit study participants. List of students' names was obtained from the main registrar office of the University. The first name of the first participant was selected randomly, and then the remaining participants were selected using systematic random sampling. To accomplish this process, the first step was stratifying regular undergraduate students by their schools/colleges (six colleges and five schools). In the second step, the total sample size was allocated into the 11 strata using probability proportional to the number of the students as a measure of size. The third step was selecting participants from each school and college based on the proportion of the size of each department. The fourth step was selecting participants from each level of study year based on the proportion to each year. Then, the final step was randomly selecting the first participant and systematically selecting the rest participants from each level and section of the study year.

Measurements

The survey questionnaire consisted of four parts, namely, demographic variables, mental health measure, the perceived need for professional mental health care, and barriers to access the service. Participants' sex, age, religion, ethnicity, marital status, current place of living, area of growing up, department, level of the study year, family history of mental illness and substance use are all documented in the demographic characteristics questionnaire.

Self-Reported Questionnaire (SRQ–20): It is a screening tool for mental distress developed by WHO [47]. SRQ–20 is a self-report instrument with 20 binary responses (yes/no) questions. It has the potential of

detecting cases and non-cases with sensitivity ranging from 63–90 and specificity ranging from 44–95 [48]. WHO recommends SRQ–20 as a reliable and valid instrument to detect general Common Mental Disorders [48]. It was developed specifically for use in LMICs [47]. SRQ–20 has been previously translated into Amharic language in Ethiopia, locally validated [49, 50], and used in different community surveys [51–53] and institution-based surveys [18, 19, 43, 54] with cut-off points > 4 [54], > 7 [19], > 8 [43] and > 11 [18]. SRQ–20 has good psychometric properties (i.e. sensitivity 86% and specificity 84%) for detecting individuals with mental distress in the Ethiopian population with an optimal cut-off point at >8 [55]. To identify cases in the current study, a cut-off point of >8 was used based on a previous validation study of SRQ–20 in Ethiopia that resulted in good sensitivity and specificity using a cut-off point of 8 [55]. In the pilot data collected from 38 undergraduate students in a similar population but in a different setting to the current study, the internal consistency was 0.77*.*

The perceived need for professional mental health caremeasuring questionnaire*:* Perceived need for professional mental health services in the past three months was measured using a question used in the previous studies [56, 57]. The question is phrased as follows: 'Was there a time when you thought you should see a doctor, counselor or other health professionals for your mental distress, but you did not go in the past three months?' with the response options of Yes/No. "Yes" response implies the perceived need for mental health care but not received in the past three months; whereas "No" response implies no need for mental health care for mental distress. The perceived need for professional mental health care implies the number of students who needed professional mental health care (those who answered "Yes") but did not receive the service in the past three months, because of barriers to receive the service.

Barriers to Access to Care Evaluation (BACE-III):BACE was originally developed to identify barriers to receiving professional mental health service for people with mental health problems [58]. It has 30-items to be completed by the participant (self-complete measure).This instrument has good psychometric properties (i.e. validity, reliability, and acceptability) [58]. BACE-III has three dimensions of potential barriers of stigma (12-items), attitudinal (10-items) and instrumental (8-items) related. This instrument asks about a range of issues that have ever stopped, delayed or discouraged an individual from receiving professional care for a mental health problem in the past three months. The response scale ranges from 0 (not at all) to 3 (a lot) and higher score indicates a greater barrier. Six of the thirty items contain a fifth option: "Not applicable". Findings for each barrier are presented in three ways: mean score for the item, barrier to any degree (the percentage circling 1, 2 or 3) or major barrier (the percentage circling 3) based on BACE-III manual for researchers.

For the current study, BACE-III was translated into the Amharic language by two Amharic language experts whose first language is Amharic and their second language is English. One expert who knows the subject matter translated the instrument based on the BACE-III translation guide. The masked back-translation was made by two English language experts and one mental health expert. The research team compared the back-translated instrument with the original version of BACE-III and agreed upon the consistency of the translation. The translated BACE-III was piloted on 40 undergraduate students in a

similar population but in a different area of the current study setting resulting in the internal consistency measure of 0.85.

After the pilot study, the authors examined the applicability of each question in the university set-up and noticed that item number 27 and 28 need some modifications. Discussion was made with a mental health expert who has experience of adapting mental health instruments. Then question number 27 which says ‘difficulty taking time off work’ was modified as ‘difficulty taking time off education’ and question number 28 which says ‘concern about what people at work might think, say or do’, was modified as ‘concern about what students might think, say or do’. The final version of the instrument was administered to students who scored eight and above on the SRQ–20 and who had a need (those who answered “Yes”) to receive professional mental care in the past three months of the study period. The internal consistency of the BACE-III scale after the revision was 0.81. Those participants who answered “No” for the perceived need for mental health need measuring questionnaire were asked ‘In the past three months, did you receive help from a psychologist, doctors, friends, family, religious leaders or traditional healers?’ by skipping the BACE-III questionnaire.

Training of data collectors and data collection procedures

Classroom representatives were served as data collectors. Half a day training was given by the principal investigator for data collectors about the aim of the research, the contents of data collection tools, how to approach participants, ethical issues and responsibility of controlling missing data. The classroom representatives both males and females were contacted by the researcher through the help of their department heads, because they had cell phone numbers of each classroom representative. Then, by the assistance of the classroom representatives, the participants came to the selected lecture halls and class rooms and, then the data collectors explained the aim of the study. Finally, after the verbal agreement was received, the data collectors started to collect the data by explaining the instructions of all questionnaires with the close supervision of the principal investigator. To protect the confidentiality of the participants, personal identifiers were not included in the questionnaires; instead, a code was applied.

The data collection was carried out before the arrival of final examination to control inflation of the prevalence of mental distress. Those who scored eight and above on SRQ–20 were asked to answer the questions about the perceived need for professional mental health care, whereas the rest who scored bellow eight on SRQ–20 could not be allowed to pass onto the next questionnaires. Those who answered “Yes” to the perceived need for professional mental health questionnaire were asked to answer BACE-III questionnaire. Participants who answered “No” skipped BACE-III and answered why they did not need mental health treatment in the past three months. Finally, after the participants completed the self-administered questionnaires, the data collectors immediately checked the existence of incomplete and missed information before the participants left the room.

Data management and analysis

Data cleaning and cross-checking were done before analysis using Statistical Packages for the Social Sciences (SPSS version 20). Descriptive statistical measures (i.e. percentage, frequency, mean, and standard deviation) were employed to summarize demographic characteristics of the participants and to identify barriers to mental health care service. Multiple linear regression was used to model the association between demographic variables with a mean score of attitudinal, instrumental, and stigma-related barriers with receiving professional mental health service. Univariate regression analysis was used to examine the association of each demographic variable with the total mean scores of attitudinal, instrumental, and stigma-related barriers to receive professional mental health care. Multivariate regression analysis was used to examine the interaction of all demographic variables together to identify variable which are significantly associated with each mean total score of the three dimensions of BACE-III after adjusting for the other variables. The result was reported as being statistically significant whenever the p-value is less than 0.05.

Ethical considerations

Ethical clearance for the conduct of the study was obtained from the Institutional Review Board (IRB) of Addis Ababa University College of Health Sciences. Information sheet containing details of the research and rights of the participants was attached to the questionnaire. Oral informed consent was obtained from the respondents. Finally, the obtained data were kept anonymous and confidential during all stages of the research.

Results

Demographic Characteristics

A total of 980 regular undergraduate students completed the screening phase survey from the whole sample of 1135 students approached, yielding 86.34% response rate. One third (34.6%) of the participants were scored eight and above on SRQ–20.The majorities (60.5%) were males, and there was no significant difference in the male to female ratio among those who scored positive to mental distress. The age of the participants ranged from 17 to 38 years with a mean age of 21.53 years (SD = 2.42). The participants were from diverse ethnic groups where the majorities (34.6%) and (20.9%) were from Amhara and Wolaita ethnic groups respectively. Regarding marital status, 82.8% were single and 95.3% were living in the campus. Over half (54.7%) were from urban backgrounds. Concerning the level of the study year, 27.7%, 26.6% and 25.9% were first-year, second-year third-year regular undergraduate students respectively.

Table1. Demographic characteristics of the study sample

Mental distress

The prevalence of mental distress was 34.6% with no significant gender difference (51.9% among males and 48.1% among females). The item-based response of study participants to the SRQ–20 are summarized in figure 1. The top three frequently reported symptoms were: loss of interest in things (37.60%), being tired (36.90) and thought of ending one's life (36.80%). The least reported symptom was handshaking (19.7%).

Figure1: Prevalence of mental distress and its distribution of specific symptom

Perceived need for professional mental health care

Of 339 participants with elevated symptoms of mental distress, 70.5% reported perceived need for professional mental health treatment in the past three months with no significant gender difference (male: 72.2% and female: 68.7%). The remaining 29.5% did not report a need for professional mental health treatment because they have received the service from informal sources (25.5% from religious leaders, friends, family, and traditional healers) and formal sources (4% from doctors and psychologists).

Barriers to seeking professional mental health care for mental distress

Three hundred thirty-nine participants (176 male and 163 female) were screened positive for mental distress. Of this, 239 (127 male and 112 female) did not receive professional mental health treatment in the past three months, because of barriers to receive the treatment although they needed to get the care as in table 2. This table shows mean score of an individual item, standard deviation, percentage to any degree (circling 1, 2 and 3) and major barriers (circling 3) for the perceived barrier to professional mental health treatment.

The minimum percentage of the individual item reported as 'any degree' for the BACE-III was 16.7% (having had previous bad experiences with professional care for mental health) and the maximum percentage is 74.4% (thinking the problem would get better by itself). The lowest and highest mean score with a standard deviation of each BACE-III item range from (M = 0.30, SD: 0.76) 'having had previous bad experiences with professional care for mental health' to (M = 1.65, SD: 1.22) 'thinking the problem would get better by itself'.

The top five barriers to receive professional mental health care reported percentage greater than 60% to any degree (sum of responses of a little, quite a lot or a lot) were: 'thinking the problem would get better by itself' with 74.4% of the participants reported percentage to any degree and 37% thought that it would act as a major barrier to receive professional mental health services. The second is 'being unsure where to go to get professional care' which accounted for 71.6% and reported as a major barrier with 21%.

The third top reported barrier was ‘wanting to solve the problem by own’ whereby 71% of participants reported that this would serve as a barrier to any degree and 28% thought that it would act as a major barrier to them seeking professional mental help. The fourth is ‘denying mental health problem’ in which 67.4% of the participants reported as a barrier to any degree of receiving professional mental health care and 38% of them reported as it would act as a major barrier. The fifth one is ‘preferring to get alternative forms of care’ reported as any degree of the barrier to receiving professional mental care by 67% while 34% of the participants reported it as a major barrier to receive formal mental health service in the university. Of these five barriers, except being unsure where to go to get professional care, the remaining top four were attitudinal-related barriers to receiving professional mental health services in the university.

Table 2: Barriers to receiving professional mental health care among students with mental distress who have not received professional mental health care in the past three months.

Description of the three dimensions of BACE-III

Mean score of attitude related sub-scale of BACE-III (M = 1.26, SD = 0.68) was the highest compared to instrumental related barrier sub-scale (M = 0.78, SD = 0.43) and stigma related barrier sub-scale (M = 0.61, SD = 0.65) of BACE-III (Table 3).

Table 3: Mean and standard deviation of attitudinal, instrumental and stigma-related barriers (n = 239)

Predictors of attitudinal related barriers to receiving professional mental health care

In univariate linear regression analysis (table 4), being fourth year students (β = 0.27; 95%CI = 0.24, 1.16; p = 0.003) was statistically significantly associated with attitudinal-related barriers to receive professional mental health care. In multiple regression analysis, being fourth year students (β = 0.26; 95%CI = 0.21, 1.15; p = 0.01) was the only variable that scored significantly higher to their counterparts on attitudinal-related barriers to receive professional mental health service.

Table 4: Predictors of attitudinal related barriers to receiving professional mental health care in univariate and multivariable linear regression (n = 239)

Predictors of instrumental related barriers to receiving professional mental health care

In univariate regression analyses (table 5), female students (β = -.15; 95%CI = -.24, -.02; p = 0. 02) scored significantly lower mean score on instrumental-related barriers whereas, students who came from rural areas (β = 0.18; 95%CI = 0.04, 0.26; p = 0. 01), fourth year students (β = 0.28; 95%CI = 0.17, 0.76; p =

0.002), students who reported history of mental illness in the family (β = 0.16; 95%CI = 0.05, 0.43; p = 0.01) and students who reported experience of substance use (β = 0.15; 95%CI = 0.03, 0.36; p = 0.02) scored significantly higher mean score on instrumental related barriers. A one year increase in age is associated with 0.19 unit increased in instrumental-related barriers to professional mental health service. In multivariable analysis, students from rural areas (β = 0.16; 95%CI = 0.03, 0.25; p = 0.01), second year students (β = 0.27; 95%CI = 0.02, 0.52; p = 0.03) and fourth year students (β = 0.29; 95%CI = 0.19, 0.77; p = 0.001) scored significantly higher to their counterparts on instrumental related barriers to receive professional mental health care.

Table 5: Predictors of instrumental related barriers to receiving professional mental health care in univariate and multivariable linear regression (n = 239)

Predictors of stigma related barriers to receiving professional mental health care

In univariate regression analyses (table 6), being from rural areas (β = 0.13; 95%CI = .00, 0.33; p = 0.05), having family history of mental illness (β = 0.13; 95%CI = 0.01, 0.57; p = 0.05) and having experience of substance use (β = 0.13; 95%CI = .00, 0.49; p = 0.05) scored significantly higher mean score on stigma related barriers. A one year increase in age is associated 0.17 unit increase in stigma-related barriers to professional mental health services. In multivariable analysis, being fourth year students (β = 0.24; 95%CI = 0.14, 1.02; p = 0.01) was associated with significantly higher score on stigma-related barriers to receive professional mental health service compared to fifth year students.

Table 6: Predictors of stigma related barriers to receiving professional mental health care in univariate and multivariable linear regression (n = 239)

Discussion

In the present study there is high prevalence of mental distress and perceived need for professional mental health care among university students. The top five frequently reported barriers for not receiving professional mental health service were: thinking the problem would get better by itself, being unsure where to go to get professional care, wanting to solve the problem by oneself, denying mental health problem, and preferring to get alternative forms of care. Rural background and being in a fourth-year were significant barriers to receiving formal mental health service among the students.

The prevalence of mental distress which is reported in the present study is higher than what has been reported in the meta-analysis of the general population studies in Ethiopia [32]. Perhaps our finding may not be surprising, because university students are more likely than the general population to be exposed to mental distress [12]. The possible difference between individual studies reviewed in the meta-analysis [32] and the present study could partly attributed to the discrepancy in data collection instrument, cut-off points used, data collection time, age group, and setting.

The current prevalence of mental distress is higher than what has been reported in previous studies conducted among university students [18, 59]. One possible reason for the discrepancy is the difference in the cut-off values used to define mental illness [18, 59]. The other explanation for the difference might be resulted from not using locally validated instrument [59]. The current finding is lower than what was reported in previous studies in Ethiopian universities [45, 60]. The first possible justification for the difference might be data collection instrument being used to screen mental distress [45, 60]. The second possible reason for the difference could be data collection time in which exam was approaching [60]. The present finding is comparable with a study report conducted in Jima University [42]. This might be resulted from similarity of the data collection tool and the cut-off points used to define mental distress.

The high prevalence of perceived need for professional mental health services in the current study suggests that most students with mental distress in Wolaita Sodo University remain untreated. This may not be astonishing, because most universities in LMICs are ill-equipped to solve students' mental health problems [46]. Previous study also reported that only a few numbers of university students receive mental health services for their mental health problems [61]. Mental health treatment gap adversely affects students' academic result [14], health, social life and cognitive outcomes [62]. Our finding is higher than what has been reported in the general population of Ethiopia. In a meta-analysis of Ethiopian studies the pooled prevalence of the help-seeking intention of people with depression in Ethiopia is 42% [35] which is much lower than the current finding. The possible explanations for the difference could be difference in mental health literacy, study population and data collection instruments being used.

However, the present perceived need for treatment is lower than what has been reported by a study conducted among rural Chinese adults, where 80% of the participants needed to receive formal mental health service for their mental illnesses [63]. The main difference with the current study are the participants in the Chinese study [63] were rural adults, but in the present study, respondents were adolescents. As evidence shows as age increases, the need to receive mental health care also increases [64], so that adults may have more help-seeking intentions than adolescents, because of having more increased mental health literacy [65]. The other possible difference can be culture difference affects treatment preference, in the Chinese study [63] 72% of the participants preferred care from formal sources, but in Ethiopia, the majority of university students received mental health treatments from informal sources [45]. Our study supports previous web-based survey reporting that 37% to 84% of university students screened positive to mental distress did not receive any professional mental health service [26]. The similarity of the result may be, due to using similar data collection tool and similar age group of participants.

Among the top five reported barriers for receiving professional mental health service by the students who recognized a need for care, the first was thinking mental distress would get better by itself. This indicates that students perceive mental distress would get better without receiving any treatment, which may be associated with considering mental health problems as not serious so that they become reluctant to use available mental health services [62] and it may also be associated with having poor mental health

literacy [66]. The current finding supports a prior study reporting that the majority of college students believed that time by itself would solve their mental health problem [56].

The present study shows that most undergraduate students with mental distress had no information about where to find professional mental health services at the university, even if WSU has two counseling offices established to help students mainly with mental health problems and a teaching referral hospital that provides physical and mental health services for the community and the students as well. The information gap is probably caused by lack of awareness creation about their services done by the university mental health service providers. Our finding supported by prior studies, where the majority of university students had no information about the availability of mental health service in their university [67, 68].

Wanting to solve mental health problem by oneself is reported as the third common barrier to receive mental health service in the present study. This suggests that most students may not want to share their mental health problems with professionals so that they need to handle the problem by themselves. This is possibly due to perceiving their problem as not serious or transit or being skeptical about the effectiveness of professional mental health service [26]. As a result, they may prefer to manage their mental health problem using a healthy coping mechanism like problem-solving [69] or using unhealthy coping strategies such as substance use and isolation [70]. The present finding supports the past studies reporting a major barrier for receiving formal mental health service among university students with mild to moderate depression and anxiety was preferring to self-medication [71, 72].

The fourth barrier identified in the present study is denying mental health problems. Students may not want to recognize their mental health problems due to lack of knowledge about mental illness [66] or they may deny their mental health problem as a coping strategy by rejecting the reality and not taking appropriate action to treat their problem [70]. Our finding supports prior study finding reporting the majority of university students deny mental health problems that hindered them to receive professional mental health care [29].

The fifth commonly reported barrier for using professional mental health service is preferring to get mental health service from informal sources. This suggests that majority of students receive mental health help from friends, family, relatives, religious leaders, and traditional healers [45], which is also common practice in the general population of Ethiopia [73]. The present finding also supported by previous studies, where informal sources of mental health care reported by college students as a reason for not to receive mental health services in their university [66, 74].

Interestingly, the current study found that fourth-year students with mental distress are more likely than other level of study years to report attitudinal, instrumental, and stigma related treatment barriers. The reason can be the majority of fourth-year students in the present study were from engineering department. Students from this department are more likely to be exposed to mental distress, due to heavy course loads both in theories and application [75]. Hence, they may encounter more barriers to receiving professional mental health services compared to other fields of study [76]. However, our finding

contradicts with a study finding reporting that first-year students are more likely than their junior and senior students to perceive a greater number of barriers to receive professional mental health care [29]. The result difference with the present study could be due to difference in data collection tool, study setting, and sample size in each level of the study year. Caution in the present study, the number of fourth-year students is small.

Our study also found that students from rural backgrounds are more likely than students from urban areas to face instrumental-related barriers to seeking professional mental health care. This might be because of adolescents from rural areas may not have increased knowledge of mental illnesses so that they may not have sufficient information about the availability of free mental health services in the university and they may not be psychologically open toward professional mental health services [77]. Our finding confirms with the past study conducted in Australia reporting that adolescents from rural areas have more instrumental-related challenges for receiving formal mental health care than adolescents from urban areas [78]. Our study also shows that second-year students reported more instrumental-related barriers like fourth-year students. This is probably due to the interaction effects of other controlled variables in the adjusted model. This may need further study in the future.

The present study implies that mental distress is prevalent among undergraduate students. Likewise, the need to receive professional mental health services is increasing, even though the students could not be able to receive the service provided in the university due to attitudinal, instrumental and stigma-related barriers particularly fourth-year engineering students and students who came from rural areas. This needs designing practical mental health interventions to treat their mental distress, otherwise, it affects their health, social life, and academic results [23].

Therefore, the present findings provide useful information and directions for university mental health service providers to create awareness about mental health problems and their service, benefits of receiving professional mental health care, and when and where to seek professional mental health support by distributing flyers, preparing training, and mental health day. All these together enhance to develop active university-based mental health intervention to reduce the prevalence of mental distress and to satisfy the need for receiving professional mental health service by minimizing the reported major barriers. The present study investigated some demographic predictors of barriers to receiving professional mental health care, but further study is necessary to examine the associations of other variables such as mental health literacy and academic results with barriers to receiving professional mental health services. Furthermore, future research is needed to study predictors of perceived need for professional mental health care among undergraduate students.

Any research has its own limitations; similarly, the present study is not limitations free. First, data were collected using self-reported questionnaires so that recalling bias may occur to remember mental distress symptoms that happened in the past one month and rating the degree of barriers to receive professional mental health care may be difficult to remember. Second, barriers to receiving mental health care measuring instrument was not locally adapted, although it is properly translated and piloted for the

present research. Third, a screening tool was used to identify participants positive to mental distress; it would have been better to use a diagnosis tool. Fourth, the study was a cross-sectional design that cannot show causality among variables. Fifth, data collectors were classroom representatives so that they might be in a position to know the participants' response to each item while checking missing data during they return the questionnaire. Six, since the participants were recruited from a single public university, it is difficult to generalize the result to all public universities and private colleges that are found in Ethiopia.

Despite the limitations mentioned above, the present study has some strengths. First, a large number of students were participated in the prevalence study. Second, the study used a locally adapted instrument, SRQ–20. Third, the research contains findings of the prevalence of mental distress, perceived needs, and barriers to receiving professional mental health services together, so that this information all together can serve as input for the future feasibility study of mental health interventions for mental distress among university students.

Conclusion and recommendation: the present study shows that the prevalence of mental distress and perceived need for professional mental health service was high among regular undergraduate students at Wolaita Sodo University. The top five perceived barriers for not to receive professional mental health service in this university were: thinking the problem would get better by itself, being unsure where to go to get professional care, wanting to solve the problem by oneself, denying mental health problem, and preferring to get alternative forms of care. So, to alleviate these problems, students need to receive professional mental health interventions in the university. Hence, mental health providers in the university should make their services accessible to the students, because the majority of the students did not know where to get mental health services at the university.

Besides the interventions, developing preventive mental health education strategy is essential to minimize the prevalence of mental distress by creating conducive environments that promote and sustain positive mental health for every student. Moreover, preparing mental health celebration day in the university can play a great role in changing the attitude of students toward receiving mental health care and improving mental health literacy, because out of the five major barriers, four of them were attitudinal-related. In this celebration day, creating awareness about the treatability of mental distress like any other physical illness, benefits of receiving mental health care from professionals, recognizing mental distress to search solution in the early stage, and educating students to receive mental health care from professional parallel withreceiving treatment from alternative sources are very important. Therefore, this is an alarm call for action from university administrations, university mental health care providers, and the Ministry of Science and Higher Education for helping undergraduate students with mental distress and preventing this problem.

Abbreviations

BACE, Barriers to Access to Care Evaluation; LMICs' Low and Middle Income Countries; SNNPR, Southern Nations, Nationalities, and Peoples' Region; SRQ, Self-Reported Questionnaire; SPSS; Statistical Packages for Social Sciences; WHO, World Health Organization, and WSU, Wolaita Sodo University.

Declarations

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Author contributions

AN led to conceiving the study, supervision of data collection, developed study design, data analysis, interpretation of the findings, drafted manuscript and revised the manuscript for submission in consultation with co-authors. MA contributed to data analysis, commenting on all drafts of the manuscripts, interpretation of the findings, and feedback. GM contributed to data analysis, commenting on all drafts of the manuscripts, interpretation of the findings, and feedback. DW was involved in data analysis, commenting on all drafts of the manuscripts, interpretation of the findings, and feedback. MA led to conceiving the study, data analysis, commenting on all drafts of the manuscripts, interpretation of the findings, and feedback. All co-authors have approved the final version of the manuscript.

Competing interests

The authors declare that they have no competing interests.

Consent for publication

Not applicable.

Ethics Approval and Consent to Participate

Ethical clearance approval obtained from the Institutional Review Board (IRB) of Addis Ababa University College of Health Sciences. Respondents took part in the study after providing oral consent. Data kept anonymous and confidential during all stages of the research process. Protocol number: 045/17/Psych.

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Tables

Table1: Demographic characteristics of the study sample

Variables	Total Sample (n) % N (980)	Screened positive for mental distress (n) % N (339)	Participants with mental distress who have not received formal Mental Care % N (239)
Sex			
Male	593 (60.5)	176 (51.9)	127 (53.1)
Female	387 (39.5)	163 (48.1)	112 (46.9)
Age			
Mean	21.53	21.21	21.22
SD	2.42	1.95	1.82
Minimum	17	18	18
Maximum	38	30	28
Religion			
Christian Orthodox	543 (55.4)	241 (71.1)	164 (68.6)
Christian Protestant	330 (33.7)	50 (17.7)	46 (19.2)
Islam	80 (8.2)	30 (8.8)	22 (9.2)
Christian Catholic	8 (0.8)	2 (0.6)	2 (0.8)
No religion	8 (0.8)	4 (1.2)	3 (1.3)
Others	11 (1.1)	2 (0.6)	2 (0.8)
Ethnicity			
Amhara	339 (34.6)	164 (48.4)	110 (46.0)
Oromo	155 (15.8)	58 (17.1)	41 (17.2)
Wolaita	205 (20.9)	44 (13)	35 (14.6)
Gurage	80 (8.2)	24 (7.1)	15 (6.3)
Tigre	24 (2.4)	11 (3.2)	8 (3.3)
Sidama	58 (5.9)	9 (2.7)	7 (2.9)
Hadiya	32 (3.3)	8 (2.4)	6 (2.5)
Gamogofa	30 (3.1)	8 (2.4)	6 (2.5)
Others	57 (5.7)	13 (3.9)	11 (4.6)
Marital status			
Single	811 (82.8)	268 (79.1)	194 (81.2)

In a relation	114 (11.6)	50 (14.7)	31 (13.0)
Married but not living together	35 (3.6)	11 (3.2)	9 (3.8)
Divorced	14 (1.4)	7 (2.1)	3 (1.3)
Married and living together	6 (0.6)	3 (0.9)	2 (0.2)
Residency			
In Campus	934 (95.3)	320 (94.4)	223 (93.3)
Off Campus	20 (2)	8 (2.4)	7 (2.9)
Both	26 (2.7)	11 (3.2)	9 (3.8)
Area of growing			
Urban	536 (54.7)	176 (51.9)	127 (53.1)
Rural	444 (45.3)	163 (48.1)	112 (46.9)
Level of study year			
First year	271 (27.7)	117 (34.5)	81 (33.9)
Second year	261 (26.6)	85 (25.1)	58 (24.3)
Third year	254 (25.9)	84 (24.8	67 (28.0)
Fourth year	96 (9.8)	28 (8.3)	18 (7.5)
Fifth year	98 (10.0)	25 (7.4)	15 (6.3)
Family history of mental illness			
Yes	67 (6.8)	34 (10.0)	22 (9.2)
No	913 (93.2)	305 (90.0)	217 (90.8)
Substance use			
Yes	58 (5.9)	39 (11.5)	31 (13.0)
No	922 (94.1)	300 (88.5)	208 (87)

Table 3: Mean and standard deviation of attitudinal, instrumental and stigma-related barriers (n = 239)

BACE-III Sub scales	Mean	Standard Deviation
Attitudinal-related barriers	1.26	0.68
Instrumental-related barriers	0.78	0.43
Sigma-related barriers	0.61	0.65

Attitudinal related barriers							
Variables		**Univariate**			**Multivariable**		
		Beta	95% CI	P-value	Beta	95% CI	P-value
Sex	Male (Ref.)	-	1.14, 1.38	<0.01			
	Female	.001	-.17, .18	.99	.01	-.17, .19	.87
Age		.09	-.02, .08	.18	.01	-.05, .06	.93
Area of growing	Urban (Ref.)	-	1.12, 1.36	<0.01			
	Rural	.03	-.13, .22	.63	.03	-.14, .21	.70
Level of study years	First year	.01	-.36, .38	.97	.002	-.42, .42	.99
	Second year	.03	-.33, .43	.80	.03	-.36, .46	.82
	Third Year	.11	-.20, .54	.37	.11	-.22, .57	.39
	Fourth Year	.27	.24, 1.16	.003	.26	.21, 1.15	.01
	Fifth Year (Ref.)	-	.80, 1.48	<0.01			
Family mental illness history	No (Ref.)	-	1.14, 1.32	<0.01			
	Yes	.12	-.01, .59	.06	.11	-.05, .56	.10
Substance use	No (Ref.)	-	1.15, 1.33	<0.01			
	Yes	.07	-.126, 0.39	.32	-.003	-.28, .27	.96
R2						**0.08**	

Note. Reference category results for multivariable were: β = 1.04; 95% CI: -.37, 2.45; P = 0.04. **Ref.** = Reference category for univariate regression analysis and CI = Confidence Interval for β.

Table 4: Predictors of attitudinal related barriers to receiving professional mental health care in univariate and multivariable linear regression (n = 239)

		Instrumental related barriers					
Variables		**Univariate**			**Multivariable**		
		Beta	95% CI	P-value	Beta	95% CI	P-value
Sex	Male (Ref.)	-	.77, .92	<0.01			
	Female	-.15	-.24, -.02	.02	-.10	-.20, .02	.12
Age		.19	.02, .07	.004	.13	-.01, .07	.09
Area of growing	Urban (Ref.)		.64, .78	<0.01		.	
	Rural	.18	.04, .26	.01	.16	.03, .25	.01
Level of study years	First year	.11	-.13, .34	.39	.23	-.05, .47	.11
	Second year	.14	-.10, .39	.25	.27	.02, .52	.03
	Third Year	.14	-.10, .37	.27	.23	-.02, .47	.07
	Fourth Year	.28	.17, .76	.002	.29	.19, .77	.001
	Fifth Year (Ref.)		.42, .86	<0.01			
Family mental illness history	No (Ref.)		.70, .82	<0.01			
	Yes	.16	.05, .43	.01	.09	-.05, .32	.15
Substance use	No (Ref.)		.70, .82	<0.01			
	Yes	.15	.03, .36	.02	.09	-.05, .28	.17
R2						**0.14**	

Note. Reference category for multivariable: β = -.16; 95% CI = -1.02, 0.70 p = .72. **Ref**. refers to reference category for univariate regression analysis and CI = Confidence Interval for β

Table 5: Predictors of instrumental related barriers to receiving professional mental health care in univariate and multivariable linear regression (n = 239)

Stigma related barriers							
Variables		**Univariate**			**Multivariable**		
		Beta	95% CI	P-value	Beta	95% CI	P-value
Sex	Male **(Ref.)**	-	.49, .72	<0.01			
	Female	.01	-.15, .18	.84	.06	-.09, .25	.34
Age		.17	.01, .10	.01	.12	-.01, .09	.14
Area of growing	Urban **(Ref.)**		.42, .65	<0.01			
	Rural	.13	.00, .33	.05	.12	-.01, .32	.07
Level of study years	First year	.02	-.32, .37	.89	.12	-.23, .55	.42
	Second year	-.002	-.36, .36	.99	.08	-.27, .50	.56
	Third Year	.13	-.18, .54	.32	.18	-.11, .62	.17
	Fourth Year	.24	.14, 1.01	.01	.24	.14, 1.02	.01
	Fifth Year **(Ref.)**	-	.19, .83	<0.01			
Family mental illness history	No **(Ref.)**	-	.50, .67	<0.01			
	Yes	.13	.01, .57	.05	.09	-.0, -.48	.18
Substance use	No **(Ref.)**		.49, .67	<0.01			
	Yes	.13	.00, .49	.05	.07	-.11, .40	.27
R2						**0.10**	

Note. Reference category for multivariable: β: -.60; 95% CI = -1.91 to .72; p = 0.37. **Ref**. refers to reference category for univariate regression analysis and CI= Confidence Interval for β.

Table 6: Predictors of stigma related barriers to receiving professional mental health care in univariate and multivariable linear regression (n = 239)

Barriers to Mental Health Care	Mental Distress who did not receive professional mental health treatment (N = 239)		Total (N)	Item Mean and (SD)
	Barrier to any degree % (n)	Major barrier % (n)		
Stigma-related barriers				
Concern about what my family might think, say, do or feel	48.1 (115)	18.4 (44)	239	0.98 (1.18)
Concern that I might be seen as weak for having a mental health problem	38.9 (93)	14.2 (34)	239	0.76 (1.10)
Feeling embarrassed or ashamed	29.8 (71)	10.9 (26)	239	0.58 (1.01)
Concern that I might be seen as 'crazy'	31.9 (76)	10.5 (25)	239	0.61 (1.02)
Not wanting a mental health problem to be on my medical records	26.0 (62)	8.4 (20)	239	0.50 (0.95)
Concern that people might not take me seriously if they found out I was having professional care	28.0 (67)	7.1 (17)	239	0.51 (0.93)
Concern that people I know might find out	28.4 (68)	6.7 (16)	239	0.47 (0.87)
Concern about what my friends might think, say or do	33.5 (80)	6.7 (16)	239	0.56 (0.92)
Concern about what students might think, say or do	31.4 (75)	6.3 (15)	239	0.53 (0.90)
Attitudinal-related barriers				
Thinking I did not have a problem	67.4 (161)	38.1 (91)	239	1.59 (1.29)
Thinking the problem would get better by itself	74.4 (178)	36.8 (88)	239	1.65 (1.22)
Preferring to get alternative forms of care	66.5 (159)	34.3 (82)	239	1.51 (1.27)
Wanting to solve the problem on my own	71.1 (170)	28.0 (67)	239	1.50 (1.18)
Preferring to get help from family or friends	58.6 (140)	22.2 (53)	239	1.20 (1.20)
Dislike of talking about my feelings, emotions or thoughts	38.0 (91)	9.6 (23)	239	0.69 (1.02)
Concerns about the treatments available (e.g. medication side effects)	36.8 (88)	9.6 (23)	239	0.65 (1.01)
Thinking that professional care probably would not help	30.9 (74)	7.5 (18)	239	0.54 (0.93)
Fear of being put in hospital against my will	21.4 (51)	7.1 (17)	239	0.41 (0.89)
Having had previous bad experiences with professional care for mental health	16.7 (40)	4.6 (11)	239	0.30 (0.76)
Instrumental-related barriers				
Not being able to afford the financial costs involved	56.0 (134)	25.5 (61)	239	1.23 (1.25)
Having no one who could help me get professional care	59.8 (143)	24.7 (59)	239	1.26 (1.22)
Being unsure where to go to get professional care	71.6 (171)	21.0 (51)	239	1.36 (1.11)
Difficulty taking time off education	55.2 (132)	17.6 (42)	239	1.10 (1.16)
Problems with transport or travelling to appointments	44.4 (106)	17.6 (42)	239	0.92 (1.18)
Being too unwell to ask for help	51.9 (124)	14.6 (35)	239	0.96 (1.11)
Professionals from my own ethnic or cultural group not being available	26.4 (63)	6.7 (16)	239	0.47 (0.89)

Note: stigma-related barrier items 5, 14 and 24 and instrument-related barrier item 29 'not applicable' to participants were not included in the analysis.

Table 2: Barriers to receiving professional mental health care among students with mental distress who have not received mental care in the past three months.

Figures

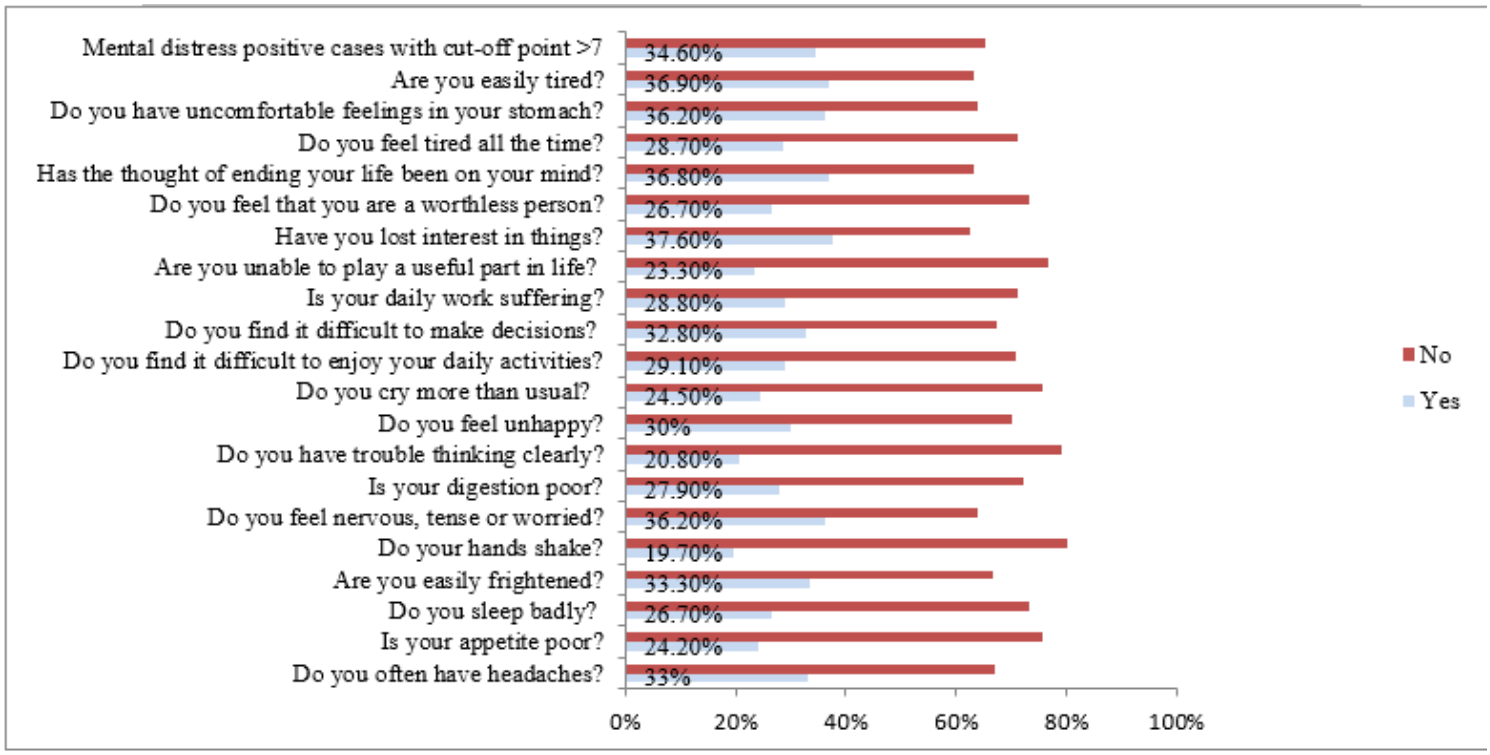

Figure 1

Prevalence of mental distress and its distribution of specific symptom