



Addis Ababa University, College of Health Sciences,
School of Medicine, Department of Psychiatry

**Prevalence of Depressive Symptoms among Hearing-
Impaired Students of Addis Ababa University: A Cross-
sectional Study**

**A Final Thesis Submitted to the Department of Psychiatry of Addis
Ababa University in Partial Fulfillment of the Requirements for
the Specialization certificate in Psychiatry**

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University: A Cross-sectional Study
conducted from August 9 to October 11,
2021**

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Summary

Introduction: Being Deaf or Hard of Hearing (DHH) has been linked with increased social isolation, negative self-concept, low perceived competence and stigma, higher prevalence of physical and sexual abuse among DHH youth and children.(Knutson, Johnson, and Sullivan 2004)(Mekonnen et al. 2016). This all can predispose DHH individuals to depressive disorders. Furthermore, the communication barriers create a challenge in the evaluation and treatment of mental health conditions of DHH individuals.

Objective: The study aims to study the prevalence of depressive symptoms among hearing impaired students in AAU.

Methods: An institution based cross-sectional study was done to assess the prevalence of depressive symptoms in all DHH students of Addis Ababa University (AAU) from August 9- October 11, 2021 using the Patient Health Questionnaire-9 (PHQ-9). Data cleaning and analysis with descriptive statistics were done using SPSS version 26.

Results; 138 out of 142 students responded to the study. The prevalence of depressive symptoms was found to be 42%. The severity level of depression based on the PHQ-9 scoring was found to be 1.4%, 26.8%, 9.4% and 4.3% for minimal, mild, moderate and severe depressive symptoms

Conclusion; The prevalence of depressive symptoms is higher than the results of hearing students done at Addis Ababa, Debrebirhan, Haramaya and Jimma Universities. This study calls for having further studies to know more about the mental health service needs of DHH individuals.

Acronyms

AAU	Addis Ababa University
BDI-II	Beck Depression Inventory revised
BSL	British Sign Language
CES-D	Center of epidemiologic Studies Depression scale
DHH	Deaf and Hard of Hearing
ESL	Ethiopian Sign Language
GHQ	Global Health Questionnaire
HH	Hard of hearing
MMPI	Minnesota Multiphasic Personality Inventory
OPD	Out Patient Department
OSSS	Oslo social support scale.
PHQ	Public Health Questionnaire
UCAA	University College of Addis Ababa
WHO	World Health Organization

Introduction

Background

Over 5% of the world's population – or 430 million people have disabling hearing loss of greater than 35 dB in the better ear. Out of this, close to 80% reside in low and middle income countries. There is an estimated number of around 5 million Ethiopians with varying degrees of hearing impairment.(Anon n.d.) Individuals who have hearing loss can be either deaf or hard of hearing. Hard of Hearing (HH) individuals have hearing loss that affects their life but can communicate with or without hearing aids under favorable conditions. Deaf individuals are unable to understand speech regardless of wearing hearing aids or not.(Marit H Kvam, Loeb, and Tambs 2007)

Greater than 90% of Deaf and Hard of hearing (DHH) are born from hearing parents who are challenged with raising that child in a population of hearing people. This results in developmental delay resulting from early language deprivation, communication challenges, disruption in parental bonding and increased use of physical violence than their hearing counterparts. This is associated with increased social isolation, negative self-concept and low perceived competence and stigma.(Mekonnen et al. 2016)

Depression is a common mental disorder affecting more than 264 million people worldwide. It is characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities. Depression is a leading cause of disability around the world and contributes greatly to the global burden of disease. The effects of depression can be long-lasting or recurrent and can dramatically affect a person's ability to function and live a rewarding life.(Anon n.d.)

Mental illnesses are assessed by the use of verbal language. That creates a challenge in the assessment of patients who are DHH. The prevalence of depression in deaf and hard of hearing (DHH) youth has been difficult to detect with certainty. Misdiagnosis of mental health problems in DHH people may occur because of communication barriers, different cultural perspectives, or the use of inappropriate assessment measures. Clinicians may misinterpret the active and expressive nature of sign language and conclude that the deaf person is disinhibited or manic, or overlook depressed affect. Screening measures used for hearing youth may underrepresent or over represent rates of depression in DHH because of differences in language acquisition and expression. (Connolly, Rose, and Austen 2006)

Statement of the problem

Even though the assessment and treatment of depression is a well-researched area, there is a limited amount of literature that has considered depression in DHH individuals.(Connolly et al. 2006; Marit H. Kvam, Loeb, and Tambs 2007)The integration of DHH individuals with hearing students was initiated on a goal of improving access to education and promoting social integration. But the unavailability of interpreters and the lack of awareness of the teachers on DHH culture and sign language has created its own set of challenges.(Mekonnen et al. 2015)This added to the already prevalent social stigma, isolation, negative self-concept and communication barriers may predispose DHH individuals to depressive disorders. The absence of awareness among clinicians of the DHH culture, communication barrier and lack of appropriate instruments makes the assessment of depression overwhelming. This leads to DHH individuals being improperly assessed with misdiagnosis or no diagnosis. Thus the prevalence of depression is largely unknown among this population groups. This study aims to study the prevalence of depression in DHH students currently enrolled in AAU.

Rationale

Research on the field of mental health among the DHH is lacking. There has not been a study on the mental health disorders among DHH individuals in Ethiopia. This study was the first of its kind in our country, and will help identify the prevalence of depression among DHH students of AAU. It might also help raise awareness on the mental health needs of DHH, identify gaps in the assessment challenges and access to mental health services, identify areas of future research in this population group.

Research question

What is the prevalence of depressive symptoms among DHH students of AAU?

Literature review

People with disability or chronic health conditions are exposed to another set of day-to-day challenges than the general population.(Marit H Kvam et al. 2007) DHH persons may have an elevated rate of depressive symptoms, according to research on Deaf college students, older DHH persons and Deaf residential school students:(Connolly et al. 2006; Dreyzehner 2019; Marit H Kvam et al. 2007; Leigh et al. 1989; Watt and Davis 1991) Generally, research in the field of deafness and mental health has lagged behind psychological research with hearing people.(Connolly et al. 2006; Marit H Kvam et al. 2007).

About 90-95% of deaf children are born to hearing parents. This creates a unique set of challenges for both the parent and the child. The problem in parent-child attachment and communication can lead to depression by increasing frustration and challenges in emotion regulation. (Brown and Cornes 2015; Mulwafu, Kuper, and Ensink 2016) Deafness in early childhood has been associated with delayed milestones in speech, language and cognition. This impairment in verbal communication can lead to social isolation and exclusion as well as worsening of reasoning. This can lead to increased susceptibility to rejection, discrimination and abuse by causing dependence on other people.(Stellah Moraa Osoro Kerongo 2020) A study of self-perceived competence of deaf students with regards to communication and social competence showed that they had more negative evaluation of themselves.(Mekonnen et al. 2016).

There has been evidences for increased incidences of childhood maltreatment. A study on the disciplinary choice of mothers of deaf children and mothers of hearing children showed that parents of children with profound hearing impairment were more likely to choose physical discipline as a form of punishment(Knutson et al. 2004) A retrospective study among American DHH college students found significantly more reports of emotional, physical, and

sexual abuse and emotional and physical neglect in childhood in the DHH group. This indicates a greater susceptibility to neglect, abuse, maltreatment, and violence than the general population. (Burnash, Rothman-marshall, and Schenkel 2015) (Kvam and Loeb 2010)

Mental health problems of 89 DHH students in Australia was assessed by using youth self-report questionnaire in written and Australian sign language format. They found 35 students were in clinical/borderline range. They also had externalizing and internalizing problems including symptoms of anxiety, depression and attention problems. 39% of students reported mental health problem. This is higher than the result for hearing children, which is 14%. (Brown and Cornes 2015) A study on the correlates of mental illness among 95 DHH students also showed that they had higher rates for any mental disorder. (Fellinger, Holzinger, and Pollard 2012)

Van Eldik and colleagues found 26% of the DHH youth met criteria for clinical depression. This increase in vulnerability to mental distress likely stems from communicative barriers in a hearing world and adverse experiences related to stigma and discrimination. the Nord-Trøndelag Hearing Loss study—the NTHL study, studied 50000 samples and found that hearing loss has been associated with significant deterioration in rating of mental illness. (Tambs 2004) Another study found greater amount of mental health problems among DHH individuals that was directly proportional to the amount of hearing lost. But it has not been a consistent finding among other papers. In another Norwegian study compared individuals who identified as deaf with the general population involved in the NTHS Nord-Trøndelag Health Study—HUNT by using parts of Hopkins Symptom Checklist (SCL-25). The rates of mental distress including symptoms of anxiety and depression are higher than the hearing control sample. (Marit H Kvam et al. 2007)

One study found that Significantly more post-lingual deaf participants obtained scores of 2 or higher on GHQ and SCL-8D. The challenges in communication, lower self-esteem and less acceptance of hearing loss were associated with greater distress. (De Graaf 2018) This is also replicated in the interview of 102 deaf people from the community. The high percentage of Deaf people experiencing psychological distress was suggested to mean that Deaf people with mental health issues' needs are not being addressed.(Connolly et al. 2006)

Another study found higher scores on Beck's Depression Inventory-II (BDI-II) in pre-lingual deaf college students. Fifty-one percent of the deaf participants and 33% of the hearing participants obtained a score of 10 or greater on the BDI, indicating at least mild depression: a significant difference. (Leigh et al. 1989) The revised BDI was used to investigate the prevalence of depression among 50 deaf adolescents in a deaf residential school. Results showed that deaf participants were significantly more depressed as a group ($M = 10.52$) than hearing participants ($M = 6.59$). (Watt and Davis 1991)

National association for the deaf NAD states that DHH youth have increased predisposition to mental health issues, and greater challenges to acquiring mental health services.(Anon n.d.)The mental health service utilization of DHH individuals is much less that what would be expected based on the population size. The diagnostic information of DHH individuals presenting for mental health treatment was studied. The results showed that 13.7% of the patients were diagnosed with mood disorders. There were higher records for deaf and hard of hearing people with no diagnosis or missing diagnoses. They concluded that the communication barriers may prevent physicians from doing a thorough evaluation.(Connolly et al. 2006)

A study that assessed the socioemotional distress of DHH students in Ethiopian school using Goodman's self-report measure found a much severe socioemotional problem regardless of being in a special class or not.(Mekonnen et al. 2015) A

study was done in Adigrat school of the deaf to assess the social opportunities and challenges of deaf students. It showed that deaf students had developed a negative view of themselves and subjective report of being negatively evaluated by their hearing counterparts due to their inability to communicate with them. This also resulted in feelings of frustration, loneliness and inferiority. (Berhie 2002) This is comparable with the study done in Nigeria on the prevalence and correlates of mental health problems in adolescents. (Adeniyi 2019)

A large scale study was done on deaf adults by using data from their health care providers. It was found that 24.9% of the respondents self-reported diagnosis of depression or anxiety. Higher rates were found in women, those who were younger, and those who were college graduates. About 17% of 668 deaf men reported that they were diagnosed with depression or anxiety disorder compared to 29% of 1,012 deaf women. (n = 1,704 deaf adults) (Kushalnagar et al. 2019)

A large scale United states survey found the prevalence of depression to be 4.9% for individuals reporting excellent hearing, 7.1% for those with good hearing, and 11.4% for participants who reported a little trouble or greater hearing impairment. This study also showed significant association with women. (14.7% in females VS 9.0% in males). Strong association between hearing impairment and depression was seen among US adults of all ages. (C. Li et al. 2014)

Prevalence of depressive disorder and demoralization study was done among 129 Gallaudet University students using Brauer Gallaudet-BDI and MMPI-depression scale. 61% of respondents had some depressive symptoms, 35% scored within range indicating mild depression. A total of 19% scored within range indicating moderate to severe depression; 7% scored within range indicating severe depression. (Marcus 1991) Another study on 110 college students(50 deaf and 60 hearing) found A total of 40% of deaf vs 17% of hearing students recorded mild depression; 6% of deaf vs 3% of hearing students recorded

moderate depression. Deaf students significantly more boredom-prone than hearing students.(Watt and Davis 1991)

Among 102 deaf students attending national Technical Institute for the Deaf (NTID), Biographical Data Sheet (EDS) and BDI was used. Forty-nine percent of the 102 deaf subjects were not depressed; 43 % scored in the mildly depressed range and 8% were moderately depressed. No subjects were severely depressed. This study showed that better perceived communication with mother is associated with less vulnerability to depression. (Leigh et al. 2019)

On a review of thirteen papers focusing on suicide in DHH population, the rates of attempted suicide in deaf school and college students during the previous year ranged from 1.7% to 18%, with lifetime rates as high as 30%. High rates of suicidal behavior and ideation has been found among study on 51 deaf college students DHH college students were more likely than hearing college students to have seriously considered suicide or attempted suicide in their lifetime, (Arnett 2019; Boyechko 1992; Turner, Windfuhr, and Kapur 2007)

Interaction of DHH individual with mental health professional who is not accustomed to the culture of the patient poses challenges in assessment. Expressive nature of sign language may mislead clinicians to overlook a depressed affect or to interpret it as disinhibition. Validity of written questionnaires is another challenge in the assessment of mental health issues among DHH.(Connolly et al. 2006) Transferring hearing cutoff scores is risky, especially if questionnaires have been revised or translated into sign language. To gain a better understanding of the situation, population-based studies with representative samples are needed(Cornes et al. 2006) As discussed earlier DHH individuals may struggle with identifying and articulating emotions and cognitions. This can lead to potential under-report or over-reporting of cognitive and affective symptoms of the PHQ- 9. In a study on symptom presentation on

PHQ-9 showed that DHH individuals tend to report somatic symptoms in response to stress. (Bozzay et al. 2017)

At Haramaya University, the prevalence of depressive symptoms among undergraduate students using BDI was found to be 26.8%. From these, 10%, 12%, 4% and 1% of them reported minimal, mild, moderate and severe depression symptoms. (Hambisa, Derese, and Abdeta 2020) In Jimma University, using BDI-II, prevalence of depression among the students was 28.2%. (Health et al. 2020) At Debrebirhan university self-administered PHQ-9 was used on 369 students. It showed prevalence of depression to be 17.1%. it was found that being female and year of study were significantly associated with depression. (Tamene 2021). A study done on Addis Ababa University (AAU) showed prevalence of depression to be 27.7% using Center of epidemiologic Studies' (CES-D). (Berhanu 2015)

Objective of the study

General objective:

- To determine the prevalence of depressive symptoms among DHH students of AAU

Specific objectives:

- To determine the prevalence of depressive symptoms.
- To describe Sociodemographic variables; such as
 - Age
 - Sex
 - Marital status
 - Current residence
 - Department
 - Year of study

Methods

Study Design

An institution-based cross sectional study design was employed.

Study Setting

The study was conducted at Addis Ababa University, Addis Ababa, Ethiopia. Many DHH individuals migrate to Addis Ababa to find better school and job opportunities. Addis Ababa University (AAU), formerly known as the University College of Addis Ababa (UCAA), is Ethiopia's oldest and largest higher learning and research institution. It was established in 1950 as the University College of Addis Ababa (UCAA). AAU has been the primary placement site for DHH individuals after finishing 12th grade general examination. The University has been a leading hub for teaching-learning, science, and community service since its establishment. On May 4, 2007, the Department of Special Needs Education was created. It was the country's first of its kind. It currently offers four programs: two undergraduate programs in Special Needs Education and Speech-Language Therapy; master's and doctoral programs in Special Needs Education; and master's and doctoral programs in Special Needs Education. (Anon n.d.) The department includes both hearing and DHH individuals. DHH individuals have access to join other departments as well based on their interest.

Study Period

Data were collected from August 9 to October 11, 2021.

Study population

All AAU students who identify as DHH and listed in the registry of AAU special needs support center were included in the study. The AAU special needs team

has the list of all DHH students. Their contact information was collected from AAU, center for special need support team after submitting a support letter from the Department of Psychiatry, AAU. From the list 2 students were not attending classes and 1 student did not have a contact address. Excluding the 3 students, from a total of 142 students, 138 students responded.

Inclusion and exclusion criteria

Inclusion criteria

- Current AAU students who identify as deaf or hard of hearing.
- Current DHH students in the list of AAU special need support center
- Consenting
- Students who are proficient in sign language or written communication

Exclusion criteria

- Students who cannot give or refuse to give informed consent
- Students who are not Deaf or hard of hearing
- Students that are not listed on AAU special need support center.
- Students who are not proficient in sign language or written communication

Variables in the study

Dependent variable

Depressive symptoms

Independent variables

Socio-demographic characteristics; such as age, sex, marital status, department of the students and year of study

Operational definition

Deaf: individuals with severe to profound hearing loss that rely on lip reading or sign language as a major form of communication

Hard of hearing: individuals with mild to moderate hearing loss that are able to communicate using hearing aids in favorable conditions

Depressive symptoms: symptoms of the common mental disorder , Depression, characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities for 2 weeks or more as measured by the PHQ-9 score greater than or equal to 5.

Data collection tools and techniques

Data were collected using a structured questionnaire. An Amharic translated form of Patient Health Questionnaire-9 (PHQ-9) was used. A study done to determine cutoff for the British Sign Language (BSL) form of PHQ-9 showed a result of 8 can be used safely to assess depression. (Belk et al. 2016). A PHQ-9 Cutoff score of 5 or above has been validated for screening depressive symptoms among Ethiopians in primary health care setting.(Hanlon et al. 2015). This study will use a cutoff score of 5 or above to assess depressive symptoms.

The questionnaire also included other associated factors such as sociodemographic information, age of hearing loss, attitude towards deafness; attitude toward hearing people; preferred method of communication; way of communication in family; physical and/or sexual abuse; self-esteem or perceived level of competence, which was assessed by a questionnaire developed by the primary investigator. The current social support was assessed by Oslo social support scale OSSS. This questions will be used in an association study with a larger sample size.

Data quality management

The self-administered questionnaire was circulated by a DHH data collector after a brief training session about the data collection process given by the primary investigator who can communicate using sign language proficiently. The data collector took written informed consent, answered any questions participants may have and checked for data completeness. The questionnaires were double-checked weekly for consistency and completeness by the principal investigator.

Methods of Data analysis

The data was gathered from the data collector. The data extraction sheets were coded and data entry, cleaning, and analysis was done using the Statistical Package for the Social Sciences (SPSS) version 26 by primary investigator. The socio-demographic & clinical characteristics of participants was computed by using simple descriptive statistics (mean, percentage, frequencies, and standard deviation).

Ethical considerations

The proposal was ethically cleared by the Department of Psychiatry, College of Health Sciences, Addis Ababa University. Letter from the Research Ethics Committee was submitted to AAU, center for special needs. The contact list of DHH was sought from AAU center for special needs. Before administering the questionnaire, the purpose of the study was briefly explained to the respondents and written informed consent was sought from the participants. The questionnaires were kept anonymous and confidential. Participants that have clinically significant symptoms (those scoring 8 or above on PHQ-9) and those reporting suicidal thoughts were linked to the campus clinic.

Results

There were 145 students registered in the AAU special needs support center as Deaf and Hard of Hearing. From the list 2 students were not attending classes and 1 student did not have a contact address. Excluding the 3 students, from a total of 142 students, 138 students responded. This makes the response rate of the study 97.2%.

Sociodemographic characteristics

The age distribution of students is seen on Table 1. The age ranged from a minimum of 18 to a maximum of 31 years. The mean age of participants was 22.37 years. 64.5 %(89) of respondents were male and 35.5 % (34) of them were female. Freshman students accounted for 32.6 %(47). Among the 2nd and 3rd year students, a majority came from Special Needs Education (SNE) 27.1% (39) and Sport department 14.6%(21). A total of nine students, i.e. one student each, attended departments of Accounting, Amharic, Business, Computer science, Journalism, History, Management and Sociology. Only one of the respondents was married and the rest were single. 97.8% (132) of the students lived in dormitories, (Table 1)

Table 1- sociodemographic characteristics

Sociodemographic characteristics		Number	Percent
Sex	Male	89	64.5%
	Female	34	35.5%
Age of participants	18-21	46	34.3 %
	22-25	80	59.7 %
	26-31	8	5.8 %

Year of study	Freshman	47	34.1 %
	1 st year	32	23.2 %
	2 nd year	59	42.8 %
Marital status	Single	137	99.3 %
	Married	1	0.7 %
Current residence	Dorm	135	97.8 %
	With family	2	1.4 %
	Alone	1	0.7 %
Department	Biology	13	9 %
	Chemistry	2	1.4 %
	Freshman	47	32.6 %
	Mathematics	2	1.4 %
	Physics	2	1.4 %
	SNE	39	27.1 %
	Sport	21	14.6 %
	Others	9	6.3%

Characteristics of hearing loss, communication preference and hearing aid use

70.3 % (97) participants reported having profound hearing loss/Deafness. 52.9% (73) of participants reported pre-lingual loss of their hearing. A majority of the cause for hearing was congenital (44.9 %) followed by physical illness (26.8 %). 41.3% (57) of participants used a combination of lip reading and/or writing, Ethiopian sign language and body gestures as a means of communication. 66.7 % participants (92) did not use hearing aid. Among the above participants, the major reason for not using hearing aid was by choice in 65.6% (61) of participants. 75.4 % (104) of participants reported feeling fine towards their hearing loss, while 13% (18) reported feeling sad occasionally. (Table 2)

Table 2- Characteristics of hearing loss, communication preference and hearing aid use

		Number	Percentage
Level of hearing	Hard of hearing	41	29.7 %
	Profound hearing loss/Deaf	97	70.3 %
Age of hearing loss	Less than 2 years	73	52.9%
	After 2 years	64	46.4 %
	Not known	1	0.7 %
Cause for hearing loss	Congenital	62	44.9 %
	Physical illness	37	26.8 %
	Accidents	34	24.6 %
	Not known	5	3.6 %
Choice of communication	Lip reading and/or writing	27	19.6 %
	Ethiopian sign language	36	26.1 %
	Body gestures	18	13.0 %
	All	57	41.3 %
Use of Hearing Aid	Yes	46	33.3%
	No	92	66.7 %
Reason for not using hearing aid	Not wanting to	61	65.6 %
	Economic difficulty	8	8.6 %
	It doesn't help	14	15.1 %
	Not being tested	6	6.5 %
	Disturbance from device	4	4.3 %
Feeling about hearing loss	Fine	104	75.4 %
	Occasionally sad	18	13 %
	Usually sad	8	5.8 %
	Always sad	8	5.8 %

Communication with others and social support

The study participants reported using lip reading and/or writing as the most frequently used way of communication with family. 58% (80) of the students reported being able to communicate well with their family. Most participants had a good feeling towards hearing people. when rating their communication with hearing people, 37% (51) had occasional difficulty and 28.3% (39) communicated well. On the Oslo social support scale, 68.1 % (94) of the respondents had poor social support. (Table 3)

Table 3- communication with others, feeling towards hearing people and social support

		Number	Percentage
Communication with family	Lip reading and/or writing	50	36.8 %
	Ethiopian sign language	21	15.2 %
	Body gestures	25	18.4 %
	All	40	29.4 %
Level of communication with family	Communicate well	80	58 %
	Occasional difficulty	40	29 %
	Usually difficult	12	8.7 %
	Not sure	6	4.3 %
Feeling towards hearing people	No opinion	12	8.7 %
	Good	101	73.2 %
	Moderate	19	13.8 %
	Bad	6	4.3 %
Level of communication with hearing people	Have not tried	28	20.3 %
	Communicate well	39	28.3 %
	Occasional difficulty	51	37 %
	Usually difficult	19	13.8 %
	No communication at all	1	0.7 %
Level of Social support	Poor social support	94	68.1 %
	Moderate social support	37	26.8 %
	Good social support	7	5.1 %

Method of discipline and exposure to physical, sexual and psychological trauma

Their usual way of being disciplined in the family was found to be advice in 68.8% (95) of the participants. Participants report on past experience of abuse showed 17.4 % (24) had physical trauma, 8.7% (12) reported sexual trauma and 15.9 % (22) experienced emotional and psychological abuse. 11.6 % (16) of participants reported experiencing abuse currently. Out of those, 75 % (12) reported having physical abuse and 25 % (4) reported psychological abuse. (Table 4)

Table-4 method of discipline and experience of trauma

		Number	Percentage
Usual method of discipline as a child	Advise	95	68.8
	Minor scolding	26	18.8
	Major beating	13	9.4
	No recollection	4	2.9
Past experience of physical trauma	Yes	24	17.4 %
	No	114	82.6 %
Past experience of sexual trauma	Yes	12	8.7
	No	126	91.3
Past experience of emotional/psychological trauma	Yes	22	15.9
	No	116	84.1
Participants current experience of trauma	Yes	16	11.6 %
	No	121	99.3 %
Type of current abuse	Physical	12	75 %
	Psychological	4	25 %

Physical health and self esteem

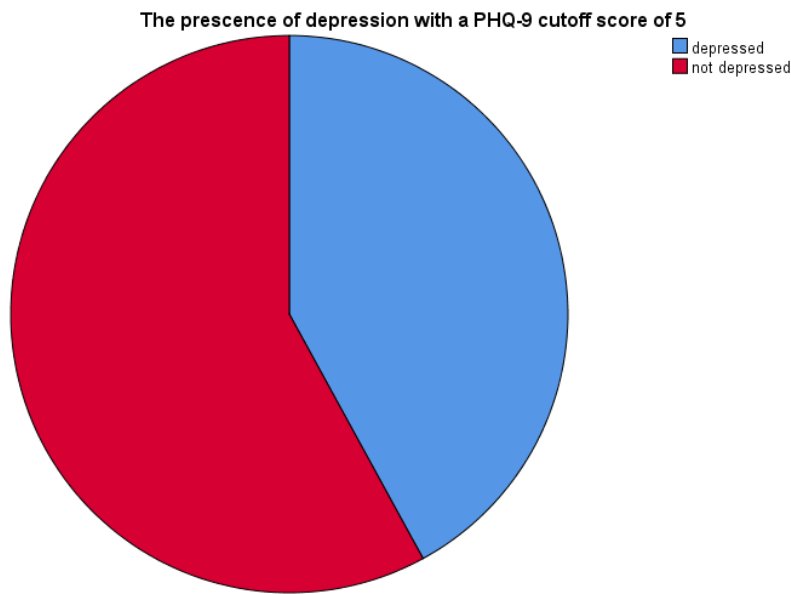
96.4 % (133) of the respondents reported not having other physical health issues. 2.8% (4) respondents reported having a problem, out of which three respondents didn't specify their illness and one had chronic ear infection.

Regarding the participants level of self-esteem, 89.9 % (124) reported feeling confident.

Prevalence of depressive symptoms

42% (58 students) had depressive symptoms with a PHQ-9 cutoff score of 5. From the above students, 20.7 % (12) of them reported not having difficulties b/c of the symptoms, while 72.4%(42) reported having impairment several days, one student each (3.4%) reported having the symptoms more than half a day and nearly every day. (Table 5, Figure 1)

Figure 1- the prevalence rate of depressive symptoms



The severity level of depressive symptoms among those who scored five or above on the PHQ-9 was found to be 3.4% for minimal depression, 63.8% for mild depression, 22.4% for moderate depression and 10.3 % for moderately severe depression.

Table-5 results of the parameters in PHQ-9

	Not at all	Several days	More than half a day	Nearly everyday
Little interest or pleasure in doing things	80, 58 %	37, 26.8%	12, 8.7%	9, 6.5%
Feeling down, depressed or hopeless	88, 63.8 %	37, 26.8%	9, 6.5%	4, 2.9%
Sleep disturbance	80, 58%	35, 25.4%	12, 8.7%	11, 8%
Low energy	69, 50%	52, 37.7%	8, 5.8%	9, 6.5%
Poor appetite or overeating	88, 63.8%	30, 21.7%	9, 6.5%	11, 8%
Feeling bad about oneself	86, 62.3%	37, 26.8%	8, 5.8%	7, 5.1%
Trouble concentrating	68, 49.3%	43, 31.2%	14, 10.1%	13, 9.4%
Psychomotor changes	100, 72.5%	21, 15.2%	12, 8.7 %	5, 3.6 %
Thoughts of suicide	135, 97.8 %	3 , 2.2%	---	---
Functional impairment	92, 66.7%	42, 30.4%	2, 1.4%	2, 1.4%

The prevalence of depressive symptoms was found to be slightly higher in female students than the males (44.9% vs 40%). The prevalence of depressive symptoms has also increased along with study year from 27.6% in first year to 20.7% in second year and 51.7% in third year. Third year students comprise 42.8% of the study population.

Table 6- sociodemographic variables and the presence of depression

variables		Depressed (PHQ-9 5 or above)	Not depressed	Total
Age	18-22	33	48	81
	23-28	25	31	56
	>28	0	1	1
Sex	Male	36	53	89
	Female	22	27	49
Department	Accounting	0	1	1
	Amharic	0	1	1
	Biology	3	10	13
	Business	1	0	1
	Chemistry	1	1	2
	Computer science	0	1	1
	Geography	0	3	3
	History	1	0	1
	Journalism	1	0	1
	Management	0	1	1
	Mathematics	0	2	2
	Physics	1	1	2
	SNE	21	18	39
	Sociology	0	1	1
	Sport	12	9	21
	Statistics	1	0	1
	Study year	Freshman	16	31
Second year		12	20	32
Third year		30	29	59
Marital status	Single	57	80	137
	Married	1	0	1
Residence	Dormitory	56	79	135

	With Family	1	1	2
	Alone	1	0	1

Discussion

An institution based cross-sectional study was done to assess the prevalence of depressive symptoms on Deaf and Hard of Hearing students of AAU from August to September, 2021. This study found that the prevalence of depressive symptoms using a PHQ-9 cutoff score of 5 is 42%(58 students).

On a study done on DHH students (Marcus 1991) had found that 61% had some depressive symptoms, 35% scored within range indicating mild depression. A total of 19% scored within range indicating moderate to severe depression; 7% scored within range indicating severe depression. Another study showed 40% DHH had mild depression and 6% had severe depression. (Watt and Davis 1991) Both studies have used the beck depression inventory modified for using in this community. The finding from this study showed slightly lower result. Although the sample size and study population of the above studies are comparable to this study, the difference in the assessment tool makes comparison between this groups difficult. The previous studies had adapted and validated the tool to the DHH population, which is not the case for this study. Another community study using data from healthcare providers shows a prevalence rate of depression to be 24.9%, which is much lower than the result on this study. (Kushalnagar et al. 2019)

Studies done on hearing university students in Ethiopia show prevalence rates ranging from 17.1% to 28.2 %. The study in Jimma and Haramaya used BDI-II, resulting in prevalence of 28.2% and 26.8% respectively(Hambisa et al. 2020; Health et al. 2020). The study in AAU used CES-D scale to result in prevalence rate of 27.7%.(Berhanu 2015) . From those at Haramaya university 10%, 12%, 4% and 1% of them reported minimal, mild, moderate and severe depression

symptoms. Whereas in this study only 1.4% had minimal depressive symptoms, 26.8% had mild depression, 9.4% had moderate depression and 4.3% had severe depression.

This study has a higher prevalence of highly depressive symptoms than the study at Debrebirhan university (17.1%) with PHQ-9 cutoff score of 10. Among which 39.3%, 14.4%, 4% and 1.6% had mild, moderate, moderately severe and severe results respectively (Tamene 2021). This study comprised of 58.7% for minimal depression, 26.8% for mild depression, 10.1% for moderate depression and 4.3% for moderately severe depression from the general study population. The higher cutoff score could be the possible factor for the higher depressive symptoms in this study.

The difference in the prevalence rates among the above mentioned studies may be due to the use of different screening tools like BDI-II, CES-D and PHQ-9 ; sensitivity of the PHQ-9 self-administered questionnaire when used among Ethiopian DHH college students; the reliability of the cutoff point of 8 on PHQ-9 score when used this study populations; the difference in the sensitivity of PHQ-9 when assessing depressive symptoms among DHH individuals due to differences in communication mode, communication ability and language fluency.

Considering the proportion of female students in our population, which is 35.5% (49 students), the prevalence of depressive symptoms is higher among female students. Thus is comparable to studies done (C. M. Li et al. 2014) (Health et al. 2020; Tamene 2021) (Marit H. Kvam et al. 2007). In one study, it was found that freshmen college DHH women had significantly higher incidence of suicide attempts when compared to men. (Kushalnagar et al. 2019) (Turner et al. 2007) Of the 3 students who reported to have suicidal thought, 2 are male (2.29%) and 1 is female (2.08%). No higher incidence of suicidal thoughts was found among females when compared to males. The prevalence of depressive symptoms has

also increased with the study year. This may be due to the added stress that comes with increasing load of studies.

40 % of those that reported to be confident had depressive symptoms while that figure rose to 50% in those who are not usually confident and a100% in those who aren't confident. 10.3% of those who are being abused currently reported depressive symptoms. 61.5% of the participants that were beaten as a discipline reported depressive symptoms as well. This factors have been associated with increasing mental distress in various studies. (Knutson et al. 2004; Schild and Dalenberg 2012) (Adigun 2017; De Graaf 2018)

More than half of the participants who usually faced difficulty while communicating with hearing people reported depressive symptoms. The reporting of depressive symptoms increased with increasing difficulty in communicating with family as well, from 38.8% those who communicate well to 66.7% in those who reported having difficulty most times. The prevalence of depressive symptoms increased with the level of social support 5.2%, 29.3% and 65.5% in good, moderate and poor social support respectively.(Fellinger et al. 2012; Marit H. Kvam et al. 2007; Stellah Moraa Osoro Kerongo 2020)

Limitations

- The validity of PHQ-9 self-administered questionnaire is not known among DHH individuals. The difference in communication style, syntax and culture among the hearing and DHH individuals calls for studies to create a validated tool.
- The self-administered nature of the questionnaire might result in recall bias
- This study was descriptive cross-sectional study with small population size of 145. It calls for more association studies to know the related factors associated with depressive symptoms in this particular population.

- The questionnaires used to assess other associated factors are developed by the primary investigator and not standardized.
- Although 11.6% (16 students) reported experiencing current abuse, no intervention was undertaken.

Conclusion

The results of the prevalence of depressive symptoms on DHH individuals based on the PHQ-9 scoring was found to be 42%. DHH students exhibited depression in more severe range when compared to other studies with hearing students. greater occurrence of depression was seen in females and with increasing year of study. The data collection will continue to include more students and conduct analytic study that studies the associated factors with depressive symptoms.

Recommendation

This study, to my knowledge, is the first of its kind in our setting. I hope that it creates a pathway for further researches in the future.

There was difficulty in finding a validated tool for assessing depressive symptoms among DHH individuals in our county. Therefore, further validation studies are required.

There has been a significant proportion of DHH students that reported to have depression. This shades light to the need of mental health professionals' awareness in understanding and finding ways of assessing DHH individuals.

It also calls for attention to providing further researches into the needs and preferences for mental health care in DHH individuals.

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Appendices

Annex 1: Informed consent form

Hello, my name is Dr. Rekik Damtew. I am a final year psychiatric resident at Addis Ababa University (AAU). I am studying the prevalence of depression among Deaf and Hard of hearing students of AAU as part of my training. You were selected to participate in this study because you are currently attending AAU. Filling this questionnaire might take 20-25 min.

Aim: the collected data will provide information regarding the prevalence of depression among deaf and hard of hearing students of AAU.

Benefit: this study may not have direct or immediate benefit to you. But the outcome of the study will provide important information on the current situation and open ways for future research in the field of mental health among DHH.

Risk: you don't have to fill this questionnaire if you don't want to do so. Your decision will not have any consequences whether you decide to participate or not. All information will remain confidential. Your name will not be disclosed and you were recorded as participant 1 (P1), Participant 2 (P2) ...

Are you willing to fill in this questionnaire?

If yes, I am grateful for your willingness to do so.

If you have questions later, please contact me at +251911822770 during working hours.

If you have understood the above information, please express your agreement to fill in this questionnaire by signing below.

Name _____

Signature _____

Date _____

በመረጃ ላይ የተመሰረተ ፈቃድ መጠየቂያ ቅፅ

ጤና ይስጥልኝ :: ዶ/ር ረቂቅ ዳምጠው እባላለሁ :: በአዲስ አበባ ዩኒቨርሲቲ (አ.አ.ዮ) የመጨረሻ አመት የ አእምሮ ህክምና ሰልጣኝ ሆኪም ነኝ። እንደ ስልጠናው አንድ አካል በአዲስ አበባ ዩኒቨርሲቲ የሚገኙ መስማት የተሳናቸው ተማሪዎች ላይ ያለውን የድባቴ መጠን እና አጋላጭ ሁኔታዎችን እያጠናሁ ነው። በዚህ ጥናት ዉስጥ እንዲሳተፉ የተመረጡበት ምክንያት በ አ.አ.ዮ አየተማሩ ካሉ መስማት የተሳናቸው ዉስጥ አንዱ ስለሆኑ ነው። ይህን የመጠየቅ ቅፅ ለመሙላት ካ 20-25 ነቂቃ ሊፈጅ ይችላል የግል ግምት አለኝ።

አላማ :- የዚህ ጥናት አላማ በአዲስ አበባ ዩኒቨርሲቲ የሚገኙ መስማት የተሳናቸው ተማሪዎች ላይ ያለውን የድባቴ መጠን እና አጋላጭ ሁኔታዎችን ማወቅ ነው።

ጥቅም :- ይህ ጥናት ለእርስዎ ቀጥተኛ የሆነ ጥቅም ላይኖረው ይችላል። ነገር ግን በድባቴ ዉስጥ ያሉ ተማሪዎችን ለመለየት ይረዳል። የእርስ ተሳታፊነትም ትልቅ ጠቀሜታ አለው። ይህ ጥናትም ወደፊት በመስማት የተሳናቸው ዙሪያ ለሚሰሩ ጥናቶች በር ከፋች ይሆናል።

ስጋት :- በዚህ ጥናት ዉስጥ ያለመሳተፍ ሙሉ ሙብት አሎት። ለመሳተፍ ወይም ላለመሳተፍ የሚያደርጉት ውሳኔ በእርስዎ ላይ የሚያውጣው አዋንታዊም ሆነ አሉታዊ ተፅእኖ የለም። የሚሰጡት መረጃዎች በሙሉ ሚስጥራዊነታቸው የተጠበቀ ይሆናል። ጥናቱ ላይ ስምዎ አይጠቀስም። የእርስ መገለጫ ተሳታፊ ቁጥር 1, ተሳታፊ ቁጥር 2 ወዘተ የሚል ይሆናል።

በጥናቱ ለመሳተፍ ፈቃደኛ ነዎት?

ፈቃደኛ ከሆኑ በጣም አመስግናለሁ። በጥናቱ ላይ ጥያቄ ካለዎት በዚህ ስልክ +251911822770 በስራ ሰዓት ደውለው መጠየቅ ይችላሉ።

ይህን የስምምነት መጠየቂያ ቅፅ በትክክል ከተረዱት፤ መስማማትዎት ከዚህ በታች ባለው ቦታ ስምዎን እና ፈርማዎን በማስቀመጥ ያረጋግጡልኝ ዘንድ በትህትና እጠይቃለሁ።

ስም _____

ፈርማ _____

ቀን _____

Annex 2: Questionnaire developed to assess the prevalence of depression in DHH students of AAU

Phone number _____ Age _____

Gender; Male _____ Female _____

Department _____ year _____

Marital status; married ___ not married ___ divorced ___ widowed ___

Current living address; dorm _ with family ___ with friends ___ alone ___

1. What is your current Level of hearing?
 1. hard of hearing
 2. profound hearing loss/Deaf
2. At what age did you lose your hearing?
 1. Less than 2 years
 2. After 2 years
 3. I don't remember
3. What is the reason for your hearing loss?
 1. Congenital
 2. Physical illness
 3. Accidents
 4. I don't know
4. What mode of communication do you prefer?
 1. Through Lip reading and/ or writing
 2. By Ethiopian sign language
 3. Body gestures
 4. All
5. Do you use hearing aid devise?
 - a. Yes
 - b. No
6. If your answer is no, what is the reason for not using hearing aid devise?

- a. I don't want to
 - b. Economic reason
 - c. It doesn't help me at all
 - d. I haven't been tested
 - e. It disturbs me/makes me sick
7. What do you feel about your hearing loss?
- a. I don't feel anything
 - b. Occasionally feel sad
 - c. Usually feel sad
 - d. Always feels sad
8. How do you communicate with your family?
- a. Through Lip reading and/ or writing
 - b. By Ethiopian sign language
 - c. Body gestures
 - d. All
 - e. Other ways _____ please specify
9. How do u express your level of communication with family?
- a. We communicate well
 - b. Occasional difficulty
 - c. Usually has difficulty
 - d. I am not sure
10. What is the usual way of being discipline used by our family?
- a. Advise
 - b. Minor scolding
 - c. Major beating
 - d. I don't remember
11. Have you ever experienced physical trauma?
- a. Yes
 - b. No

12. Have you ever encountered sexual abuse?
- Yes
 - No
13. Have you ever been psychologically or emotionally abused before?
- Yes
 - No
14. If you answered yes for any of the above questions, is it still going on?
- Yes
 - No
15. If you answered yes for the 14th question, what type of abuse is it?
- Physical abuse
 - Sexual abuse
 - Psychological abuse
 - All
16. What do you feel about hearing people?
- I don't have an opinion
 - It is good
 - It is moderate
 - It is bad
17. How is your level of communication with hearing people?
- I haven't tried
 - I can communicate well
 - I occasionally face difficulties
 - I usually face difficulty
 - I don't communicate at all
18. How is your current physical health?
- I don't have any problem
 - I have a diagnosed condition_____ please specify
19. How is your self-esteem?

- a. I am confident
- b. I usually am not confident
- c. I don't feel confident at all

በ አዲስ አበባ ዩኒቨርሲቲ የ መስማት የተሳናቸው ተማሪዎች የ ድባቱ ስርጭት መጠየቂያ ቅጽ

ስልክ ቁጥር _____ እድሜ _____

ጾታ ወንድ _____ ሴት _____

ትምህርት ክፍል _____ ፣ አመት _____

የ ትዳር ሁኔታ: ያገባ _____ ያላገባ _____ የተፋታ _____ የ ትዳር ጓደኛ የሞተ _____

የ አሁን መኖሪያ አድራሻ: ዶርም _____ ከቤተሰብ ጋራ _____ ከጓደኞች ጋር _____ ለብቻ _____

1. መስማት የመቻል አቅም:
 - a. ለመስማት እቸገራለሁ
 - b. ምንም አልሰማም
2. መስማት ያቆሙበት እድሜ ስንት ነበር?
 - a. ከ 2 አመት በታች
 - b. ከ 2 አመት በኋላ
3. መስማት ያቆሙበት ምክንያት ምን ነበር?
 - a. ሰወለድ ጀምሮ
 - b. አካላዊ ህመም
 - c. አደጋ
 - d. አላውቀዋል
4. ለመግባባት የትኛውን ይመርጣሉ?
 - a. የ አፍ ንባብ እና ጽሁፍ መግባቢያ
 - b. የ ኢትዮጵያ ምልክት ቋንቋ
 - c. በ ባህላዊ ምልክት
 - d. ሁሉም
5. የ መስሚያ ድጋፍ መስጫ መሳሪያ ይጠቀማሉ?
 - a. አዎ

b. አልጠቀምም

6. ለ 5ኛ ጥያቄ መልሶት አልጠቀምም ከሆነ ምክንያቱ ምንድነው?

- a. መጠቀም አልፈልግም
- b. በ ኢኮኖሚ ችግር
- c. ምንም ስለማይጠቅመኝ
- d. ስለሚረብሽ/ ስለሚያሳምመኝ
- e. ሌላ ካለ

7. መስማት ባለመቻልዎ ምን ይሰማዎታል?

- a. ምንም አይሰማኝም
- b. አንዳንዴ አዝናለሁ
- c. አብዛኛውን ጊዜ አዝናለሁ
- d. ሁልጊዜ አዝናለሁ

8. ከቤተሰብ ጋር የሚግባቡት በምን መንገድ ነው?

- a. የ አፍ ንባብ
- b. የ ጽሁፍ መግባቢያ
- c. የ ምልክት ቋንቋ
- d. በ ባህላዊ ምልክት
- e. ሁሉንም እጠቀማለሁ

9. ከቤተሰብ ጋር የመግባባት ሁኔታ እንዴት ይገልጹታል?

- a. በ ደምብ እግባባለሁ
- b. አልፎ አልፎ እቸገራለሁ
- c. ብዙ ጊዜ እቸገራለሁ
- d. እርግጠኛ አይደለሁም

10. ቤተሰብ ዉስጥ ስህተት በሚሰሩ ወይም በሚያጠፉ ሰአት በአብዛኛው የሚቀጡበት መንገድ ምንድን ነው?

- a. በ ምክር ያልፉኛል
- b. ቀላል አካላዊ ቅጣት
- c. ከባድ ድብድብ
- d. አላስታውስም

11. ከልጅነት እስከ አሁን ባለው ጊዜ የደረሱብዎት አካላዊ ጥቃት አለ?

- a. አዎ
- b. የለም

12. ከልጅነት እስከ አሁን ባለው ጊዜ የደረሱብዎት ጾታዊ ጥቃት አለ?

- a. አዎ
- b. የለም

13. ከልጅነት እስከ አሁን ባለው ጊዜ የደረሱብዎት የስነልቦና ጥቃት አለ?

- a. አዎ
- b. የለም

14. ከ 11 13 ላሉት ጥያቄዎች መልሱ አዎ ከሆነ፤ ጥቃቱ አሁን እየተፈጸመ ነው?

- a. አዎ
- b. የለም

15. ለ 14ኛ ጥያቄ መልስ አዎ ከሆነ፤ የትኛው አይነት ጥቃት ነው?

- a. አካላዊ ጥቃት
- b. ጾታዊ ጥቃት
- c. ስነልቦናዊ ጥቃት
- d. ሁሉም

16. ለሚሰሙ ሰዎች ያለዎት አስተያየት እንዴት ነው?

- a. ምንም አስተያየት የለኝም
- b. ጥሩ ነው
- c. መካከለኛ አስተያየት
- d. መጥፎ አስተያየት አለኝ

17. ከሚሰሙ ሰዎች ጋር የመግባባት ችሎታዎ እንዴት ነው?

- a. ሞክራ አላውቅም
- b. በደምብ እግባባለሁ
- c. አንዳንዴ እቸገራለሁ
- d. በዙ ጊዜ እቸገራለሁ
- e. ምንም አልግባባም

18. አካላዊ ጤናዎ እንዴት ነው ?

a. ምንም ችግር የለብኝም

b. የታወቀ ህመም አለኝ ፣ ካለ ይጥቀሱ _____

19. በራስ መተማመንዎትን እንዴት ይገልጹታል?

a. በራሴ እተማመናለሁ

b. ብዙ ጊዜ በ ራሴ መተማመን ይቸግረኛል

c. በራሴ አልተማመንም

Annex 3: Oslo social support scale

1. How many people are so close to you that you can count on them if you have great personal problems?
 - a. 'none'
 - b. '1–2'
 - c. '3–5'
 - d. '5+'

2. How much interest and concern do people show in what you do?
 - a. 'none'
 - b. 'little'
 - c. 'uncertain'
 - d. 'some'
 - e. 'a lot'

3. How easy is it to get practical help from neighbors if you should need it?
 - a. 'very difficult'
 - b. 'difficult'
 - c. 'possible'
 - d. 'easy'
 - e. 'very easy'

Result definition

3–8 poor social support

9–11 moderate social support

12–14 strong social support

የአስሎ ማህበራዊ ድጋፍ መለኪያ ቅጽ

1. ከባድ የግል ችግር ቢያገጥመኝ ይደርሱልኛል ብለው የሚተማመኑባቸው ሰዎች ምን ያህል ይሆናሉ?
 - a. ምንም
 - b. 1-2
 - c. 3-5
 - d. ከ 5 በላይ

2. ሰዎች በሚሰሩት ስራ (በሚያደርጉትነገር) ላይምን ያህል ትኩረት (ፍላጎት) ያሳያሉ?
 - a. ምንም
 - b. ትንሽ
 - c. እርግጠኛ አይደለሁም
 - d. በመጠኑ
 - e. ብዙ

3. የጎረቤት እርዳታ ቢፈልጉ የማግኘት እድልዎ ምን ያህል ነው?
 - a. ምንም አላገኝም
 - b. አላገኝም
 - c. ላገኝ እችላለሁ
 - d. አገኛለሁ
 - e. በደምብ አገኛለሁ

Annex 4: PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: DATE:

Over the last 2 weeks, how often have you been bothered by any of the following problems? (use "√" to indicate your answer)

	Not at all	Several days	More than half the day	Nearly everyday
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

TOTAL:

10. If you checked off any problems how difficult have these problems made it for you to do your work, take care of things at home or get along with people?

Not difficult at all _____ little difficulties _____

Some difficulties _____ lots of difficulties _____

ፕሌቸኪው የአማርኛ መጠየቂያ ቅጽ

ላለፉት ሁለት ሳምንታት ከነዚህ ከምዘረዝራቸው ችግሮች ውስጥ የትኞቹ ደርሰውብዎት (በየትኞቹ ተቸግረው) ነበር?

ጥያቄዎች	በፍጹም (0-1 ቀን በ 2 ሳምንት)	ከሰባት ቀን ያነሰ (2-6 ቀናት)	ከ ሰባት ቀናት በላይ (7-11 ቀናት)	ከሞላ ጎደል በየቀኑ (12-14 ቀናት)	መልስ
የእለት ተእለት ተግባርዎን ለማከናወን (ለመስራት) ያለዎት ተነሳሽነት ወይም ፍላጎት በጣም ቀንሶ ነበር?	0	1	2	3	
የመከፋት፣ የመደበኛ ወይም ተስፋ የመቁረጥ ስሜት ይሰማዎት ነበር?	0	1	2	3	
እንቅልፍ እምቢ ብሎት፣ በደምብ መተኛት አቅቶት ወይም እንቅልፍ በዝቶቦት ይቸገሩ ነበር?	0	1	2	3	
የድካም ወይም አቅም ማነስ ስሜት ይሰማዎት ነበር?	0	1	2	3	
የ ምግብ ፍላጎት ቀንሶ ወይም ከተለመደው በላይ ጨምሮ ነበር?	0	1	2	3	
ስለ ራስዎት መጥፎ ስሜት ተሰምቶት፣ አልተሳካልኝም ብለው ወይም ቤተሰቤን አሳፈርኩ ለው አስበው ነበር?	0	1	2	3	
በሚሰሩት ስራ ላይ ሃሳብዎን መሰብሰብ/ ትኩረት መስጠት አስቸግሮት ነበር? (ለምሳሌ ከሰዎች ጋር ሲጨዋወቱ፣ ሲያነቡ ...)	0	1	2	3	
ለሌሎች ሰዎች እስከሚታወቅ ድረስ በ እንቅስቃሴዎ (በንግግርዎ) በጣም ቀስ ብለው ወይም በትቃራኒው መረጋጋት አቅቶት (በአንድ ቦታ አርፎ መቀመጥ ወይም መቆም እስከማይችሉ ሆነው) ነበር?	0	1	2	3	
ብሞት ይሻለኛል ብለው አስበው ወይም ራስዎን በሆነ መንገድ ሊጎዱ አስበው ነበር?	0	1	2	3	
ድምር					

10. ከላይ ለተጠቀሱት ጥያቄዎች ችግር እንዳለ ከመለሱ የሚከተለውን ይሙሉ።

ከላይ ለተጠቀሱት ችግሮች ስራዎትን እንዳይሰሩ፣ በቤት ውስጥ ያሉ ነገሮችን እንዳይከናወኑ ወይም ከሌሎች ሰዎች ጋር እንዳይስማሙ ችግር ፈጥረውብታል?

ምንም አይነት ችግር አልፈጠረብኝም _____

ትንሽ ችግር ፈጥረውብኛል _____

በጣም ችግር ፈጥረውብኛል _____

ከመጠን በላይ ችግር ፈጥረውብኛል _____