

## ORIGINAL RESEARCH

**Prevalence of and factors associated with depression in the hill tribe population**

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**Abstract**

**Background:** People with low education levels, low economic status, and numerous barriers to accessing health services, such as the hill tribe people in Ahmednagar, are particularly vulnerable to the negative effects of untreated depression. Adults from a single hill tribe over the age of 30 were included in this cross-sectional observational research of depression prevalence and risk variables. In-depth interviews were conducted using a validated questionnaire and the Patient Health Questionnaire-9 (PHQ-9) to collect the data. One hundred fifty people were surveyed; 70 percent were married; 28 percent were aged 50 and over; and 73 percent were female. Depression was shown to be substantially related to four factors among persons aged 30 and up from hill tribes. Having a history of abusing psychoactive substances, being under a lot of stress, and being a female all increased the risk of depression. Substance abusers and stressed women are more at risk for depression, thus it's important to explore public health programs that target these populations.

**Keywords:** depression, hill tribe, questionnaire, health problem.

**Introduction**

Suicide is a leading cause of death among people of all ages, and depression is a key contributing factor [1]. Social and economic inequalities have a role in the onset of depression in both industrialized and developing nations [2]. WHO estimates that 264 million people worldwide experience depression across all age groups, and that suicide claims the lives of over 800,000 people year, or 1.5% of all fatalities globally [3].

Over time, this process reduces one's physical and mental capacity to meet life's basic requirements, increases one's susceptibility to illness, and eventually leads to mortality. Conditions like impaired vision, hearing defects, loss of control over several functions, cognitive impairment, psychiatric problems like depression, dementia, anxiety, and functional impairment arise as the body's normal functioning deteriorates progressively with age. In terms of economic, educational, and health advancement in India, tribal populations are seen

as the most vulnerable, marginalized, and extremely disadvantaged groups [4]. This marginalization is mostly blamed on the past treatment of indigenous tribes. The ongoing vulnerability among tribes shows that despite the execution of numerous programs and efforts, not much have changed in terms of people's daily life [4]. Suboptimal health seeking behavior [4] compounds the burden of infectious and no communicable illnesses, hunger, addiction, and mental disorders among indigenous peoples. There is less study on the mental health of Indian tribes, and much less on the prevalence of anxiety and despair among the tribal elders.

Hill tribal depression in bhandardara, Ahmednagar: prevalence and risk factors.

## Method

Those of the hill tribal community in bhandardara, Ahmednagar, were the subjects of a cross-sectional observational research. There were a total of 150 participants. Participants were eligible if they were 30 years of age or older on the day data was collected. This demographic was chosen because its members have distinct lifestyle traits that are in keeping with established norms and stand in contrast to those of younger generations. Participants who did not self-identify as members of a hill tribe or who did not give all required data were not included in the analysis.

Prior to its implementation, a questionnaire was tested for both validity and reliability. Three professionals in the field—a psychiatrist, a public health expert, and a community mental health nurse—used the item objective congruence (IOC) method to verify the accuracy of the content. Questions with scores of 0.5 or lower were removed from the questionnaire; questions scoring between 0.5 and 0.7 were revised based on the comments of the experts and reintroduced; and questions scoring 0.71 or higher were reviewed and, if necessary, reintroduced.

Participants' levels of depression were calculated using the Patient Health Questionnaire-9 (PHQ-9)[2]Several studies [3] support the PHQ-9's validity for clinical and other applications. In this study, participants' depression levels were scored on a scale from 0 (no depression) to 27 (severe depression). Those with scores of 0-4 were considered to have minimal depression, while those with scores of 5-9 were considered to have mild depression, those with scores of 10-19 were considered to have moderate depression, and so on.

After the data file was complete, it was exported to SPSS (version 24, Chicago, IL). To determine whether or not two demographic variables are related, we utilized the chi-square test or Fisher's exact test. At the 0.05 level of significance, the results were declared significant.

## Results

**Table 1: Comparisons of participants with and without depression**

Characteristics	n(%)	Depression		$\chi^2$	p-value
		Yes	No		
Sex					
Male	40(26.6)	11(27.5)	29(72.5)	3.765	0.024*
Female	110(73.3)	54(49.0)	56(50.9)		
Age(years)					
30–59	108(72)	42(38.8)	66(61.1)	0.02	0.891
≥60	42 (28)	12(28.5)	30(71.4)		
Maritalstatus					
Single	45(30)	19 (42.2)	26 (57.7)	2.99	0.087
Married	105(70)	28 (26.6)	77(73.3)		
Education					

Noteducatedbeyond primary school	120(80)	30(25)	90(75)	1.46	0.298
Highschoolandhigher	30(20)	13(43.3)	17(56.6)		
Havinganincome					
No	110(73.3)	14(12.7)	96(87.2)	0.507	0.416
Yes	40(37.5)	15(37.5)	25(62.5)		
Livingsituation					
Withfamilymember	135(90)	20(14.8)	115(85.1)	0.35	0.376
Alone	15(10)	6(40)	9(60)		
Historyofsubstanceuse					
No	85(56.6)	31(36.4)	54(63.5)	5.15	0.010*
Yes	65(43.3)	16(24.6)	49(75.3)		
Smoking					
No	110(73.3)	45(40.9)	65(59.0)	4.14	0.021*
Yes	40(26.6)	12(30)	28(70)		
Alcoholuse					
No	107(71.3)	11(10.2)	96(89.7)	0.61	0.256
Yes	43(28.6)	16(37.2)	27(62.7)		
Experiencingstress					
No	120(80)	20(16.6)	100(83.3)	105.05	0.001*
Yes	30(20)	5(16.6)	25(83.3)		

Four factors were found to be statistically significant in comparing depressed and no depressed subjects.

### Discussion

High rates of depression are seen among adults aged 30 and above, with more women affected than males. Drug abusers and those who had stressful life events in the six months before to the interview were more likely to suffer from depression than those who did not engage in drug misuse among the hill tribe people. Results from the PHQ-9 indicated that women made up over half (49%) of the depressed population, while men made up just over a quarter (27.5%). A research found that the prevalence of depression was 56.30 percent in females and 33.70 percent in men [5]. However, the World Health Organization (WHO) calculated that the overall prevalence of depression was 4.40%, with varying rates across age groups [3].

We also discovered that among the adults of the hill tribes, women had a higher incidence of depression than males did. Several earlier studies [6,7] found the same thing: women have a higher risk of depression than men. Systematic research [6] showed that females, rather than males, were disproportionately affected by depression over the globe. Researchers Kendler et al. [7] examined the causes and processes impacting major depression by sex and in twin studies, and they discovered that women's depression was much more complex than men's. In addition, the World Health Organization found that women were more likely to experience depression than males because of factors including financial hardship, male preeminence in social positions in certain societies, sex inequality, and way of life [8]. Substance misuse was observed to increase the risk of depression among adults 30 and older from the hill tribes. This conclusion agrees with the findings of a research which found that drug abusers had a higher chance of getting depression [8]. Substance misuse was also shown to have a strong correlation to depression [9], especially among young people.

Our research also shows that there is a strong link between stress and depression among hill tribe members. These results are consistent with a meta-analysis by Yang et al. [10], which found that stress is a key contributor to depression across many nations, especially among

adult women. We have also noted certain caveats to this research. To begin, the people of the hill tribe have never been exposed to the ideas, thoughts, or messages associated with depression. Depressed individuals may not respond the same way to a conventional depression assessment instrument since it was designed for use with a different demographic. Despite the hill tribes' greater familiarity with the word "stress" than with "depression," there is currently no reliable method for identifying stress in the most recent six months. Therefore, in the future, a more effective study design is required to detect the link between stress in the prior six months and depression.

### Conclusion

Depression is a major issue for adults of Hill Tribes, particularly women who are stressed and have a history of abusing psychoactive substances. The hill tribes are especially susceptible to depression because of their living circumstances, which include a lack of education and a poor economic standing. Extending the service to give adequate treatment and monitoring to persons who are diagnosed with depression requires a health care system.

### References

1. M. Roca, A.R. Amo, P. Riera-Serra, A. Perez-Ara, A. Castro, J.R. Juan, et al., Suicide risk and executive functions in major depressive disorder: a study protocol, *BMC Psychiatr.* 19 (253) (2019) 1–6.
2. M. Pompili, Critical appraisal of major depression with suicide ideation, *Ann. Gen. Psychiatr.* 18 (7) (2019) 1–5.
3. World Health Organization (WHO). Depression and other common mental disorder: global health estimates. <https://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER-2017.2-eng.pdf>.
4. Dharanaik S. Health status of particularly vulnerable tribal groups of Karnataka, India: A critical outlook. *Int J Adv Res* 2019;7:320-30.
5. KourGulzar P, Bhat A. Assessing prevalence of depression among general population of selected rural community-a descriptive survey deign. *J Psychiatry.* 2018;21(3):1–3.
6. Albet PR. Why is depression more prevalent in women? *J Psychiatry Neurosci.* 2015;40(4):219–21.
7. Kendler KS, Gardner CO. Sex differences in the pathways to major depression: a study of opposite-sex twin pairs. *Am J Psychiatry.* 2015;171(4):426–35.
8. P.R. Albert, Why is depression more prevalent in women? *J. Psychiatry Neurosci.* 40 (4) (2015) 219–221.
9. R.H. Salk, J.S. Hyde, L.Y. Abramson, Gender differences in depression in representative national samples: meta-analyses of diagnosis and symptoms, *Psychol. Bull.* 143 (8) (2017) 783–822.
10. Yang L, Zhao Y, Wang Y, Liu L, Zhang X, Li B, et al. The effects of psychological stress on depression. *CurrNeuropharmacol.* 2015;13(4):495–504