

A STUDY ON PREVALENCE OF DEPRESSION AND ITS DETERMINANTS AMONG ADOLESCENTS IN AN URBAN AREA OF KANCHEEPURAM DISTRICT, TAMIL NADU

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ABSTRACT

To determine the socio-demographic factors influencing Coronary Heart Disease among the cases and controls. To determine the dietary factors associated with Coronary Heart Disease among cases and controls, determine the life style factors associated with Coronary Heart Disease among cases and controls. To assess the metabolic determinants and family history associated with Coronary Heart Disease among cases and controls. This shows that there is still gaps in the level of awareness and life style practices in the study area.

Keywords

behavior, observable disorder, emotion and sleep.

Introduction

Human mind is composed of a mixture of almost all emotions and one's behaviour is determined by the proportion of emotions and the way in which they are expressed. As far as the emotions are in correct proportion and not exceeding limit, there will be no observable disorder. Sad mood is common in day to day life but if it is pervasive and affect a person's social life and achievements it becomes a disorder.

Depression is a state of mental illness which is characterised by deep, long lasting feelings of sadness or despair. It can change an individual feelings/thinking and also affects his/her social behaviour and sense of physical well-being. Depression is a syndrome characterized by a group of symptoms with changes in one's mood (sadness, guilt), behaviour (isolation), thought and perception patterns (less concentration, less self-esteem), with physical complaints (sleep, hunger, sex) and high risk of suicide. Depressive disorders are identified by the World Health Organization (WHO) as priority mental health disorder of adolescence because of its high prevalence, recurrence and ability to cause significant complications and impairment. Major depressive disorder is estimated to be the second disabling disease of mankind in 2020. Depression occurs with people of any genders, age and social class. However, the first episode usually occurs during adolescence and early adulthood and is one of the common and ignored psychiatric problems. It is more common among women especially due to hormonal changes. Depression among adolescent age group has impact on teen's socialization, academic performance, family relations. They are at risk of addiction for gaming, social media, electronic gadgets, smoking, alcohol, antisocial behaviours and also psychosocial impairment. The most devastating outcome of concern for adolescent depression is suicide, the third leading cause of death among older adolescents (Centre for Diseases Control, Atlanta). In India, more than six children per day committed suicide because of failure in examinations in year 2011. As per different study done among Indian adolescents, the prevalence of depression varies between 15% to 40%. Thus, it can be seen that the adolescents of today are faced with various forms of physical, psychological and social problems. Therefore, the present study was conducted to find out the prevalence and association of depression among adolescents in urban field practice area (Anakaputhur) of SreeBalaji medical college and hospital in Kancheepuram district.

MATERIALS AND METHODS

Study design:

A Community based cross sectional descriptive study done in Anakaputhur, an Urban area of Kancheepuram district, Tamil Nadu.

Study area

The study was conducted in the urban field practice area of the Urban Health Training and Centre attached to our Institution, located at Anakaputhur in Kancheepuram District of Tamil Nadu. Kancheepuram district is one among the 32 districts of Tamil Nadu. According to the census of India 2011, Kancheepuram district covers an area of 4433sq.km with a population of 39.98lakhs comprising of 20.12 lakhs males and 19.8 lakhs females. Kancheepuram, the temple town is the headquarters of the district for administrative reasons, the district has been divided into 4 revenue divisions comprising of 11 taluks with 1137 revenue villages.

Anakaputhur is a Municipality city in the district of Kancheepuram, Tamil Nadu. It is divided into 18 wards.

The study was conducted in Anakaputhuran urban field practise area of Department of Community Medicine of SreeBalaji Medical College and Hospital (SBMCH).

Study Period:

The study was conducted between June 2017 to July 2018.

Study Participants:

According to the 2011 census, Anakaputhur urban field practice area had a total population of 48 ,050 of which 24,158 were males, 23,892 were females with 8890 adolescent (Individuals aged 10 -19 years) . Total number of houses in Anakaputhur is 12,146. The study was done among adolescent who are residing in the study area permanently at the time of the study.

Inclusion Criteria:

The inclusion criteria for the study were adolescent people of both the genders of age group (13 – 18) residing in the study area, who were willing to participate in the study were included.

Exclusion Criteria:

The exclusion criteria for the study were adolescents who have any physical illness, severely ill and those who were not willing to participate in the study were excluded.

Study tools:

A pretested structured questionnaire was used as a study tool to interview the study participants. The questionnaire was prepared in English and translated to Tamil. It was conducted by face to face interview by the investigator herself and the responses were recorded in the questionnaire.

Data Analysis:

The data was entered in Microsoft Excel 2007 version and analysed using Statistical Package for the Social Sciences for Windows (SPSS) version 20.0. Prevalence data were presented in the form of numbers, percentages, tables and figures. The analytical statistics used were chi- square, Odds Ratio and Confidence Interval. Binary logistic regression was used to calculate the adjusted odds ratio. P value< 0.05 was considered as statistically significant value.

RESULTS & DISCUSSION

This is a cross sectional study designed to measure the prevalence of depression in adolescents under various parameters.

Table 1 shows the socio demographic details of the study population. Among the study participants, maximum of 292 (42.8%) participants belonged to 13 -15 years age group followed by 99 (24.8%) belonged to 16 -17 age group and only 9 (2.3%) of the respondents were of 18 – 19 age group. About 195 (48.7%) were females and 205 (51.3%) were males. Majority of the study participants 349 (87.3%) were Hindus while Christian were 43(10.8%), Muslim were 7(1.8%) and others 1(0.3%).Maximum number of the participants belongs to ninth class 147(36.8 %) followed by tenth 141(35.3%), eleventh 55(13.8%) and twelfth 57(14.3%).Most of the participants were Dayscholar 397 (99.3%) whereas only 3 are hosteller (0.8%).Among the study participants, most of them are living with both parents 352(88.8%) followed by single parent 21(5.3%),

Grandparents 18(4.5%) and Guardian 6(1.5%).Most of the study participants' father were Graduate 132(33%) followed by Higher secondary school 92(23%), Diploma 59(14.8%), Middle school 50(12.5%), Post graduate 40(10%),Primary school 23(5.8%), Illiterate 4(1%).

Among the study participants, most of the study participants' mother were Graduate 122(30.5%) followed by Higher secondary school 108(27%), Middle school 63(15.8%), Diploma 40(10%), Post graduate 38(9.5%),Primary school 21(5.3%), Illiterate 8(2%).out of the 400 study population, 208 (52%) of the father were professional followed by skilled 81(20.3%), semi-professional 60(15%), semi-skilled 37(9.3%), unskilled 14(3.5%) and unemployed 0 (0%).most of them were unemployed 254 (63.5%) followed by professional 67 (16.8%) , skilled 32(8%), semi-skilled 19(4.8%), semi- professional 15(3.8%), and unskilled 13(3.3%). Out of the 400 study population, most of them belonged to upper class 369(92.3%).upper lower class contribute only 6(1.5%) in the study area based on B.G.Prasad socio economic classification Status scale.

TABLE 1: SOCIO DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION

S.no	Socio- demographic variables	Frequency (N)	Percentage (%)
1.	Age		
	13 – 15	292	73.0
	16 – 17	99	24.8
	18 – 19	9	2.3
2.	Gender		
	Male	205	51.3
	Female	195	48.8

3.	Religion		
	Hindu	349	87.3
	Muslim	7	1.8
	Christian	43	10.8
	Others	1	0.3

FAMILY HISTORY:

Figure 1 shows most of the study participants had one sibling 260(65%), followed by two 84(21%), none 42(10.5%) and more than two 14 (3.5%).

Table 2 shows the distribution of the study participants by family history of mental disorder. out of the 400 study population ,most of them do not had family history of any mental disorder 365 (98.8%),only 5(1.3%) had family history of mental disorder.

Figure 1: Distribution of the study participants by Number of siblings (N =400)

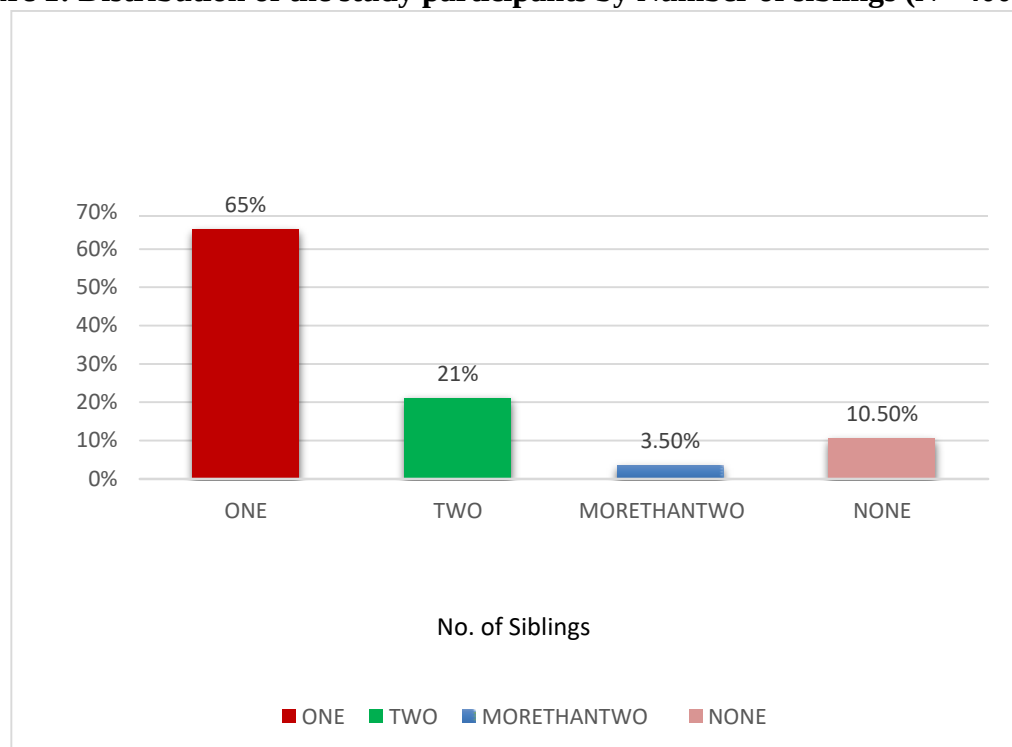


Table 2: Distribution of the study participants by Family history of mental disorder (N= 400)

Family history of mental disorder	Frequency (N)	Percent (%)
Yes	5	1.3
No	395	98.8
Total	400	100.0

Figure 2 shows the distribution of the study participants based on smoking/alcohol status of father. Among the study participants, 69.80 % did not had the habit of alcohol intake and smoking, 13.30% had habit of intake of alcohol and smoking, 9.30% had habit of smoking alone and 7.80% had the habit of smoking alone.

Figure 2: Distribution of the study participants based on smoking/alcohol status of father (N = 400)

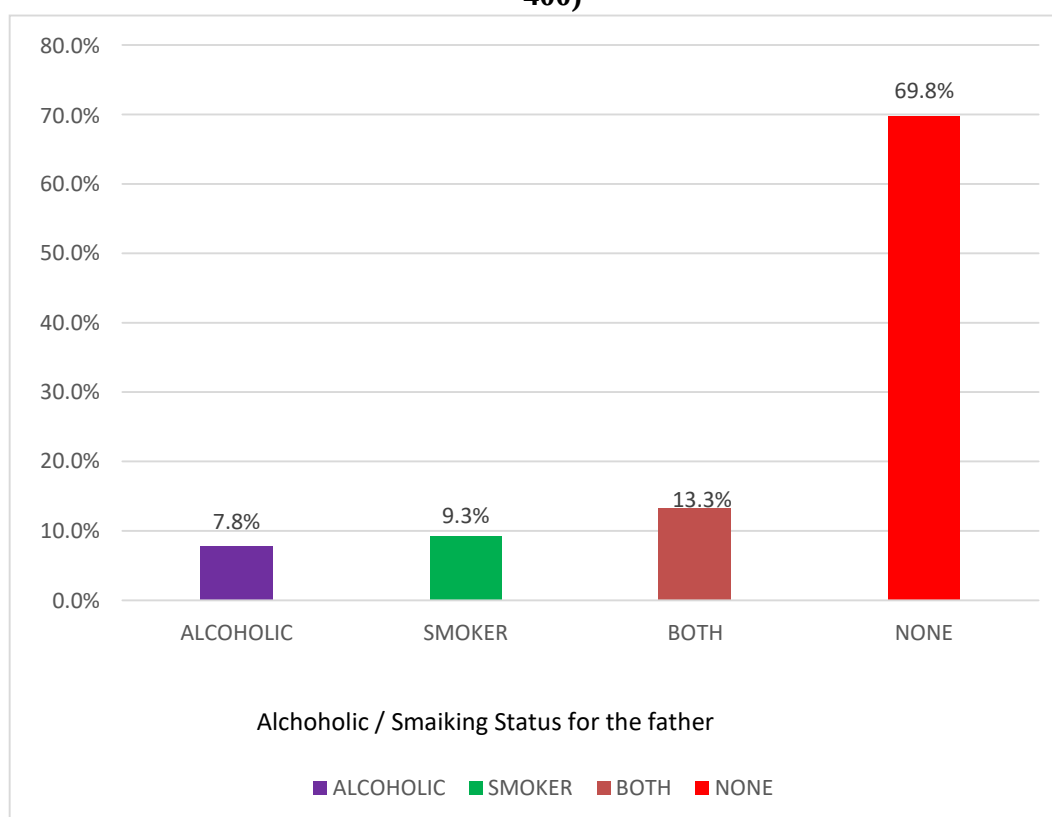


TABLE 3:

Table 10 shows distribution of the study participants based on spending time for study. Out of the 400 study participants ,168(42%) spent 3 hours for study followed by more than 4 hours 104(26%),2 hours 99 (24.8%) and others 29(7.3%).

Table 3: Distribution of the study participants based on spending time for study (N = 400)

Study time	Frequency (N)	Percent (%)
2 hours	99	24.8
3 hours	168	42.0
>4 hours	104	26.0
Others	29	7.3
Total	400	100.0

Table 4 shows the distribution of the study participants based on whether study became burden. Out of the 400 study population, only 101 (25.3%) told study became burden but most of them 299 (74.8%) told that study not became a burden.

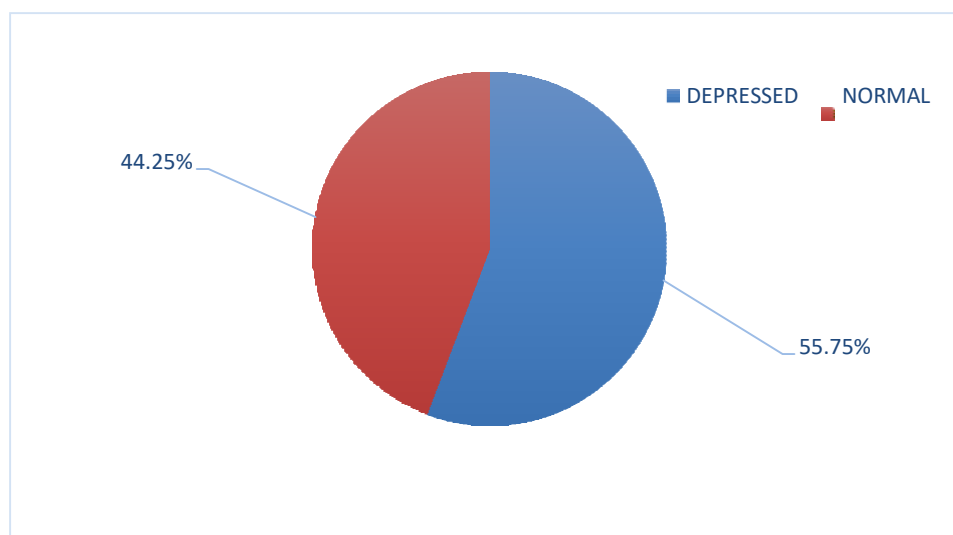
Table 4:Distribution of the study participants based on whether study becoming burden (N = 400)

Study becoming burden	Frequency(N)	Percent (%)
Yes	101	25.3
No	299	74.8
Total	400	100.0

Prevalence of Depression.

Figure 3 shows the prevalence of depression in adolescents in urban area of Kancheepuram district was found to be 55.75%.

Figure 3 : Prevalence of Depression (N= 400).



Distribution of the study participants based on Depression severity score

Out of the 400 study population using PHQ – 9 questionnaire, no depression were about 177(44.25%), followed by mild depression 85(21.25%), moderate depression 58 (14.5%), severe 41(10.25%) and moderately severe were 39 (9.75%).

Table 5 shows distribution of the study participants based on depression severity score Using PHQ -9 questionnaire

SCORE	Depression severity
0-4	No depression
5-9	Mild depression
10 – 14	Moderate depression
15 – 19	Moderately severe
20– 27	Severe

Table 6: Distribution of the study participants based on Depression severity score (N = 400)

Depression severity score	Frequency (N)	Percent (%)
No depression	177	44.25%
Mild depression	85	21.25%
Moderate depression	58	14.5%
Moderately severe	39	9.75
Severe	41	10.25%

Univariate analysis of association between Gender and Depression

Table 9 shows association between gender and depression. Comparing gender and depression, it was found that 132 (64.4%) of males were more depressed compared to 91(46.7%) of females. The association between gender and depression is statistically significant (p value - 0.001) with an OR – 2.066 (95%CI - 1.3837 – 3.086)

Table 7:Univariate analysis of association between Gender and Depression (N = 400)

Gender	Depression		OR	95% CI	Chi square value	P value
	Present n=223(%)	Absent n(%)				
Male	132 (64.4%)	73 (35.6%)	2.066	1.3837 – 3.086	12.725	0.001*
Female	91 (46.7%)	104 (53.3%)				

* p value <0.05 is significant

Table 10 shows association between standard and depression. Comparing standard and depression, it was found that 177(61.45%) of the study population who belonged to high school was found to be more depressed compared to 46(42%) of the study population who belonged to

higher secondary school. The association between standard and depression is statistically significant ($p = 0.003$) with an OR – 2.28 (95% CI - 1.466 – 3.570)

Table 8:Univariate analysis of association between Smoking/Alcohol status of Father and Depression (N = 400)

Smoking/alcohol status of father	Depression		Chi-square value	P value
	Present n=223 (%)	Absent n (%)		
Alcoholic	15 (48.4%)	16 (51.6%)	14.629	0.002*
Smoker	27 (73%)	10 (27%)		
Both	39 (73.6%)	14 (26.4%)		
None	142 (50.9%)	137 (49.1%)		

*p value <0.05 is significant

association between preference for treatment and depression. Comparing preference for treatment and depression, it was found that 183 (45.8%) Similarly, A study conducted by Surabhi Chauhan et al in Uttar Pradesh found that about 79.7% of study subjects were involved in extracurricular activities. Extracurricular activities and depression were statistically associated with each other ($X^2=9$, $P<0.002$). 10 Another study done by Mason MJ et al that adolescents who engaged in more extracurricular activity presents with lower depressive symptoms and found to be statistically significant. 10-13

In this study, there was statistically significant association between standard and depression which might be due to that high school students are facing board exam for the first time. Similarly, in a study done by Man Mohan Singh et al found that there was statistically significant association between standard and depression. In this study, there was statistically significant association between preference for treatment and depression ($p<0.05$)¹⁴

In this study, there was statistically significant association between history of surgery done and depression ($p<0.005$). The most common severity of depression observed in our study was no depression - 44.2% , mild – 21.2% , moderate – 23%, severe – 10.2%. A study done by Naushad et al and Malik et al observed approximately similar prevalence of mild depression.^{15,16} However, in a study conducted by Malik et al the prevalence of moderate depression was dominating, wherein the prevalence of severe depression was 11.4% which was similar to our observation. ¹⁷

In a study conducted by Naushad et al the prevalence of moderate depression was 41.2% which was much higher than our observation which might be due to usage of different scale (BDI-II).¹⁸ In our study, the association between socio economic status and depression was found to be statistically non - significant.

CONCLUSIONS

This study shows that the Prevalence of depression among adolescents in Anakaputhur area of Kancheepuram district was found to be 55.75%. The depression observed was more among males than female. Health education to parents as well as to the community as a whole should be promoted to remove the stigma attached to these disorders.

Similar study like the current one could pave the way for school-based interventions that may help adolescents with mild and moderate depressive symptoms could minimize the risk for progression into other serious problems like abuse, suicide and violence.

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

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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