Coping strategies and associated factors among physically disabled people for psychological distress in Ethiopia

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Research Article

Keywords: coping strategy, resilience, psychological distress, physical disability

Posted Date: July 28th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-1838091/v1

Additional Declarations: No competing interests reported.

Version of Record: A version of this preprint was published at BMC Public Health on January 4th, 2023.
See the published version at https://doi.org/10.1186/s12889-022-14877-0.

Abstract

Background: Coping strategies are frequently used among physically disabled people when they faced with adversities. In low- and middle-income countries are not investigated coping styles among psychological distress disabled individuals, despite a high prevalence of psychological distress. The aim of this study was to identify coping strategies of physically disabled people in Ethiopia to enhance the development of appropriate interventions.

Methods: an institution-based cross-sectional study was employed among individuals at the University of Gondar staff and students living with physical disabilities from May to June 2021. All physically disabled staff and students were screened for psychological distress (n=269). The Brief Cope with Problems Experienced (COPE-28) was used to assess coping strategies for psychological distress.

Results: In the present study, emotional-focused coping strategies are most frequently used when dealing with psychological distress among physically disabled participants. The most frequently used coping strategy was spirituality coping from emotional-focused subscales. In the multivariate analyses, urban residence and stigma were positively associated with emotion-focused coping strategies, and WHO quality of life (QOL) was positively associated with problem-focused coping sub-scale. Urban residence was negatively associated with dysfunctional coping strategy, but WHO QOL was positively correlated with dysfunctional coping sub-scale.

Conclusions: In this study revealed that religion is the most frequently used coping strategy among the study participants. Urban residents, stigma, and WHO QOL were factors significantly correlated with a coping strategy. The Ministry of Education and Ministry of health may find the present findings useful for early detection, prevention, and interventions of coping strategies among physically disabled persons.

Introduction

Globally, more than one billion or fifteen percent of the world population are estimated to live with disability. About eighty percent of them were lived in developing countries. It is more prevalent among women (19%) than men (12%). Physical disability affects forty-five million people worldwide of them ninety percent of physical disability occurs in developing countries and 2 out of every 3 who are physically impaired are females(1–3). According to the World Bank and World Health Organization(WHO) report, there are an estimated fifteen million people with disabilities in Ethiopia, 17.6% of the population(4).

Disability is umbrella term for impairments in body functioning or structure and it is an interaction between a person's body and features of the society in which he/she lives(3, 5, 6). It negatively impacts physical activities, health outcomes, social interactions, educational achievements, economic participation and higher rates of poverty than people without disability(3, 7–9).

Coping is an ability to adjust, adapt, and meet a challenge successfully(10). Noted that coping means when one constantly changes her/his behavioral and thought effort that people adopt to master, reduce or minimize stressful events and restoration of equilibrium in order to manage some specific external demands that causing the distress in problem and emotion-focused coping (11–14). Coping might be positive and negative those have been associated with lower and higher level of psychological distress, respectively,(15). The most frequently used coping strategies was religious or spiritual-focused coping strategy when finding meaning and purpose to adversity through a strong relationship with God(16).

It is a very broad term and it plays both independent and interactive role influencing physical and mental health(17). Disabled people confronted in using different supportive materials. These include; wheelchairs and artificial limbs, problems in availability, inaccessible of appropriate technology, and difficulty of repairing and maintaining the accessible devices(18). Coping strategies are an important to improve social and physical barriers to disabled people(19). It is considered for disabled people/university students to do their daily activities, like fetching water, lectures, going to market, and washing clothes(20). It is different among gender. Males have to control a stress, either overcoming or fleeing it and females are not easily cope with psychological stress due to natural conditions(21).

Different studies revealed that, there are several coping strategies among disabled people or students from their psychological distress. These includes; sought of social support, problem solving, escaping avoidance, use social media, watching movie, friends/roommates, and use of relationship(22, 23). Social support and problem focused coping strategies play an important role to increase life satisfactions and the personal grow of disabled people(24). Regular physical exercise is also one of effective coping mechanisms to use by disabled persons(25).

In Ethiopia, still unknown whether coping styles an important impact on the physical disability individuals responding to psychological distress. As it is the first research attempt in Ethiopia, it is supposed to bring a fresh insight in the field and serve as basis future researchers in the country. Therefore, to know coping styles and predictors of physically disability employ/students in Gondar University is important to overcome psychological distress due to their disability.

In Ethiopia, coping strategy has not been studied among physical disability students and staffs with psychological distress. Still, people who are exposed for different mental illness associated with their disability were investigated for the status of their coping style of their mental well-being with different psychological distress, very little attention has been given to buffer psychological distress and associated factors in people exposed different stressful events linked with their disability, which is the common problem in developing countries and Ethiopia context particular. Therefore, the current study conducted to assess coping strategy and associated predictors among physical disability students and staffs at University of Gondar in northwest Ethiopia are vital to give appropriate intervention by the participants and psychiatrist.

Methods And Materials

Setting

In institution based cross-sectional study was employed in the University of Gondar. All physically disabled students and staffs (n=269) were screened for psychological distress symptoms using the validated using Kessler psychological distress scale(K-10) items questionnaire. Those scoring ≥20 had probable psychological distress (n=93) were included in the study. The brief coping with problems experienced (COPE-28) scale was used for buffering psychological distress symptoms.

Study design and period

An institution based cross-sectional study design was conducted among physically disabled students and staffs at the University of Gondar from May to June 2021.

Study area

The University of Gondar was established in 1954, and hence this is the oldest medical training institution in the country. The University has five campuses. As we got the information from Master card foundation and disability directorate, in all campuses around 44 masters and 178 undergraduate physically disabled students have been attending their classes. More than 71 physically disabled individuals have been employed at the University of Gondar.

Study population

All students, teachers and workers with physically disabled who were living at the University of Gondar during the study period. All students who were on the withdrawal and workers who were on annual/maternal/sick leave were excluded.

Sampling technique

The census was used to recruit the study participants at University of Gondar. A total of 269 study sample were identified, all physically disabled students, teachers and workers of Gondar University were screened for psychological distress symptoms by using Kessler psychological distress scale(K-10). Those who scored ≥20 were probable psychological distress. After screening, ninety-three physically disabled samples were eligible to assess their coping strategies.

Study variables

The dependent variables were coping strategies and resilience was measured by Brief cope-28 item. Independent variable includes socio-demographic factors, WHO-DAS, QOL, social support, clinical factors and substance use variables.

Data sources and measurements

Data were collected using an interviewer-administered structured questionnaires, which contains several other explanatory variables-including; socio-demographic characteristics, clinical factors, psychological factors (stigma and social support), and substance related factors. Data for collected for all variables collected by using structured questionnaires. The following instruments were employed.

Measurements

In this study one of the outcome variables was assessed by using the Brief-COPE (Coping Orientation to Problems Experienced Inventory) is a 28 item self-report questionnaire designed to measure effective and ineffective ways to cope with a stressful life event. Coping is defined broadly as an effort used to minimize distress associated with negative life experiences. The scale has three subscale; problem-focused, emotion-focused, and avoidant coping.

Respondents rate items on a 4-point Likert scale, ranging from 1 “I haven’t been doing this at all” to 4 “I have been doing this a lot”. The scale has 28 items that assess the degree to which a respondent utilizes a specific coping strategy. The 28 items have been categorized into fourteen coping strategies. In validation studies, the Brief COPE Scale was found to have reasonable reliability and validity. It was used to assess coping styles for mental illness in our country(26-32). In this study, the alpha value was 0.857.

Disability was measured using the World Health Organization Disability Assessment Schedule (WHODAS). Disability was measured in six domains of functional impairment, including understanding and communicating, getting around, self-care, getting along with people, life activities, and participation in society. Scores were from 1(not difficult) to 5 (extreme or cannot do)(33-35). In this study, the Cronbach’s Alpha was 0.8.

Social support was assessed using the Oslo 3-item social support scale which was used in several studies. It provides a brief measure of social support and functioning and is considered to be one of the best predictors of mental health. It covered different levels of social support by measuring the number of people the respondents feel close to, the interest and concern showed by others. The Oslo-3, total scores were calculated by adding up the raw scores for each item. The score scale ranges from 3 to 14 and three broad categories: “poor social support” 3 to 8, “moderate support” 9-11, and “strong support” 12-14(36-38).

Stigma was assessed by using a standard questionnaire of eight items of stigma scale for chronic illness (SSCI-8)(39). It comprises eight items rated on a five point likert scale from one (never) to five (always). Total score range from eight to forty, with a cut-off score greater than eight indicating the presence of stigma(40, 41)

Substance use factors were assessed using WHO’s Alcohol, smoking, and substance involvement screening test (ASSSIS), which is develop by the WHO and its Cronbach’s Alpha with 0.80, sensitivity of 80%, and specificity of 71%.

Patients' quality of life was assessed by 26 items of WHOQOL-BREF questionnaire. The questionnaire consists of two parts. The first, part evaluates the individual's overall perceptions of quality of life and the person's overall perception of health. The second part evaluates the four domains: physical health, psychological health, social, and environmental health. Domain scores are scaled in a positive direction (i.e. higher scores correspond to better quality of life). The QOL raw scores are transformed into a range between 0 and 100. The overall QOL computed as the average of the score of the four domains. The higher mean score indicates better QOL and vice versa. In this study, the Chronbach Alpha's was 0.784.

Data processing and analysis

The completed questionnaire was checked for completeness and then was coded, recoded, and interred into Epi-info version seven statistical programs and then was exported to SPSS version 21 for analyses. Both descriptive and analytical procedures were used. Descriptive statistics like frequency, percentage, mean and SD. After all variables fulfilled the chi-square (categorical variables), computed mean, independent sample t-test, one way ANOVA and then checked their collinearity diagnostic and independent from other Variable Inflation factors (VIF was less than 2 and Tolerance greater than 0.2 and less than 0.989) and bivariate and multivariate linear regression analysis stepwise method was employed to identify factors associated with coping strategies whose P-values were <0.2 level. Finally, the variables that had an independent associated with coping strategies were declared based on 95% CI and P-value < 0.05. Model fitness was checked by using Adjusted R square from 0.43 to 0.89 at f-test 0.0001 to 0.05). An adjusted unstandardized β coefficient was used to describe associated with coping.

Results

A total of 93 physically disabled participants with a Kessler psychological distress scale (K-10) score of ≥20 included in the analyses. The prevalence of physically disable respondents with psychological distress symptoms was 93/269: 34.6%.

Socio-demographic and health related characteristics

The mean psychological distress scale score of the participants was 26.52 with SD of 5.87. The mean age of the respondents was 24.67±5.48 years. Out of the participants, 87.1% (n=81) were single, and 91.4% (n=85) were Orthodox Christian followers. The majority of the study population, n=81(87.1%) degree and above educational holder, nearly ninety percent (n=81) were students and more than two-third of the study populations got ≤3799 Ethiopian birr. Of the participants, more than fifty percent (n=49) had visual impairment, and one in three of the respondents had both legs disability. Nine in ten participants were stigmatized due to their physical disability, and 55.9% (n=52) got intermediate social support. The small number of 17(18.3%) and n=20(21.5%) of the respondents have chewed khat and suicidal ideation, respectively. The mean and the standard deviation of the overall WHO QOL and WHO DASS were 39.1±12.5 and 24.35±8.25, respectively, (table 1).

Coping strategies

The two most common coping strategies were “Giving up trying to deal with it,” and “Using alcohol or other drugs to help me get throw it.” were reported to be used ‘a lot’ by n=60; 64.5% and 60.2% (n=56) participants, respectively. The least frequently used coping strategies were accepting the reality of the fact and taking action. The scores of the problem-focused coping sub-scale ranged from two to eighteen, with a mean of 11.46 (SD ±3.26). The emotional focused coping subscale scores ranges to 3 to 24 with a mean of 13.61 (±5). Avoidance coping subscale score ranges to 5 to 26, and a mean of 15.28 (SD±4.53) (table 2).

In table 3: illustrates that a brief cope is comprised of 14 subscales, each of which assesses the degree to which a respondent utilized a specific coping strategy. Each of the fourteen scales is comprised two items; total scores on each scale ranges from 2 (minimum) to 8 (maximum). Higher scores indicate increased utilization of that specific coping strategy. In this subscale, spiritual coping style was the most frequently used strategy by physically disabled study participants.

In table 4 illustrates that the possible score range of 0 to 84, the sample scored a mean coping strategy score of 41.15(SD=11.34). The score ranges from 12 to 63. The minimum possible score that suggest weaker, whereas the maximum possible score that suggest stronger coping strategy. The mean score of the sample can be understood as low. The minimum and the maximum score also indicated that there were no outliers. The sub-scale of problem-focused, emotion-focused and dysfunctional coping possible scores range from, 0 to 21, 0-27, and 0 to 36, respectively. The mean and SD score of problem-focused, emotion-focused, and dysfunctional coping were 11.46(SD=3.26), 13.61(SD=5) and 15.28(SD=4.53), respectively.

Relationship between factors and coping strategy

Sub-sample test were formed based on the samples of categorical variables by using independent sample t-test, one way ANOVA and post hoc pairwise comparisons were employed to examine if significant difference existed as the function of the variables. The independent sample t-test between female (mean=14.68; SD=4.66) and male (M=12.65; SD=5.13) produced a statistical mean difference on emotional-coping (t[90]=-1.99, p< 0.05), rural (M=11.73; SD=4.7) and urban (M=16;SD=4.2) yielded a statistical mean difference on emotional-coping (t[89]=-4.5, p<0.0001). Stigmatized (M=14.22; SD=4.72) and not stigmatized (M=9.5; SD=4.5) a statistical mean difference on emotional-coping (t[14]=-3.2) at p<0.02). The independent sample t-test between stigmatized (M=11.8; SD=3.18) and not stigmatized (M=9.17; SD=2.9) produced a statistical mean difference on problem-coping (t[15]=-2.7; p<0.001). Finally, independent sample t-test between female (M=16.29; SD=4.37) and male (M=14.37; SD=4.5) yielded a statistical mean difference on dysfunctional coping (t[90]=-2.09; p<0.04). Between rural (M=14.19; SD=5.4) and urban (M=16.66; SD=4.57) at (t[82]=-2.7; p<0.0001), stigmatized (M=15.7;SD=4.53) and not stigmatized (M=12.5; SD=3.6) yielded a statistical mean difference on dysfunctional coping (t[16]=-2.33; p<0.02).

Factors associated with coping strategy and resilience

In the multivariate analyses, urban residence B=3.05(0.98-5.12), and stigmatized B=3.01(1.80-7.64) were positively associated with emotion-focused coping subscale and stigmatized B=1.11(0.61-2.83), and WHO QOL B=0.18(0.13-0.22) were factors positively associated with problem-focused coping sub-scale. Urban residence B=-0.96(-1.69-0.22) was negatively associated with dysfunctional coping strategy, but WHO QOL B=0.35(0.32-0.38) was positively associated with dysfunctional coping sub-scale(Table.5)

Discussions

Coping is the expending conscious effort to solve personal and interpersonal problems and seeking to master, minimize or tolerate psychological distress associated with physical disability. Persons with disabilities include those who have long-term physical, mental, intellectual, or sensory impairments which interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

In this study, the overall mean coping strategy score was lower than the mean value of the total mean score of coping, but the subscale of emotional-focused was the highest coping strategy mean score compared with the subscale of problem-focused and avoidant coping strategies. The two most frequently used coping strategies from Avoidant/dysfunctional coping strategies were “I have been giving up try to deal with it” and “I have been using alcohol or other drugs to help me get through it”. “I have been accepting the reality of the fact that it has happened” was the least frequently used emotion-focused coping strategies. The instrument consists of 28 items that measure 14 factors of 2 items each. “Spiritual coping” was the most frequently used coping style among study participants.

The independent sample t-test between female and male, and rural and urban yielded a statistical mean difference on emotional-focused coping strategy subscale. The independent sample t-test between stigmatized and not stigmatized produced a statistical mean difference on problem-based coping strategy subscale. Finally, independent sample t-test between female and male yielded a statistical mean difference on dysfunctional coping. Between rural and urban, and stigmatized and not stigmatized yielded a statistical mean difference on dysfunctional coping.

In the present study, the remarkable findings were obtained. Participants stigmatized were positively relationship with emotional and problem-focused coping strategies. Quality of life was significantly associated with problem-focused and avoidant coping strategies but urban resident was negatively associated with avoidant coping strategies. Participants who reside in urban were positively associated with emotional coping style.

In the present study, Emotional coping of spirituality coping style is the most frequently used strategy among the participants. Which was supported by other study in Ethiopia, spiritual coping was the most frequently used coping strategy among psychologically distressed women(42). Spirituality coping mechanism was significantly predictive of good mental health(43). Religion has also been found to act as a resource for physically disabled people coping style(44). There were many studies supported that religion was a good coping mechanism for psychological distress respondents (45–47). Spirituality and

religion positively influence people's ability to cope, which aid in the coping process, which practices are related to greater life satisfaction, happiness, positive affect, and other indicating of well-being(48).

In this study, stigmatized physical disabled participants were positively associated with emotional and problem focused coping strategy subscales. Stigma contributes to the discrimination and exclusion experienced by people with disability in all aspects of their lives due to lack of awareness and understanding regarding cause of disability, misconception about cause of disabilities often result from cultural and religious belief(49, 50). Disability has its own stigma pervasive every society, but in parts of Africa and Asia discrimination towards disabled people can be particular oppressive. This in turn their coping styles like emotions or to solve problems associated with disability(51). The ability to use positive coping strategies was connected with lower self-stigma, while negative coping strategies associated with increased the stigma or stigma was significantly connected with negative coping strategies or it was also significantly negatively associated with positive coping strategies(52)

In the current study, quality of life of physically disabled respondents was positively correlated with problem-focused and avoidant/dysfunctional coping strategy subscales. Coping style can play a role on health related QOL associated with physical disability(53). Quality of life positively associated with coping style items; such as support and venting, positive reframing and acceptation, active coping and self-distraction, in contrast, denial, humor, religion and self-blaming were negatively associated with QOL(54). Coping styles correlated negatively all QOL domains except mental health domain among dysfunctional disability patients(55). The QOL and coping strategies are positively associated; supposed to be adaptive coping strategies(56) and improving the QOL physically disable adolescents may focused on reduction of life stress and developing resilience by increased the variety of social and personal resources(57).

Another significant factor in this study, being living in the urban was relationship with coping strategy subscale of emotional-focused and avoidant coping styles. Coping styles and stress of rural and urban adolescents those who are living urban were higher mean value of coping strategies than their counterparts rural living(58). In urban adolescents have many options to solve the problem or cope with stress(58). Rural residence was lower severity of physical distress and greater satisfaction with their counterparts from large city(59). Patients living with chronic medical diseases in Poland, those who were living in rural areas had low level of psychological distress due to their social interaction and religion(59).

Conclusions

In summary, this is the first study on coping strategy for psychological distress among physically disabled students and staffs of University of Gondar. Spiritual coping was the most frequently used coping strategy of fourteen subscales of coping style and alcohol used also the most frequent used coping strategy from the Brief COPE 28 items questionnaire. Urban residence and stigmatized were positively correlated with emotional-focused coping strategy subscale. Stigma and WHO QOL were significantly associated problem based coping subscale and WHO QOL was positively correlated with

avoidance coping subscale, but urban residence was negatively associated with dysfunctional coping subscale. The ministry of Education and Ministry of health may find the present findings useful for early detection, prevention, and interventions of coping strategies among physically disabled persons.

Declarations

Ethical considerations

Ethical approval and ethical clearance were obtained from the Institutional Review Board (IRB) and ethical clearance committee of the University of Gondar. Ref. No.-V/P/RCS/05/2520/2021. Participants were informed about the aim of study and advantage of study; confidentiality, there is no risk of being participants and they have full rights to stop in the middle of the interview. The risk and the benefit of the study were clearly explained to the participants through the information sheet before obtaining their consent. Written informed consent was obtained from each study participant. All methods were carried out in accordance with 1964 Declaration of Helsinki.

Consent for publication

Not applicable

Availability of data and materials

The dataset during and/or analyzed during the current study available from the corresponding author on reasonable requests

Competing interests

None declared

Funding

The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors. The funder has no role in writing the manuscript.

Authors' contributions

GT conceived the study and was involved in the study design, reviewed the article, analysis, report writing, and drafted the manuscript. TA, SS, YM, TK, DA, and ES were involved in the study design, analysis and drafted the manuscript. All authors read and approved the final manuscript.

Acknowledgments

First of all, we would like to thank the University of Gondar, disability directorate office for organizing this research program. Secondly, our heartfelt thanks also extend to the University of Gondar, disability office

staffs for their assistance to get the data of participants. Finally, we would like to thank our study participants for their cooperation in providing the information.

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Tables

Table 1
Socio-demographic and health related characteristics

Variables	Categories	Frequency	Percent
Age	Mean(SD) 24.69(5.48		
Sex	Male	49	52.7
	Female	44	47.3
Marital status	Single	81	87.1
	Others *	12	12.9
Religion	Orthodox	85	91.4
	Others **	8	8.6
Education	Degree and above	81	87.1
	Others ***	12	12.9
Occupation	Student	81	87.1
	Employee	12	12.9
Income	≤ 3799	60	64.5
	> 3799	33	35.5
Residency	Rural	52	55.9
	Urban	41	44.1
Types of physical disability	Visual	49	52.7
	Both legs	29	31.2
	Others ****	15	16.1
Chronic illness	Yes	11	11.8
	No	82	88.2
Stigma	Yes	81	87.1
	No	12	12.9
Perceived Social support	Poor	11	11.8
	Intermediate	52	55.9
	Good	30	32.3
Physical domain	Mean (SD) 83.52(17.3)		
Psychological domain	Mean (SD) 73.89(16.17)		

Variables	Categories	Frequency	Percent
Social domain	Mean (SD) 32.6(10.33)		
Environmental domain	Mean (SD) 97.74(19.30)		
Resilience	Mean (SD) 26.96(8.62)		
Suicidal thought	Yes	20	21.5
	No	73	78.5
Suicidal attempt	Yes	8	8.6
	No	85	91.4
Alcohol	Yes	17	18.3
	No	76	81.7
Khat	Yes	17	18.3
	No	76	81.7
Psychological distress	Mean (SD) 26.52(5.87)		
WHO DASS	Mean (SD) 24.35(8.25)		
WHO QOL	Mean (SD) 39.1(12.5)		

Table 2
Frequency of use of coping strategies by physically disabled participants with psychological distress symptoms(N = 93).

Its internal consistency in this study was 0.842 Chronbac's Alpha.	**Mean (SD)**	**Not at all**	**A little bit**	**A medium amount**	**A lot**
Problem focused coping strategies	11.46(3.26)				
Thinking hard about what steps to take	2.13(0.78)	6(6.5)	5(5.4)	53(57)	29(31.2)
Trying to come up with a strategy about what to do	2.00(0.86)	1(1.1)	31(33.3)	28(30.1)	33(35.5)
Trying to get advice or help from other people about what to do	1.41(1.20)	27(29)	29(31.2)	9(9.7)	28(30.1)
Taking action to try to make the situation better	0.43(0.76)	64(68.8)	22(23.7)	3(3.2)	4(4.3)
Getting help and advice from other people	2.15(1.04)	6(6.5)	26(28)	9(9.7)	52(55.9)
Concentrating my efforts on doing something about the situation I'm in	1.44(1.23)	28(30.1)	27(29)	7(7.5)	31(33.3)
Getting emotional support from others	2.00(0.89)	3(3.2)	27(29)	30(32.3)	33(35.5)
Emotion focused coping strategies	13.61(5)				
Trying to find comfort in my religion or spiritual beliefs	1.20(0.97)	28(30.1)	26(28)	31(33.3)	8(8.6)
Praying or meditating	1.65(1.07)	11(11.8)	42(45.2)	9(9.7)	31(33.3)
Looking for something good in what is happening	1.12(0.91)	30(32.3)	26(28)	33(35.5)	4(4.3)
Accepting the reality of the fact that it has happened	0.38(0.64)	65(69.9)	22(23.7)	5(5.4)	1(1.1)
Getting comfort and understanding from someone	1.41(0.73)	8(8.86)	46(49.5)	32(34.4)	7(7.5)
Trying to see it in a different light to make it seem more positive	1.66(0.71)	6(6.5)	27(29)	53(57)	7(7.5)
Learning to live with it	1.77(0.96)	3(3.2)	46(49.5)	13(14)	31(33.3)
Making jokes about it	1.51(0.75)	4(4.3)	48(51.6)	31(33.3)	10(10.8)
Making fun of the situation	0.60(0.83)	54(58.1)	26(28)	9(9.7)	4(4.3)
Avoidance/dysfunctional coping strategies	15.28(4.53)				

Its internal consistency in this study was 0.842 Chronbac's Alpha.	Mean (SD)	Not at all	A little bit	A medium amount	A lot
Doing something to think about it less, such as watching TV, reading, daydreaming, or sleeping	1.65(1.22)	29(31.2)	4(4.3)	31(33.3)	29(31.2)
Turning to work or other activities to take my mind of things	0.57(0.83)	56(60.2)	26(28)	6(6.5)	5(5.4)
Expressing my negative feelings	1.71(0.75)	5(5.4)	28(30.1)	49(52.7)	11(11.8)
Saying things to let my unpleasant feelings escape	1.75(1.07)	5(5.4)	46(49.5)	9(9.7)	33(35.5)
Saying to myself "this isn't real	0.91(0.81)	29(31.2)	49(52.7)	9(9.7)	6(6.5)
Giving up trying to deal with it	2.32(0.97)	3(3.2)	24(25.8)	6(6.5)	60(64.5)
Giving up the attempt to cope	1.69(0.96)	4(4.3)	49(52.7)	12(12.9)	28(30.1)
Refusing to believe that it has happened	1.02(0.82)	23(24.7)	52(55.9)	11(11.8)	7(7.5)
Blaming myself for things that happened	1.53(0.73)	3(3.2)	48(51.6)	32(34.4)	10(10.8)
Criticizing myself	1.72(1.20)	24(25.8)	8(8.6)	27(29)	34(36.6)
Using alcohol or other drugs to help me get through it	2.24(1.01)	5(5.4)	24(25.8)	8(8.6)	56(60.2)
Using alcohol or other drugs to make myself feel better	1.15(0.91)	29(31.2)	24(25.8)	37(39.8)	3(3.2)

Table 3
Mean and standard deviation of coping sub-scale of physical disable participants

	Mean	SD
Spiritual coping	4.56	1.89
Active coping	4	1.54
Self-distraction	3.83	1.27
Self-blaming	3.42	1.72
Planning	3.3	1.16
Emotional support	3.05	1.28
Positive reframing	3.05	1.65
Instrumental support	2.8	1.68
Acceptance	2.77	1.48
Denial	2.61	2
Venting	2.56	1.11
Behavioral	2	1.27
Humor	1.7	1.23
Substance use	0.8	1.21

Table 4
Descriptive statistics of resilience and coping of adults with physical disability (n = 93)

Variables	N	Range	Minimum score	Maximum score	Mean	SD
Emotional-focused	93	21	3	24	13.61	5
Problem-focused	93	16	2	18	11.46	3.26
Dysfunctional coping	93	5	21	26	15.28	4.53
Coping strategy	93	52	11	63	41.15	11.34

Table 5
simple and multivariable leaner regression of coping and resilience associated factors among physically disabled psychological distress participants (N = 93)

Characteristics	Mean (SD)	Crude B(95% CI)	Adjusted B(95% CI)
Emotional focused subscale of coping, Tolerance ≤ 0.9, adjusted R square 0.24, F-change 4.7,at P-value 0.000			
Age		-0.13(-0.31, 0.06)	-0.06(-0.23, 0.11)
Sex			
Male	12.65(5.13)	Rf	
Female	14.68(4.66)	2.03(0.01, 4.06)	0.48(-1.55, 2.50)
Residence			
Rural	11.73(4.80)	Rf	
Urban	16(4.2)	**4.27(2.38, 6.15)**	**3.05(0.98, 5.12)** P < 0.001**
Income			
≤ 3799	13.08(4.86)	1.49(-0.64, 3.63)	0.91(-1.01, 2.88)
> 3799	14.58(5.17)	Rf	
Stigma			
Yes	14.22(4.72)	**4.72(1.80, 7.64)**	**3.10(0.22, 6.00)* P < 0.05**
No	9.5(4.98)	Rf	
Suicide attempt			
Yes	19(1.41)	-2.75(-6.39, 0.89)	-2.48(-5.80, 0.85)
No	13.49(4.98)	Rf	
Alcohol			
Yes	10.57(5.27)	3.7(1.13, 6.26)	2.07(-0.46, 4.60)
No	14.29(4.7)	Rf	
Resilience		0.08(-0.04, 0.20)	0.05(-0.05, 0.16)
Problem-focused subscale of coping, Adjusted R square 0.44, F-change 10 at sig F change 0.000			
Sex			
Male	10.9(3.7)	Rf	
Female	12.1(2.64)	1.19(-0.31, 2.52)	0.47(-0.69, 1.61)
Residency			

Characteristics	Mean (SD)	Crude B(95% CI)	Adjusted B(95% CI)
Rural	10.94(3.4)	Rf	
Urban	12.12(3.0)	1.18(-0.16, 2.51)	-0.8(-2.02, 0.40)
Stigma			
Yes	11.8(3.2)	**2.63(0.70, 4.57)**	**1.11(0.61, 2.83)**
No	9.17(2.89)	Rf	
Suicide attempt			
Yes	13.25(3.41)	-1.96(-4.32, 0.41)	-0.45(-2.39, 1.50)
No	11.29(3.21)	Rf	
K-10		0.08(-0.03, 0.20)	-0.07(-0.09, 0.1)
WHO DASS		0.05(-0.02, 0.13)	-0.01(-0.07, 0.07)
WHO QOL		**0.18(0.14, 2.17)**	**0.18(0.13, 0.22) P < 0000**
Resilience		0.06(-0.02, 0.14)	-0.01(-0.07, 0.05)
Dysfunctional Adjusted R square 0.89, F-change 125.9 at p-value 0.000, VIF < 1.4 tolerance < 0.9			
Sex			
Male	14.37(4.52)	Rf	
Female	16.3(4.37)	1.92(0.09, 3.80)	0.14(-0.54, 0.83)
Residence			
Rural	14.19(4.23)	Rf	
Urban	16.66(4.57)	**2.47(0.64, 4.29)**	**-0.96(-1.69, -0.22) P < 0.05**
Stigma			
Yes	15.69(4.53)	3.19(0.47, 5.91)	-0.14(-1.14, 0.86)
No	12.5(3.58)	Rf	
PSS		0.11(-0.04, 0.27)	-0.01(-0.06, 0.04)
Resilience		0.14(0.04, 0.25)	0.02(-0.01, 0.06)
WHO QOL		**0.34(0.31, 6.37)**	**0.35(0.32, 0.38) P < 0.000**