

Original Research Article

A demographic and descriptive study on depression status of adolescent population of Ahmedabad city in India

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ABSTRACT

Background: Depressive indications and spirituality are prevalent all around the world, but their coherent existence has received moderately minute consideration from majority psychological health experts. This quantitative research examines relationships between spiritual participation and depressive indications or disorders. Religious beliefs and rituals possibly will aid public to deal with improved stressful life conditions, give sense and hope, and encircle unhappy people with an encouraging society. This study aimed to investigate the role that spiritual factors play in inhibiting depression and will lend a hand to determine whether this is a resource or a liability in adult age group.

Methods: The present study was carried out in Ahmedabad city in the period from November to December 2022. A total of 400 adults were included in the study, which were selected using multi-stage sampling aged between 18 years to 59 years.

Results: The obese adults had significantly higher depression levels. Depression had a negative correlation with spirituality levels. Regression analysis also demonstrated that the spirituality was one of the influencing factors affecting depression.

Conclusions: Spirituality is negatively associated with depression.

Keywords: Spirituality, Depression, Obesity, Adults

INTRODUCTION

In primary care settings, depression is a prevalent diagnosis, accounting for 6% to 20% of all patient visits.¹⁻

³ Similarly, spiritual sentiments have a significant impact on patients' attitudes about medical care. According to a countrywide poll conducted in 1990, 75% of the population indicates that their attitude to life is based on their faith.⁴ According to a survey of patients in a primary care environment, 40% of patients desire their doctors to talk to them about their beliefs.⁵

A beneficial correlation between religious devotion and mental health has been found in several researches.

Larson et al included all of the research on spirituality and mental health published in 2 prestigious psychiatric publications over an 11-year period using meta-analysis.⁶ A favorable correlation between spiritual views and mental health was found in 84% of the research reviewed, a statistically significant correlation was found in 13.5% of the studies, and a negative correlation was found in 2.5% of the studies. College students, the elderly, handicapped veterans, disabled women, and women healing from hip fractures are just a few of the particular categories where various components of spirituality have been linked to a decreased frequency of depression.⁷⁻¹¹ A poll in Washington County, Maryland revealed that persons who did not frequently attend religious services were 4 times more likely to commit suicide than those

who did. This relationship goes beyond basic survey data to depressed behaviours.¹²

There haven't been many researches that link depression with spirituality among the urban poor, despite the range of these investigations. A patient's spiritual life may be a useful coping technique given the pressures inherent in many metropolitan neighbourhood, such as the elevated incidence of poverty, violence, and chronic disease, especially when other support networks are constrained.¹³⁻¹⁶ As indicators of spirituality, many earlier researches have focused on church attendance and faith in a higher power.^{7-10,12,17} Furthermore, several characteristics have been identified as crucial to one's spirituality, in addition to attending church: an inner life of prayer and meditation, attitudes toward other people, and belief in a connection with a higher force. In order to shed light on this crucial coping strategy, the current study was conducted to better understand the relationship between depression and spirituality in metropolitan medical individuals.

METHODS

The present cross-sectional study was carried out in Ahmedabad city in the months of November and December 2022. A total of 400 adults were included in the study, which were selected using multi-stage sampling aged between 18 years to 59 years. PHQ-9 (patient health questionnaire) was used to determine the depression.³² Findings were analysed using regression analysis. For every individual age (in completed years), gender, occupation, per capita income, internet addiction (Young's internet addiction test), spirituality (Washington University psychiatrist Robert Cloninger), height and weight were recorded.³⁰ BMI was calculated for everyone using the formula,

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{height (m)}^2}$$

The adults who were willing to participate in the study, were only enrolled in the study. Participants were interviewed through pre-formed semi structured questionnaire.

Health education regarding good eating practices and improving living quality (how to think positively) was given to participants for the improvement of their health and as prevention to depression. Data was tabulated in Microsoft Excel and analyzed using IBM Corp. Released 2011. IBM SPSS Statistics for Windows, version 20.0. Armonk, New York and Microsoft Excel 2007.

RESULTS

Table 1 gives information about the association between genders, BMI, occupation, substance abuse (addiction), internet addiction and spirituality with depression. Cramer's V test was used to test the association for the same, at 5% level of significance using IBM SPSS Statistics for Windows, Version 20.0. Armonk, New York and Microsoft Excel 2007.^{25,26}

BMI, occupation, internet addiction and spirituality were found to be associated with depression. The higher BMI & internet addiction lead to depression. Working people and non-spirituals are more prone to depression.

Table 2 shows the linear regression function for the depression (dependent factor) with age, gender (female: 1, male: 0), occupation (working: 1, non-working: 0), per-capita income, BMI, internet addiction, spirituality as independent factors. Linear regression model fits good for the factors affecting depression.

Table 1: Differences between depressed and not depressed with demographic and health related information.

Parameters		Depressed N (%)	Not depressed N (%)	P value	Cramer's V
Gender	Female	168 (67.2)	82 (32.8)	0.652	0.022
	Male	104 (69.3)	46 (30.7)		
BMI category Asia Pacific classification	Underweight	54 (62.1)	33 (37.9)	<0.0001	0.2382
	Normal	143 (63.3)	83 (36.7)		
	Overweight	66 (91.7)	6 (8.3)		
	Obese	9 (60)	6 (40)		
Occupation	Working	152 (75.62)	49 (24.62)	0.0015	0.1642
	Non-working	120 (60.30)	79 (39.69)		
Substance abuse (addiction)	Yes	34 (79.1)	9 (20.9)	0.1407	0.0823
	No	238 (66.7)	119 (33.3)		
Internet addiction	Yes	242 (94.53)	14 (31.8)	<0.0001	0.7584
	No	30 (20.83)	114 (32)		
Participants	Spiritual	17 (13.3)	111 (86.7)	<0.0001	0.8047
	Non spiritual	255 (93.8)	17 (6.2)		

Table 2: Linear regression function for the factors affecting depression.

Variables	Equation	P value
(Constant)*	-0.680	0.000*
Age	-0.042	
Gender (female:1, male:0)	0.093	
Occupation* (working:1, non-working:0)	0.032	
Per Capita Income*	0.425	
BMI*	0.013	
Internet Addiction*	0.129	
Spirituality*	-0.368	

DISCUSSION

This study posed a number of interesting queries. Given the potentially overwhelming social stress connected to living in the inner city, one's belief in a higher power, and the effectiveness of prayer may shield one from depression. Though it's possible that a lack of faith is simply one of the helplessness, despair, and anhedonia that define severe depression. Although it may be easy to assume that spirituality and sadness are causally related, these results reflect just an association. Numerous studies had shown that a person's participation at religious services acted as a protective factor against depression.^{7-10,12,17} It had been hypothesized that church goers were less sad because of the social support provided by the church.^{9,10,12} This link, however, may be tainted by selection bias since depressed individuals may be too weak to go to religious services. People with depression were just as likely as those without depression who participated in religious activities, prayed and meditated.

However, in patients, with depression, appropriate encouragement of participation in spiritual activities or the incorporation of religious imagery into the regimen was recommended treatment and may be beneficial. The success of identifying a higher power in 12-step drug and alcohol addiction treatment programs suggested that incorporating spiritual language can be beneficial. Alcoholics Anonymous membership allowed 60-80% of alcoholics to drink less or not at all in a year and 40-50% to remain sober for many years.²⁷ In one study in 1981, opiate-dependent patients who used religious imagery and language had improved rates of abstinence at 1 year compared with those who did not use religious imagery (41% vs. 5%).²⁸

This study had some potential limitations. The 40% completion rate raised concerns about possible selection bias when participants opt out. However, a review of the partially completed questionnaires revealed that the last remaining items were generally unanswered, indicating that the incompleteness of the questionnaire. In addition, the criteria for inclusion of the questionnaires in the analysis were strict: the instrument had to be fully completed to be included in the data analysis. After examining the demographic data, there was no statistical

difference between patients who completed and patients who did not complete the questionnaire (data not shown).

In summary, this study examined urban populations and found that higher spirituality scores were associated with fewer depressive symptoms, showed significant differences between depressed and non-depressed individuals. Finding patient-friendly ways to foster a patient's unique belief system may benefit depressive symptoms. Additionally, understanding the patient's spiritual life and its impact on mental health can provide caregivers with insight into important coping mechanisms. This continues to be an exciting area of research where the interrelationships of spirituality, medicine and mental health can find common ground for incorporating new modalities into the care of poverty-stricken depressed patients.

CONCLUSION

From the present study it was concluded that 68% (272/400) of the sample was depressed and BMI is associated positively with depression. So, obesity was more commonly seen in depressed and indirectly other diseases where obesity act as risk factor may also be more common in them. Working people were more suffering from depression, one of the reasons may be imbalance between social and professional life. Internet addiction was one of the important risk factors leading to depression. The linear regression function can be used for the determination of depression.

BMI, occupation, per capita income, and internet addiction have a significant positive relation while spirituality had a negative relation with depression.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Barry KL, Fleming MF, Manwell LB, Copeland LA, Appel S. Prevalence of and factors associated with

- current and lifetime depression in older adult primary care patients. *Fam Med*. 1998;30(5):366-71.
2. Simon GE, VonKorff M. Recognition, management, and outcomes of depression in primary care. *Arch Fam Med*. 1995;4(2):99-105.
3. Wilson C, Civic D, Glass D. Prevalence and correlates of depressive syndromes among adults visiting an Indian Health Service primary care clinic. *Am Indian Alsk Nativ Ment Health Res* (1987). 1995;6(2):1-12.
4. Begin AE, Jensen JP. Religiosity and psychotherapists: a national survey. *Psychotherapy*. 1990;27(1):3-7.
5. King DE, Bushwick B. Beliefs and attitudes of hospital patients about faith healing and prayer. *J Fam Pract*. 1994;39(4):349-52.
6. Larson DB, Sherrill KA, Lyons JS, Craigie FC, Thielman SB, Greenwold MA, et al. Associations between dimensions of religious commitment and mental health reported in American Journal of Psychiatry and the Archives of General Psychiatry: 1978-1989. *Am J Psychiatry*. 1992;149(4):557-9.
7. Fehring RJ, Brennan PF, Keller ML. Psychological and spiritual well-being in college students. *Res Nurs Health*. 1987;10(6):391-8.
8. Zuckerman DM, Kasl SV, Ostfeld AM. Psychosocial predictors of mortality among the elderly poor: the role of religion, well-being, and social contacts. *Am J Epidemiol*. 1984;119(3):410-23.
9. Idler EL. Religious involvement and the health of the elderly: some hypotheses and an initial test. *Soc Forces*. 1987;66(1):226-38.
10. Miller JF. Assessment of loneliness and spiritual well-being in chronically ill and healthy adults. *J Prof Nurs*. 1985;1(2):79-85.
11. Pressman P, Lyons JS, Larson DB, Strain JJ. Religious belief, depression, and ambulation status in elderly women with broken hips. *Am J Psychiatry*. 1990;147(6):758-60.
12. Comstock GW. Church attendance and health. *J Chronic Dis*. 1972;25(12):665-72.
13. Fowle S, Steward-Brown S. Deprivation and health: deprivation contributes to chronic illness letter. *BMJ*. 1994;308(6922):203-4.
14. Lewis G, Sloggett A. Suicide, deprivation, and unemployment: record linkage study. *BMJ*. 1998;317(7168):1283-6.
15. Haynes R, Gale S. Mortality, long-term illness and deprivation in rural and metropolitan wards of England and Wales. *Health Place*. 1999;5(4):301-12.
16. Newacheck PW. Poverty and childhood chronic illness. *Arch Pediatr Adolesc Med*. 1994;148(11):1143-9.
17. Stack S. The effect of the decline in institutionalized religion on suicide: 1954-1978. *J Sci Study Relig*. 1983;22(3):239-52.
18. Zung WK. A self-rating depression scale. *Arch Gen Psychiatry*. 1965;12:63-70.
19. Hatch RL, Burg MA, Naberhaus DS, Hellmich LK. The spiritual involvement and beliefs scale: development and testing of a new instrument. *J Fam Pract*. 1998;46(6):476-86.
20. Zung WWK, Magruder-Habib K, Velez R, Alling W. The comorbidity of anxiety and depression in general medical patients: a longitudinal study. *J Clin Psychiatry*. 1990;51:77-80.
21. Zung WWK. The role of rating scales in the identification and management of the depressed patient in the primary care setting. *J Clin Psychiatry*. 1990;51:72-6.
22. Paloutzian R, Ellison C. Loneliness, spiritual well-being and the quality of life. In: Peplau LA, eds. *Loneliness: A Sourcebook of Current Theory, Research, and Therapy*. New York, NY: John Wiley & Sons; 1982: 224-37.
23. Allport GW, Ross JM. Personal religious orientation and prejudice. *J Pers Soc Psychol*. 1967;5(4):432-43.
24. Nelson EC, Wasson J, Kirk J, Keller A, Clark D, Dietrich A, et al. Assessment of function in routine clinical practice: description of the COOP Chart method and preliminary findings. *J Chronic Dis*. 1987;40(1):55-69.
25. Microsoft Excel, 2007.
26. IBM SPSS Statistics for Windows, Version 20.0. Armonk, New York.
27. Emrick CD, Tonigan JS, Montgomery H. Alcoholics Anonymous: what is currently known? In: McCrady BS, Miller WR, eds. *Research on Alcoholics Anonymous: Opportunities and Alternatives*. New Brunswick, NJ: Rutgers Center for Alcohol Studies; 1993: 41-6.
28. Desmond M. Religious programs and careers. *Am J Drug Alcohol Abuse*. 1981;8(1):71-83.
29. Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Res*. 1989;28(2):193-213.
30. Young KS. Internet addiction: a new clinical phenomenon and its consequences. *Am Behavior Sci*. 2004;48(4):402-15.
31. Cloninger CR. The science of well-being: an integrated approach to mental health and its disorders. *World Psychiat*. 2006;5(2):71-6.
32. Levis B, Benedetti A, Thombs B. Accuracy of Patient Health Questionnaire-9 (PHQ-9) for screening to detect major depression: individual participant data meta-analysis. *BMJ*. 2019;365:l1476.
33. Ahmedabad Municipal Corporation. City civic centers. Available at: https://ahmedabadcity.gov.in/portal/jsp/Static_pages/ccs.jsp. Accessed on 28 December 2022.

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