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Psychosocial determinants of psychological distress among people with disabilities in Ethiopia: a cross-sectional study

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ABSTRACT

Objective This study aimed to assess the psychosocial determinants of psychological distress among people with disabilities in Ethiopia.

Design A cross-sectional study was conducted at an institution from 01 to 30 May 2021, using a census sampling approach.

Setting and participants A total of 269 individuals aged 18 and older with disabilities were present at the University of Gondar in Ethiopia.

Main outcome The Kessler psychological distress scale (K10), the multidimensional scale of perceived social support, the actual help-seeking behaviour and the stigma scale for chronic illness-8 were used to assess the dependent and independent variables, respectively. Binary logistic regression analyses were performed; a p value less than 0.05 was considered statistically significant at a 95% CI.

Result In this study, the prevalence of psychological distress was 34.6% with a 95% CI (29.40 to 40.10). Factors, such as older age (adjusted ß=1.09; 95% CI 1.04 to 1.15), low perceived social support (adjusted OR (AOR)=1.83; 95% CI 1.16 to 2.89), experiencing stigma (AOR=2.50; 95% CI 1.12 to 5.61) and cognition problems (adjusted ß=0.73; 95% CI 0.62 to 0.85), were significantly associated with increased psychological distress. Of the participants with psychological distress, professional help-seeking behaviour was 7.5%.

Conclusion Psychological distress was notably high among individuals with disabilities, while professional help-seeking remained very low. This underscores the urgent need for targeted mental health interventions to reduce stigma, strengthen social support and improve access to appropriate psychological care.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ A census sampling method was used to ensure complete coverage of the target population.
⇒ Validated and standard measurement tools were used to enhance the reliability of the data.
⇒ Use of interviewer-administered questionnaires may induce social desirability bias.
⇒ Exclusion of individuals with hearing impairments limits the generalisability of the findings.
⇒ Cross-sectional studies are restricted in determining the causal relationship between dependent and independent variables.

INTRODUCTION

Psychological distress is a non-specific mental health condition characterised by symptoms of anxiety, depression and emotional suffering[1 2] that may impair individuals' daily activities, social functioning and overall quality of life.[2]

Disabilities have been defined as an existing difficulty in performing one or more activities that, per a person's age, sex and normative social role, are generally accepted as essential components of daily living, such as self-care, social relations and economic activity.[3] Thus, the individual is incapable of some degrees of independence. These difficulties appear to represent a dimension of stress that increases the risk of the occurrence of psychiatric or substance disorders.[4] About 80% of disabilities are found in low-income countries, and half of all people with physical disabilities (PWPD) cannot afford healthcare.[5] As a result, individuals who have disabilities may face various psychological and social challenges, including shock, denial, anger, depression and a diminished sense of self. These issues are frequently made worse by stigma that shows them as charitable and dependent rather than respected members of the community.[6]

Help seeking for mental health issues is defined as an adaptive means of coping that seeks outside support to deal with mental health difficulties, such as professional (eg, psychiatrists) and informal (eg, family

members and friends).[7] Although early help-seeking practices are critical to decreasing the impact and consequences of mental illness, the vast majority of people with mental health disorders do not seek help from healthcare professionals.[8 9] There is a considerable treatment gap, with 22.5% of people suffering from mental health problems getting help, with functional limitations or illness severity serving as the biggest mediator. Anticipated self-stigma and perceived stigma seemed to be the most significant barrier to early help seeking.[10–12] Evidence from different studies showed that the prevalence of psychological distress and depression ranges from 21% to 75.5%,[13–19] and educational status, employment status, duration of disabilities, self-rated health and perceived social support were negatively associated with psychological distress among PWPD.[20] PWPD faced multiple challenges in seeking mental healthcare due to stigma, low mental health literacy and practical or financial difficulties like inaccessible transportation and far-off facilities.[21] PWPD access to formal health services were influenced by a number of factors, including need factors (perceived severity of illness), enabling factors (eg, affordability and social support) and predisposing factors (eg, beliefs and attitudes).[22] Furthermore, perceived discrimination significantly reduced healthcare-seeking behaviour, highlighting the profound effects of stigma and social inequality.[23]

Despite the substantial burden, there have been limited studies in Ethiopia on the psychosocial factors that contributed to psychological distress in individuals with disabilities. These individuals frequently encounter various challenges, including social, medical, environmental and attitude-related ones, which limit their ability to fully engage in society and may worsen their mental health issues. A double burden of perceived stigma may result from the co-occurrence of mental illness and disability. Regarding psychosocial interventions aimed at this population in Ethiopia, there is also a significant gap. Developing context-specific, evidence-based interventions requires an understanding of how social support and stigma affect psychological distress. Therefore, this study aimed to assess the psychosocial factors that contribute to psychological distress among PWPD in Ethiopia.

Research hypothesis

Psychological distress is significantly associated with poorer quality of life, higher perceived stigma and low perceived social support among Ethiopians with disabilities.

METHOD AND MATERIALS

Study setting

An institution-based cross-sectional study was conducted from 1 to 30 May 2021, among individuals with disabilities in the University of Gondar community. The University of Gondar is one of the oldest universities in Ethiopia, established in 1954 as the Public Health College and Training Centre. The university has five campuses. Based on the information obtained from the Mastercard Foundation and Disability Directorate registration lists, there were around 293 individuals with disabilities in the university (44 master's and 178 undergraduate students and 71 employees) across all campuses of the University of Gondar.

All students, teachers and administrative workers aged 18 and above with disabilities who were present at the University of Gondar during the study period were included. On the other hand, 17 individuals with hearing impairments were excluded. Those with partial hearing who could communicate during data collection were included, while individuals with communication difficulties were excluded. The data were collected from 276 study participants using a census sampling approach.

Study variables

Psychological distress was considered as a dependent variable, whereas sociodemographic factors, clinical factors, substance-related factors, psychosocial factors (perceived social support, stigma and quality of life) and suicidal behaviour were taken as independent variables.

Disability

In this study, disability refers specifically to physical and sensorium disabilities, including impairment in mobility and visual (blindness and low vision).[24] It did not include intellectual disabilities and mental health disabilities.

Measurement tools and data collection technique

Pretested, interviewer-administered Amharic versions of the questionnaire were used for a month. The sociodemographic, clinical, substance use, perceived stigma, perceived social support, WHO, disability assessment schedule, quality of life and suicidal behaviours were all included in the measurement. The Kessler psychological distress scale (K10), which consists of ten questions about emotional states with a five-level response rate, was used to measure psychological distress. Every item has a score ranging from '1' (never) to '5' (always), with a minimum and a maximum score of 10 and 50, respectively. Based on their scores, people were categorised as likely to be well if they scored 10–19, to have a mild mental disorder if they scored 20–24, to have a moderate mental disorder if they scored 25–29 and to have a severe mental disorder if they scored 30–50.[25] Individuals scoring 20 or above were classified as having psychological distress ('yes'), while those scoring below 20 were classified as not having psychological distress ('no'). This dichotomisation was applied to create a binary outcome variable used in logistic regression analysis. According to a previous study, the K10 had a Cronbach's alpha of 0.83 and demonstrated good internal consistency.[26] In this study, the K10 shows even greater reliability with a Cronbach's alpha of 0.92, indicating excellent internal consistency.

The actual health-seeking questionnaire was used to assess both formal and informal help-seeking behaviours.

This questionnaire aims to evaluate how individuals seek assistance for health-related issues. While informal help-seeking behaviour entails getting support from parents, family members or others who lack relevant professional qualifications, formal help-seeking behaviour refers to people seeking assistance from professionals with accredited backgrounds in the relevant field. There are ten items on this survey. Each source option receives a 'yes' or 'no' response from the participants. We assigned a binary score to each: yes=1 and no=0. The sum of all 'yes' answers determines the final score, which can be anywhere between 0 and 10. Higher scores indicate a greater likelihood of getting assistance.[27]

Substance use problems were assessed with the alcohol, smoking and substance involvement screening test (ASSIST). ASSIST risk scores for tobacco range from 0 to 31, and for alcohol and other substances, scores range from 0 to 39. The ASSIST risk score for alcohol is described as '0–10' lower risk, '11–26' moderate risk and '27+' high risk. For other substances like tobacco products, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives or sleeping pills, hallucinogens, opioids and others, for each score range from low=0–3, moderate=4–26 and high = 27+.[28] Individuals who have used the substance at any point in their lifetime, regardless of recent use, were considered ever substance use.

A multidimensional scale of perceived social support (MSPSS), which measures an individual's degree of perception of social support from three sources: family, friends and a significant other, was used to determine the perceived social support status. Each of the 12 items on the MSPSS is scored and rated from '1' (very strongly disagree) to '7' (very strongly agree). The response scale, thus, falls between 12 and 84. Low perceived social support scored 12–35, moderate perceived social support scored 36–60 and high perceived social support scored 61–84.[29]

The WHO Quality of Life was used to evaluate the quality of life of individuals with disabilities. Its score ranges from 26 to 130. Each of its 26 items is rated from '1' (not at all or dissatisfied) to '5' (completely or extremely satisfied).[30] Stigma was measured using the stigma scale for chronic illness (SSCI-8). It has eight items with ratings ranging from '1' (never) to '5' (always),[31] on a five-point Likert scale. The total score is between 8 and 40, and stigma is present if the score is higher than the mean.[32 33]

The 12-item WHO's disability assessment schedule (WHODAS-2.0) was used to determine the degree of functional impairment. According to the severity of issues, this instrument's six domains, cognition, self-care, getting along, life activities, mobility and participation, each have a five-point Likert scale, ranging from 0 (no difficulty) to 4 (very severe difficulty).[34] This assessment instrument has been confirmed among individuals with disabilities in an Ethiopian context. The Cronbach's alpha for the tool is 0.88, which indicates good internal consistency.[35] The WHODAS-2.0 in this study has a Cronbach's alpha of 0.81, indicating good internal consistency.

Data quality assurance

To ensure consistency, two native speakers of the language translated the questionnaire from English to Amharic and back to English. Data collectors got training on conducting participant interviews and an explanation of ethical standards, including the study purpose, confidentiality and obtaining written informed consent from participants. At Bahir Dar University, the questionnaire was pretested 1 week before the actual data collecting period with 5% of individuals with disabilities. In the pretest, some Amharic terms were updated, and the outcome variable measurement tool reliability was checked, and its Cronbach's alpha was 0.87. The lead investigator, research teams and supervisors reviewed the collected data every day to ensure it was consistent and complete.

Data processing and analysis

The gathered data were exported to the SPSS V.23 after being entered into EpiData V.4.6. To explain the sociodemographic, clinical, substance-related and psychosocial factors, descriptive data were computed and presented in frequencies, percentages, tables and graphs. Bivariable and multivariable analyses were conducted in the binary logistic regression analysis to show the association between the independent variables and dependent variable.

Multivariable logistic regression analyses were considered for variables that had a p value of less than 0.2 in the bivariable analysis. A p value of less than 0.05 was considered statistically significant for independent variables at a multivariate analysis. A 95% CI and adjusted OR (AOR) were used to describe the associations' strengths. When the model's fitness was assessed using Hosmer–Lemeshow statistics, a χ^2 of 5.70 with significance at a p value of 0.589 was found, indicating that the model fits the data well. The variance inflation factor for each candidate variable was less than 2.0, indicating that there is no colinearity among the independent variables.

Participant and public involvement

Participants in this study included individuals with disabilities residing in the University of Gondar community. Neither the participants nor the public were involved in the study's design, conduct, reporting or dissemination planning.

RESULTS

Sociodemographic characteristics

A total of 276 participants were invited to this survey, with a response rate of 97.5%, and the other 7 people declined to participate in the interview. The majority of the participants, 218 (81.0%), were single; 236 (87.7%) were Orthodox Christian followers; 232 (86.2%) had a degree or higher in education; 209 (77.7%) were students and 162 (59.9%) were male. The mean age of the respondents was 26.67 (SD±7.33) years. More than half of the participants, 153 (56.9%) were rural dwellers, and 159

Table 1 Sociodemographic characteristics of the study participants (n=269)

Variables	Category	Mean/ Frequency (N)	Percentage (%)/SD
Age	Mean (SD)	26.67	7.33
Sex	Male	161	59.9
	Female	108	41.1
Marital status	Single	218	81.0
	Married	43	16.0
	Divorce	6	2.2
	Widowed/Separate	2	0.7
Religion	Orthodox	236	87.7
	Muslim	15	5.6
	Protestant	15	5.6
	Catholic	3	1.1
Educational status	Primary school (1–8)	6	2.2
	Secondary school (9–12)	20	7.4
	Diploma	11	4.1
	Degree and above	232	86.2
Occupational status	Student	202	75.1
	Government employee	67	24.9
Monthly income	Low income	159	59.1
	Lower middle income	110	40.9
Source of income	Family	71	26.4
	Monthly salary	67	24.9
	Governmental or non-governmental	131	48.7
Residency	Rural	153	56.9
	Urban	116	43.1

(59.1%) were below poverty, below Ethiopian Birr 1557 per month, according to the World Bank poverty index of $1.9 (table 1).

Functional impairment, quality of life and types of disabilities

Out of the participants, 141 (52.4%) and 91 (33.8%) have visual impairment and have both leg paralysis, respectively. Some of the participants'—26 (9.7%)—had a comorbid physical illness, of which 10 (38.5%) were neurological problems (table 2).

The overall mean WHODAS-2.0 score was 9.74±7.71. The lowest mean score of disability was observed in domain 6 (participation in a society) at 1.34±0.84, whereas the highest mean score of disability was noted in domain 5 (getting along) at 5.59±2.48 (table 2). The overall mean quality of life score of the participants was 25.40±6.56. The mean and SD of the lowest and highest scores of the quality of life were social relationships and psychological health, 47.20±20.98 and 56.64±14.12, respectively (table 2).

Table 2 Distributions of the WHODAS-2.0 and WHOQOL-BREF characteristics of the study participants (n=269)

Standard tools	Domains	Mean/ Frequency	Percentage/ (SD)
WHODAS-2.0 (means/SD)	Cognition	3.82	1.88
	Mobility	4.32	2.41
	Self-care	2.60	1.34
	Getting along	5.59	2.48
	Life activities	3.38	1.67
	Participation	1.34	0.84
	Overall WHODAS-2.0	9.74	7.608
WHOQOL scale-BREF (mean/SD)	Physical health	51.55	13.84
	Psychological	56.64	14.12
	Social relationships	47.20	20.98
	Environmental	55.48	15.42
	Overall, WHOQOL	25.40	6.56
Types of disabilities	Visual impairment	141	52.4
	Both legs paralysis	91	33.8
	More than one body part	10	3.7
	Hand disability	11	4.1
	Other types of disabilities	16	5.9
Comorbid physical illness	Yes	26	9.7
	No	243	90.3
Types of comorbid physical illnesses	Neurological problem	10	3.7
	Hypertension	6	2.2
	Renal problem	4	1.5
	Other†	6	2.2
History of mental illness	Yes	1	0.4
	No	268	99.6

*Other types of physical disability, including *only one hand or one leg or one eye; back (spinal bifida) plus legs and/or hands and partial hearing.*
†Other types of comorbid physical illnesses, including *back pain, joint pain, goiter, epilepsy, tuberculosis and bronchial asthma*
WHODAS-2.0, WHO's disability assessment schedule; WHOQOL, WHO quality of life.

Psychosocial characteristics

Of the participants, 43 (16.0%) and 19 (7.1%) had ever had suicidal ideation and attempted suicide, respectively. Out of these, 8 (42.1%) attempted it once, and 3 (1.1%) were in the last month. About 11 (57.9%) of the participants' response descriptions for the suicide attempt were serious attempts to kill themselves, and it was only luck that they did not succeed. The most common method of suicide attempts was poison, reported in cases 10 (52.6%), with family conflict being the primary reason, mentioned in 5 cases (26.3%) (table 3). Of the study participants, 61

Table 3 Frequency distributions of suicidal ideation and attempt, substance use and perceived social support of the study participants (n=269)

Variables	Categories	Frequency (n)	Percent (%)
Ever suicidal ideation	Yes	43	16.0
	No	226	84.0
Suicidal ideation in the last 1 month	Yes	5	1.9
	No	264	98.1
A plan to commit suicide	Yes	30	11.2
	No	239	88.8
Ever suicide attempt	Yes	19	7.1
	No	250	92.9
Frequency of suicide attempt	One time	8	42.1
	Two times	7	36.8
	Three times and above	4	21.1
Suicide attempt in the last 1 month	Yes	3	1.1
	No	266	98.9
Methods used to commit suicide	Poisoning	10	52.6
	Hanging	4	21.1
	Jump from high	3	15.8
	Using sharp tools and gun	2	10.5
Response description of suicide attempt	I made a serious attempt to kill myself and it was only luck that I did not succeed	11	57.9
	I tried to kill myself, but knew that the method was not foolproof	7	36.8
	My attempt was crying for help. I did not intend to die	1	5.3
Reasons for suicide attempt	Family conflict	5	26.3
	Poverty	4	21.1
	Other reasons [OR]	10	52.6
Ever psychoactive substance use	Yes	61	22.7
	No	208	77.3
Tobacco	Yes	5	1.9
	No	264	98.1
Alcohol	Yes	56	20.8
	No	213	79.2
Perceived social support	Low perceived social support	126	46.8
	Medium perceived social support	123	45.7
	High perceived social support	20	7.4
Stigma	No stigmatisation	77	28.6
	Stigmatisation	192	71.4

OR: other reasons for suicide attempt: physical illness, family death, mental illness, lack of support and pain.

Table 4 Help-seeking behaviour for psychological distress among study participants (n= 93)

Help sources	Frequency (%)
Intimate partner (eg, girlfriend, boyfriend, husband and wife)	10 (10.7)
Friend (not related to you)	11 (11.8)
Parent	17 (18.3)
Other relatives/family member	10 (10.7)
Mental health professional (eg, psychiatrist, psychologist and social worker)	7 (7.5)
Teacher (advisors and classroom teachers)	9 (9.7)
Doctor/General practitioner/any healthcare provider	9 (9.7)
Minister or religious leader (eg, Priest, rabbi and chaplain)	14 (15.0)
Traditional healers (holy water, wizard, khat chewer and book reader)	7 (7.5)
I have not sought help from anyone for my problem	6 (6.5)
History of seek help	12 (12.9)
Over all help sought	25 (26.9)

(22.7%) had a history of substance use. Out of those, 5 (1.9%) and 56 (20.8%) used tobacco and alcohol, respectively (table 3). Regarding perceived stigma among the study participants, 192 individuals (71.4%) experienced stigmatisation based on the SSCI, using a cut-off score set at a mean score of 14.68 or higher (table 3).

Regarding perceived social support, 126 (46.8%), 123 (45.7%) and 20 (7.4%) had low, medium and high perceived social support, respectively. In the mean subscale score of perceived social support for the family scale, friend scale and significant others, low levels of perceived social support at a scale score of 1–2.9 were 48 (17.8%), 23 (8.6%) and 34 (12.6%), respectively (table 3).

Prevalence of psychological distress and help-seeking behaviour

Out of the study participants, 93 (34.6%) have psychological distress (95% CI 29.4 to 40.1). Among participants, its prevalence was 40.7% for women and 30.4% for men. Of those, 44 (16.4%), 23 (8.6%) and 26 (9.7%) are likely to have a mild, moderate or severe mental disorder, respectively. Approximately, 26.9% of participants with psychological distress engaged in one sort of help-seeking behaviour, but only 7.5% sought professional help for their mental health concerns (table 4).

Factors associated with psychological distress

In the bivariate logistic regression analysis, age, female sex, occupation, source of income, ever substance use, WHODAS-2.0 (mobility, life activities, cognition and

getting along with others), all domains of quality of life, perceived stigma and social support were candidates for multivariate logistic regression analysis at a p value of less than 0.2.

In the multivariate logistic regression analysis, as age increased, the risk of developing psychological distress increased by 9.0% (adjusted ß=1.09; 95% CI 1.04 to 1.15). In this study, participants with low perceived social support were 1.83 times more likely to experience psychological distress compared with those with high perceived social support (AOR=1.83; 95% CI 1.16 to 2.89). Experiencing stigmatisation was associated with a 2.5-fold increase in the likelihood of psychological distress compared with no stigmatisation (AOR=2.50; 95% CI 1.12 to 5.61). Additionally, for each one-unit decrease in cognition score, the risk of developing psychological distress increased by 27% (ß=0.73; 95% CI 0.62 to 0.85) (table 5).

DISCUSSION

In this study, psychosocial determinants of psychological distress among physically disabled people in the University of Gondar communities were assessed. The results revealed that a significant proportion, 34.6% of the participants, have psychological distress, with a 95% CI (29.40 to 40.10). Out of these, 26.9% and 7.5% of study participants sought support at least one sort of support and professional care for their mental health conditions, respectively. This help-seeking behaviour is lower than the 78.4% help-seeking behaviour reported in the study among students at Jimma University.[36] The gap could be explained by the fact that the individuals in this study are PWPD and prone to both anticipated self-stigma and perceived stigma.[10–12] The 34.6% prevalence of psychological distress is consistent with those of studies conducted in Ethiopia among physically disabled patients 34.6%,[37] in China, 39.9%,[13] in Georgia, 32.7%[16] and in the USA, 32.9%.[19]

The prevalence of psychological distress in this study revealed a much higher rate as compared with many of the previous studies carried out in different parts of the world, which reported prevalence rates of mental disorders from two different studies conducted in Australia: 21%[14] and 22%,[15] and in New Zealand 27.3%.[38] The possible reason for the discrepancy could be attributed to variations in study populations, cut-off points of measurement tools, study designs and the sociocultural practices of the participants. For instance, a study on psychological distress in individuals with disabilities in Australia used the K10 scale with a cut-off of 22+, which might overlook some cases of distress. In contrast, this study used a lower cut-off of 20+, potentially capturing more individuals experiencing psychological distress.

The finding in this study is much lower than the prevalence of depression reported among individuals with disabilities at the Disabilities Rehabilitation and Vocational Centre, 75.5% in Ethiopia.[18] The possible reason for the variations might be the differences in the measurement tool used and the study population. As a matter of fact, population differences also bear responsibility. The current study is conducted among PWPD who are independently performing their duties, whereas the previous study was carried out among people who were at rehabilitation and vocational centres, who are more vulnerable to mental health issues.

In this study, the findings showed that the prevalence of psychological distress among female participants was much higher than that of their male counterparts. The discrepancy in psychological distress between men and women is attributed to biological, psychological and cultural influences. Biologically, women are more susceptible to hormonal shifts, heightened stress reactivity and neurotransmitter changes.[39] Psychologically, they also tend to ruminate more, struggle with self-esteem and experience body image issues, all of which worsen emotional distress.[40] Additional burdens, such as caregiving, social inequality and exposure to gender-based violence, increase psychological strain.[41] Cultural norms promoting emotional openness make them more likely to report symptoms, while men may conceal distress due to stigma around emotional vulnerability.[42]

In this study, as age increases, the risk of experiencing psychological distress increases among study participants. The possible explanation for the association might be that PWPD have a need to function independently by separating from family. Hence, they may have a chance to experience intense external stressors. This is supported by a study conducted on serious psychological distress among adults with and without disabilities in the USA.[43 44]

The results of the current study revealed that the cognitive domain of WHODAS-2.0 was negatively associated with psychological distress. The possible explanation for this association might be that people with low cognitive capacity might have low self-esteem and use different coping strategies. This is supported by a study carried out in the USA about disability, health insurance and psychological distress among US adults.[44 45]

In this study, stigmatisation is significantly associated with psychological distress among individuals with disabilities. Because frequent exposure to discrimination and microaggression is associated with increased levels of anxiety, depression and low self-esteem. Public stigma diminishes life satisfaction, while internalised stigma can lead to feelings of shame, social withdrawal and isolation. Furthermore, stigma restricts access to vital resources, thereby intensifying psychological distress. Addressing and reducing stigma is, therefore, essential for promoting mental health and well-being and improving quality of life for PWPD. This is supported by previous research on the effect of stigma on the psychological quality of life among PWPD.[5 46]

The findings of this study revealed that poor perceived social support was significantly associated with psychological distress. This is the fact that people are more susceptible to anxiety, depression and social isolation when they lack social support, which is a vital defence against

Table 5 Bivariate and multivariate analysis of psychological distress and associated factors of the study participants (n=269)

Variables	Category	Psychological distress		Crude ß/OR, 95% CI	Adjusted ß/OR, 95% CI
		Yes (n=93)	No (n=176)		
Age	Mean (SD)	27.4±9.1 29.0 ± 7.8		1.83 (1.03 to 1.14)	1.09 (1.04 to 1.15)
Sex	Male	49 (30.4)	112 (69.6)	1	1
	Female	44 (40.7)	64 (59.3)	1.57 (0.94 to 2.62)	1.61 (0.94 to 2.76)
Marital status	Single	81 (37.2)	137 (62.8)	1.92 (0.92 to 3.88)	0.94 (0.33 to 2.71)
	Others [M]	12 (23.5)	39 (76.5)	1	1
Educational status	Degree and above	81 (34.9)	151 (65.1)	1	1
	Others [E]	12 (32.4)	25 (67.6)	1.12 (0.53 to 2.34)	0.36 (0.10 to 1.32)
Occupational status	Student	81 (38.8)	128 (61.2)	2.53 (1.27 to 5.03)	0.62 (0.09 to 4.08)
	Government employee	12 (20.0)	48 (80.0)	1	1
Source of income	Monthly salary	13 (20.6)	50 (79.4)	1	1
	Family	31 (41.3)	44 (58.7)	037 (0.17 to 0.79)	0.93 (0.42 to 2.04)
	Governmental or non-governmental financial aid	49 (37.4)	82 (62.6)	0.44 (0.22 to 0.88)	1.46 (0.30 to 7.01)
Ever substances use	Yes	17 (27.9)	44 (72.1)	0.67 (0.36 to 1.26)	1.01 (0.48 to 2.11)
	No	76 (36.5)	132 (63.5)	1	1
WHODAS (mean/SD)	Cognition means (SD)	4.52±2.19 3.45 ± 1.57		0.74 (0.64 to 0.85)	0.73 (0.62 to 0.85)*
	Mobility means (SD)	4.61±2.48 4.16 ± 2.36		0.93 (0.84 to 1.03)	1.00 (0.84 to 1.19)
	Self-care means (SD)	2.67±1.37 2.57±1.32		0.95 (0.79 to 1.14)	1.61 (0.94 to 2.76)
	Life activities mean (SD)	3.75±1.19 3.18±1.45		0.82 (0.71 to 0.95)	0.92 (0.74 to 1.16)
	Getting along with others mean (SD)	6.34±2.87 5.20±2.22		0.83 (0.75 to 0.92)	0.93 (0.81 to 1.07)
	Society participation means (SD)	1.41±0.93 1.30±0.78		0.86 (0.65 to 1.15)	0.49 (0.19 to 1.25)
WHOQOL (mean/SD)	Physical quality of life	49.78±19.0 52.48±15.5		1.06 (0.99 to 1.14)	1.01 (0.98 to 1.03)
	Psychological QoL	54.2±18.6 57.9±16.2		1.07 (1.00 to 1.15)	0.99 (0.97 to 1.02)
	Social relationship QoL	43.2±27.8 49.3±22.5		1.14 (1.02 to 1.26)	1.00 (0.96 to 1.04)
	Environmental QoL	51.5±15.1 57.6±15.2		1.09 (1.03 to 1.15)	1.01 (0.99 to 1.04)
Stigma	No stigmatisation	12 (15.6)	65 (87.4)	1	1
	Stigmatisation	81 (42.2)	111 (57.8)	3.94 (2.01 to 7.80)	2.50 (1.12 to 5.61)*
Ever suicidal ideation	Yes	20	23	1.82 (0.94 to 3.53)	0.51 (0.20 to 1.33)
	No	73	153	1	1
Perceived social support	Low perceived social support	52 (41.3)	74 (58.7)	3.79 (1.43 to 10.02)	1.83 (1.16 to 2.89)
	Medium perceived social support	30 (24.4)	93 (75.6)	1.74 (0.67 to 4.50)	1.60 (0.97 to 2.63)
	High perceived social support	11 (55.0)	9 (45.0)	1	1

Help-seeking behaviour was assessed only among participants who reported psychological distress (n=93). Therefore, this variable is not included in the regression analysis and descriptive statistics are presented only for this subgroup.
**Associated with psychological distress statistically at p <0.05, '1' defines the reference.*
QoL, quality of life; WHODAS, WHO disability assessment schedule; WHOQOL, WHO quality of life.

stress and emotional difficulties. Research continuously demonstrates that psychological distress is more likely to occur in individuals with disabilities who perceive low levels of emotional support.[47 48] Social support lessens the negative effects of physical limitations on mental health by boosting resilience and self-worth. Therefore, encouraging social interaction and easily accessible support systems is crucial to enhancing the mental health of individuals with disabilities.[49 50]

This study used a census sampling method to ensure comprehensive coverage of the target populations and employed standardised measurement tools to enhance data reliability. However, the use of an interviewer-administered questionnaire may have introduced social desirability bias, as participants might have responded in ways they perceived as favourable. Additionally, the cross-sectional design restricts the ability to establish causal relationships between dependent and independent variables. Finally, most participants had high education levels, unlike the wider Ethiopian population with disabilities. This limits generalisability, highlighting the need for broader representation and diverse educational backgrounds to understand psychosocial distress across contexts.

Conclusion

The prevalence of psychological distress among PWPD was found to be high. The result also showed that the prevalence of suicidal ideation and attempts was high. As a result, PWPD need intensive psychological support. Moreover, in the female sex and adulthood age groups, cognitive decline, stigma and poor social support need further attention for the assessment of psychological distress and interventions. Therefore, the collaborative efforts with concerned stakeholders and academic staff need to improve the help-seeking behaviour for their mental distress, as well as training for instructors on how to identify, support and refer people with psychological distress in a timely manner when required.

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