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A cross-sectional study on depression among the transgender community in the slum region of Coimbatore, India

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Article Info

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Abstract

This community-based cross-sectional study was conducted in a slum in Coimbatore, Tamil Nadu India. Data was collected between January and July 2023. All of the study subjects gave their written consent. From the present study, the prevalence of depression was found to be 71.4% among the study participants. Nearly equal participants of aged 18-30 and above had a depression. The findings indicated that 23.33% of transgender aged 18-30 and 48% aged above 31 had experienced depression. The majority of transgender youth 41.33% in this study were reported living with their families. The study found a strong link between depression and demographic characteristics such as age, living with family, school education, and tobacco consumption. According to the results of the Patient Health Questionnaire (PHQ-9), the majority of individuals had a poor appetite or were overeating. Majority of the participants do not think about injuring themselves or dying themselves. Upcoming study in this underexplored field is greatly encouraged.

Keywords: transgender, Depression, Patient Health Questionnaire (PHQ-9)

Introduction

Depression in young people is a severe public health concern that causes enormous human misery. It interrupts a person's life during a vital age for learning and social development and has been linked to alcohol and drug dependence.[1] A large amount of research reveals that sexual and gender minority (lesbian, gay, bisexual, transgender, queer or questioning, intersex, asexual-LGBTQ+) persons suffer from psychopathology at a

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higher rate than their cisgender and heterosexual counterparts. [2].

As a continuum phenotype, depression may refer to a mood state within the framework of normative affective experience, or it may encompass a range of mood-related concepts and difficulties, with clinical disorders that could be expressed as mood syndromes at its most extreme [10-11].

According to developmental epidemiological study, the prevalence of major depressive disorder and dysthymia in adolescents is around 8% (95 % CI: 0.02–0.13) and 4% (95 % CI: 0.01–0.07), respectively. Furthermore, from 2001 to 2020, 34% of people worldwide had high self-reported depression symptoms (95% CI: 0.30–.38) [12].

Despite gains in mental health awareness, prevention, and therapies for LGBTQ+ persons, further work is required. [3-4]. The PHQ-9 [5-6] has become a widely used measure of depression in research and therapeutic practice. The PHQ-9 is a self-report meant to assess the severity of depression based on DSM criteria. Its psychometric qualities have been thoroughly investigated [7-8]. Previous research has found significant support for the PHQ-9 as a unidimensional measure of depression symptoms [9]. The PHQ-9 consists of nine questions meant to measure depressed symptomatology using DSM criteria. The items are answered according to the frequency of symptoms (0 = *not at all,* 1= *some days,* 2 = *more than half of the days,* 3 = *almost every day*). A higher score is indicative of greater depressive symptomatology. The goal of the study is to measure the depression among the transgender population in slum area of Coimbatore.

Sociodemographic and other variables.

Participants provided the sociodemographic information (age, religion, level of education, profession, living condition) and health status cross-sex hormone use, smoking, alcohol drinking).Patient Health Questionnaire-9 (PHQ-9), The PHQ-9 is a multipurpose instrument for screening, diagnosing, monitoring and measuring the severity of depression.

Procedure:

Data collection and analyses

The psychometric measures were administered collectively, through personal computers, Participants were informed of the confidentiality of their responses and of the voluntary nature of the study, and collected the signed consent forms. This community-based cross-sectional study was conducted in a slum in Coimbatore, Tamil Nadu, India. It is inefficient to use probability sampling to get a sample big enough for most statistical methods. We could totally use the network relation data sampling approach, but the relation network was too small to look for this "hidden population," so we chose to adopt a basic snowball sampling strategy with an offline and online Survey. To properly evaluate the target components, create a survey with culturally competent questions after determining an acceptable sample approach and including the necessary community partners. We visited the homes where this community resides, spoke with the residents, and gathered information from each one. The information was acquired by visiting each house until the appropriate sample size was reached. Data was collected from January to July 2023. All of the study subjects gave their written consent. The study was approved by the Institutional Ethics Committee of the Indira Medical College and Hospitals, V.G.R.Nagar, Pandur, India. We started by calculating the prevalence and descriptive data for the PHQ-9 items. Depression was measured using the English version of the Patient Health Questionnaire - 9 (PHQ-9). Individuals with a cut-off score of 8 or higher are likely to have depression. It is a validated measure for evaluating depression with excellent validity and reliability.

The PHQ-9 is the depression module, and it scores each of the nine Diagnostic and Statistical Manual-IV criteria from "0" (not at all) to "3" (almost every day). We utilized SPSS 22.0 and MS Excel to analyze the data.

Results:

Table 1: Socio-demographic characteristics of the research participants **n=150**

Variable	Participants (%)
Age (years)	
18–30	60 (40)
>31	90 (60)
Family situation	
Living separately	52 (34.66)
Living together	98 (65.33)
School education	
No Education	26 (17.33)
Educated	124 (82.66)
Employment	
Unemployed	68 (45.33)
Full-time employed	82 (54.66)

Table 2: Socio demographic details and depression among the study participants **n=150**

Variables	Depression			Chi-Square	P Value
	Yes (%)	No %	Total		
Age (years)					
18–30	45 (75)	15 (25)	60 (40)	8.2645	0.004
>31	72 (80)	18 (20)	90 (60)		
Family situation					
Living separately	36 (69.23)	16 (30.76)	52 (34.66)	0.534	0.46
Living together	62 (63.26)	36 (36.73)	98 (65.33)		
School education					
No Education	16 (61.53)	10 (38.46)	26 (17.33)	1.707	0.19
Educated	92 (74.19)	32 (25.80)	124 (82.66)		
Employment					
Unemployed	59 (86.76)	9 (13.23)	68 (45.33)	9.625	0.001
Full-time employed	53 (64.63)	29 (35.36)	82 (54.66)		
Alcohol Consumption					
Yes	66 (76.74)	20 (23.25)	86 (57.33)	2.886	0.08
No	41 (64.06)	23 (35.93)	64 (42.66)		
Tobacco Consumption					
Yes	91 (77.77)	26 (22.22)	117 (78)	2.721	0.09
No	21 (63.63)	12 (36.6)	33 (22)		

Depression in young people is widespread and a cause for concern. After maturity, it leans to presage a chronic and recurrent course of sickness and deficiency. From the present study the prevalence of depression was found to be 71.4% among the study participants. Nearly equal participants of aged 18-30 and above had a depression. The findings indicated that 23.33% of transgender aged 18-30 and 48% aged above 31 had experienced depression. The majority of transgender youth 41.33% in this study were reported living with their families. Family rejection can cause them to become more vulnerable to unhealthy behaviors, harmful consequences for health and depression. A survey in China revealed that transgender and gender non-binary youth had high levels of depression and other mental illness conditions [14]. Compared to the general population, transgender people aged 18 and older in Australia are five times more prone to being identified as having depression in their lifetime [13]. Among the total participants

82.66% were educated and 45.33% were unemployed, 54.66% ware Full-time employed, The association between alcohol consumption and depression is, arguably, controversial. Impaired mood and mental state, as seen in our findings, indicates that transgender 57.33% consumes alcohol and 78% consumes tobacco. Similar to a study in Sweden, infrequent social drinkers were not at high risk from depression when compared to non-drinkers [15].

Table 3: Mean PHQ-9 score, range (median)

Severity of depression	Number n=150 Mean	%
Minimal (1-4)	5 (2.2)	3.33
Mild (5-9)	11 (4.2)	7.33
Moderate (10-14)	16 (6.6)	10.66
Moderate severe (15-19)	24 (8.4)	16
Severe (≥20)	94 (21.6)	62.66

In present study the PHQ score for severity of depression was observed 62.66%, Moderate severe 16%, Mild severity were 7.33 and minimal severity were 3.33. However, it is important to note that the transgender community has greater rates of unemployment than the overall population, which may lead to increased rates of depression in this group. Since transgender people seldom find well-paying professions because of prejudice, Rotondi G et al. in Canada discovered that unemployment was a significant risk factor for depression in transgender people. This might have been a stressor.16. In our study, 86.76% of transgender jobless people suffered from depression.[16] According to this study, there was a statistically significant correlation between depression and experiencing any form of violence, and depression was more common among individuals who experienced such violence. The majority of transgender people reported experiencing a number of health issues in addition to issues with sexual assault, violence, harassment, illegal consequences, and human rights violations. They mostly accused the police, notably the railroad and traffic police, of abusing their position and committing violent crimes. [17] Considering the stress of transition and the value of supporting friends and family are two implications of the findings for treating depression in transgender women. Future research ought to investigate a model of depression and high-risk behaviors in women who identify as transgender. [18]

Table4 : Patient Health Questionnaire (PHQ-9) responses /score. n=150

Item	Not at all (0) Responses/score	Several days (1) Responses/score	More than half of the days (2) Responses/score	Almost every day(3) Responses/score	*M*	*SD* 95%, 1.960$\sigma_{\bar{x}}$
Little interest or pleasure in doing things	59/0	15/15	62/124	14/42	45.25	45.25 ±46.935 (±103.72%)
Feeling down, depressed, or hopeless	29/0	29/29	69/138	23/69	59	59 ±50.738 (±86.00%)
Trouble falling or staying asleep, or sleeping too much	36/0	78/78	61/122	25/75	68.75	68.75 ±42.96 (±62.49%)
Feeling tired or having little energy	29/0	86/86	60/120	25/75	70.25	70.25 ±42.944 (±61.13%)
Poor appetite or overeating	32/0	28/28	102/204	12/36	67	67 ±78.614 (±117.33%)
Feeling bad about yourself – or that you are a failure	10/0	35/35	96/192	9/27	63.50	63.5 ±73.808 (±116.23%)
Trouble concentrating on things	25/0	40/40	82/164	3/9	53.25	53.25 ±64.328 (±120.80%)
Moving or speaking so slowly that other people could have noticed	45/0	61/61	90/180	46/138	94.75	94.75 ±67.993 (±71.76%)
Thoughts that you would be better off dead or of hurting yourself	72/0	50/50	31/62	3/9	30.25	30.25 ±25.765 (±85.17%)

According to the study, the majority of replies from each item on the Patient Health Questionnaire (PHQ-9) were as follows (Table4)

1. Little interest or pleasure in doing things- 41.33% participants responded and score was 124, i.e. Moderate depression13.77,
2. Feeling down, depressed, or hopeless- 46% participants responded and score was 138, i.e. Moderately severe depression score was 15.33,
3. Trouble falling or staying asleep, or sleeping too much-40.66% participants responded and score was 122, i.e. Moderate depression score was 13.55,
4. Feeling tired or having little energy- 57.33% participants responded and score was 86, i.e. Moderate depression score was 9.55,
5. Poor appetite or overeating- 68% participants responded and score was 204, i.e. Severe depression score was 22.66,
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down- 64% participants responded and score was 192, i.e. Severe depression score was 21.33
7. Trouble concentrating on things, such as reading the newspaper or watching television- 54.66% participants responded and score was 164, i.e. Moderately severe depression score was 18.22
8. Moving or speaking so slowly that other people could have noticed. Or the opposite being so figety or restless that you have been moving around a lot more than usual- 60% participants responded and score was 180, i.e. severe depression score was 20.9. Thoughts that you would be better off dead or of hurting yourself- 48% participants responded and score was 0, i.e. depression score was 0.

Discussion

According to the results of this study, 71.4% of study participants had depression. According to a research by Nooshin Khobzi Rotondi and Greta R. Bauer, 61.2% of people suffer from depression.[20] The study found a strong link between depression and demographic characteristics such as age, living with family, school education, and tobacco consumption. According to the results of the Patient Health Questionnaire (PHQ-9), the majority of individuals had a poor appetite or were overeating. Feeling horrible about themselves, restless that you've been moving around, but the positive effect was that the majority of the participants don't think about injuring themselves or dying themselves. In this culture, attempts to reinforce gender identity and professional achievement can lead to psychological and physical gender violence. Significant depression is one of the worst mental health effects of both types of abuse. Violence against transgender people is frequent in developing nations such as India, where they are often looked down upon in society. Strict legislation must be enacted and implemented to protect transgender people from various forms of harm. In terms of our strengths and weaknesses, it should be noted that this is one of just a few research on transgender people's mental health. It's a vulnerable demographic that's often difficult to reach. The cross-sectional design of this study is a weakness, and so future longterm investigations are required.

Conclusion

This investigation showed an excellent reliability estimate for PHQ-9. Overall, our findings indicated that the PHQ-9 might be a useful tool for detecting depression in this group. The study found that depression has a substantial relationship with demographic characteristics such as age, living with family, school education, and tobacco consumption. The study found that using Patient Health Questionnaire (PHQ-9) responses, the majority of participants had a poor appetite or were overeating, felt bad about themselves, and were restless because they had been moving around, but the majority of participants did not have thoughts of hurting themselves or killing themselves. Transgender persons have a much higher frequency of both probable depressions.

Upcoming study in this underexplored field is greatly encouraged.

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Ethical Clearance: The ethical clearance obtained from institute.

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