Original Research Article

Impact of parental care on depression and academic performance of adolescent girls from selected schools in a city in South India

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ABSTRACT

Background: Adolescence is a transitional period where the relationship between them and their parents are vital. Mental health status of girls staying in poor homes without parental care may influence their academic performance and since need special attention. So a study was undertaken to assess the depression status of adolescent girl students (13-15yaers) in selected schools using Kutcher Adolescent Depression Assessment Scale (KADS) given by Kutcher and to compare the depression scores, academic and other socio-demographic factors of adolescent girls with and without parental care.
Methods: Cross sectional study involving 130 girl students from selected schools of which 40 students were from poor homes. Chi -square test and Mann Whitney U test was used as test of significance for qualitative and quantitative variables respectively. Binary logistic regression was also used.
Results: Analysis of KADS score indicated that both type of students with and without parental care had similar cumulative scores varying from 1- 19. Among the study subjects 10 (7.7% with 95 % confidence interval 3.12% - 12.28%) had scores above 15. Academic performances and participation in arts and sports were significantly different between students staying with parents than those from poor homes.
Conclusions: Percentage of students from poor homes with collective KAD scores above 15 is almost double the percentage of students with parental care. Parental support is positively related to better academic and extracurricular activities of students.

Keywords: Adolescent, Depression, Parental care, Kutcher

INTRODUCTION

Adolescence is a period of biological, cognitive and social change that it is associated with the onset or exacerbation of a number of health-related problems including depression, eating disorders, substance abuse and dependence, risky sexual behaviour, antisocial and delinquent activity and school dropout and subsequent unemployment.[1-8] According to UNICEF (2011) report it is estimate that around 20 percentage of the world's adolescence have mental health or behaviour problems.

Several studies have examined the relationship between adolescent depression and aspects of parenting style. In recent years, the role of parental influence in adolescent adjustment has been seriously questioned. Some researchers have argued that parents make little or no difference in how their children navigate the adolescent

period, pointing instead to data showing that peer influence dominates this period[1].Contrary to this position, there is growing evidence that parents do make a difference, and that this difference operates through the nature of their attachment with their child.[8,9]

An empirical study on the depression of adolescents showed that low levels of adolescent depression were associated with high levels of attachment both to parents and to peers.[10] A study to assess the mental health of Indian adolescents studying in urban schools using the Strengths and Difficulties Questionnaire (SDQ) for behavioural difficulties and mental health disorders in urban high school students showed that mental health problems are widespread among Indian adolescents.[11]

There are many poor homes in the capital city of Kerala, India. The mental health status of the girls from poor homes is a matter of concern. The causes of lower academic performance of the poor home occupants compared to their classmates require special attention. Another great challenge among adolescents is stigma associated with depression. Depression associated stigma can be a barrier to seek professional help. The epidemiological situation and available health service system shows that providing mental health services in rural areas is a challenging task, which needs infrastructural, architectural and programmatic correction in the existing National Mental Health programme and District Mental Health programmes. Lack of trained human resource for mental health care and treatment is another challenge.[12] Besides these, another barrier is the lack of political commitment and realization that mental health is an important aspect of our health. The present study is taken up with a view to assess the mental health with focus on the girls from poor homes of Thiruvananthapuram, the capital of Kerala State, India. Students who hail from families of varied socioeconomic background will be compared to those who come from poor homes to assess the depressive mental status of adolescent girls of high schools of Thiruvananthapuram city.

Aims and objectives

1) To assess the depression status of adolescent girl students (13-15 years) in selected High Schools of Thiruvananthapuram city, Kerala, India using Adolescent Depression Scale (KADS) given by Kutcher.

2) To compare the depression scores, academic and other socio-demographic factors of adolescent girls with and without parental care in High Schools of Thiruvananthapuram city, Kerala, India using Adolescent Depression Scale (KADS) given by Kutcher.

METHODS

A cross sectional study in selected schools of Thiruvananthapuram district, Kerala, India was

undertaken from February 2016 to September 2016. The sample size was estimated to be 112 based on the prevalence (47.33%) from a previous study and 20% precision. [14] Girl students of standards 8 to 10 (13-15years) in selected high schools of the city were included in the study. A total of 130 students were included in the study. In case of absence of any student on the day of survey, two attempts were taken to contact them on a later convenient date. Students whose parents did not provide consent were omitted from the study. Those students who could not be contacted even after two attempts were excluded from the study. A semi-structured questionnaire was used for data collection. Questions on socio-demographic profile of students, questions pertaining to depression mental health status of students using Kutcher Adolescent Depression Scale (KADS) and questions related to academic performance of students were included in the questionnaire.[13] The questionnaire was self-administered. Care was taken to obtain individual answers and to avoid bias generated from group discussion, by separating them from one another while administering the questionnaire. Total Score interpretation is such that score 0-15 indicates the respondent were not depressed whereas score 16 and above indicated possible depression which required more thorough assessment. Ethical clearance was obtained from the Institutional Ethical Committee. An informed consent was obtained from the parents, head of the institutions of the concerned schools in the study area and an informed ascent was sought from the respondents. At the end of the study the outcome of students with poor scores were communicated with the school authorities so that necessary steps to improve the mental health could be taken.

Statistical analysis

Data were entered in excel sheet and trial version of SPSS software was used for data analysis. All qualitative data were analyzed for proportions and quantitative variables using mean and standard deviation or median with first and third quartile. Chi-square test and Mann Whitney U test was used as test of significance for qualitative and quantitative variables respectively. P value less than was taken as statistically significant. Binary logistic regression was done for the variables found to be significant in bi variable analysis with p value less than 0.05 with parental care as the outcome variable.

RESULTS

The present study was done among adolescent girls from selected schools of the city. Out of the total 130 students interviewed, 40 students were coming from poor homes without any parental care. They had either single parent or no parents. In the study students with care included those staying with their parents and without care included those staying in poor homes. The analysis of depression scores revealed that 10 (7.7%) had scores above 15, indicating possible depressive symptoms. It was also note

that 5 (12.5%) students who have collective scores above 15 were from poor homes against 5 (5.6%) in those staying with their parents. The cumulative score of the response scale varied from 1 to 19 for both the students with and without parental care as shown in Figure 1. The results of the data collected based on socio-demographic profile of female adolescent girl students are presented in Table 1.
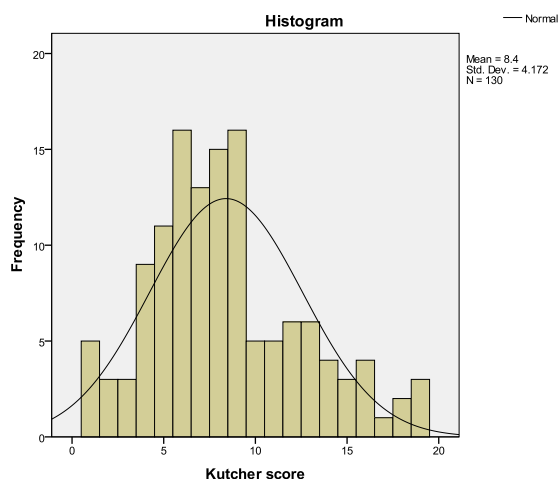

Figure 1: Histogram showing cumulative KADS score of the respondents.

In the study, 79 respondents with parental care had their

fathers' educated up to class 10 while 15 out of 40 poor home occupants had their parents with academic achievement up to 10th. However, 62.5% of the later had education more than 10th class while only 12.2% of the respondents with parental care had achieved so. Thus a greater proportion of students from poor homes had a higher education for their father. Chi-square test also showed statistical significance (p < 0.001) with education status of fathers. Such significant variation was not observed in the case of mothers education where 65 (72.2%) of respondents had their mothers educated up to 10th while 28 (70%) of the students from poor homes had education status upto 10th standard. Comparing the occupation of the parents, 62 (69%) and 12 (30%) of the mothers were unemployed in those with parental care and without parental care respectively. In case of fathers occupation, a major proportion 32 (35.6%) and 14 (35%) of those with and without parental care respectively were skilled workers.

KADS scores were compared between the students with and without parental care using Mann Whitney U test as the scores were not normally distributed. Mann Whitney U test is the non parametric equivalent of unpaired t test. The median KADS score of students with 8 with an interquartile range of 6 among those with parental care and 7 with an interquartile range of 3.75 among those without parental care as seen from Table 2. But there was no statistically significant difference in median scores between the two groups.

Table 1: Comparison of socio demographic variables of students with and without parental care.

Variables		With care (n- 90)	Without care (n-40)
Fathers education *	Upto 10th	79(87.8%)	15(37.5%)
	More than 10th	11(12.2%)	25(62.5%)
Mothers education	Upto 10th	65(72.2%)	28(70%)
	More than 10th	25(27.8%)	12(30%)
Socio economic status	APL	38 (42.2%)	-
	BPL	52 (57.8%)	
Income	5000-10,000rupees	63 (70 %)	-
	10,000-20,000rupees	22 (24.4%)	
	Above 20,000rupees	5 (5.6 %)	
Family Type	Nuclear	68(75.6%)	-
	Extended	22(24.4%)	

Table 2: Comparison of the KADS score of adolescents with and without parental care.

Kutcher score	With care (n-90)	Without care (n-40)	P value
Mean (SD)	8.37 (4)	8.48 (4.6)	0.8 *
Median (Q1, Q3)	8 (5,11)	7 (6,9.75)	
Minimum	1	2	
Maximum	19	19	

*- Mann Whitney U test; Q1 – First quartile, Q3- Third quartile SD – Standard Deviation

The academic and extracurricular activities of the students were compared between the two groups of students as shown in Table 3. Among the students with

parental support 49 (54.4%) scored above 80% marks, while only 3 (7.5%) of those students without parental care scored the same. Marks scored above 80 % and

involvement in games was found to be statistically significant (p <0.001). Similarly there was statistically significant difference between the two groups of students in their involvement in arts & academic clubs by Chi square test (p <0.01).

Binary logistic regression was done with the factors like

involvement in arts, games, academic clubs and marks scored above 80%. The analysis showed that involvement in games and marks scored above 80% were independent predictors. The adjusted odds ratio for involvement in games was 0.08 with 95% confidence interval of 0.02 to 0.27 and that for marks scored above 80% was 0.07 with 95% confidence interval of 0.02 to 0.3.

Table 3: Comparison of academic and extracurricular activities of the respondents.

Variables		With care (n- 90)	Without care (n-40)
Marks scored[1]	Above 80 %	49 (54.4%)	3 (7.5%)
	Below 80 %	41 (45.6%)	37 (92.5%)
Involvement in games[1]	Any game	82 (91.1%)	17 (42.5%)
	Not interested	8 (8.9%)	23 (57.5%)
Involvement in arts[2]	Any arts	79 (87.8%)	28 (70%)
	Not interested	11 (12.2%)	12 (30%)
Involvement in academic clubs[2]	Any clubs	50 (55.6%)	13 (32.5%)
	Not interested	40 (44.4%)	27 (67.5%)

1: Statistically significant by Chi square test (p < 0.001); 2: Statistically significant by Chi square test (p <0.01).

DISCUSSION

A 11 point Kutcher Adolescent Depression Scale (KADS) administered on 130 students in which 40 were from poor homes indicated that both type of the students had similar cumulative scores. The proportion of adolescents with score above 15 was 7.7% (95% confidence interval 3.12% - 12.28%). Studies have reported that 1 year prevalence of depression to be about 4 to 5% and life time prevalence to be 20 to 25 %.[15,16] Sarkar et al reported the prevalence in sub urban India to be 3.13%.[17] National comorbidity survey has reported a prevalence of 12.4% in girls.[18] British child and adolescent mental health survey reported 1.9% among 13 to 15 years.[19] The wide variations in the prevalence of depression might be due to difference in tool used and the difference in study setting reflecting the socio cultural environment of the country being studied. The prevalence of depression increases from childhood to adolescents. The pubertal changes mainly contribute to this rise.[20] Due to the same reason adolescent depression may be more often missed at home settings. Higher depressive symptoms in girls as seen in the present study can be attributed to female hormones, stressors and social factors.[21]

Depression is the single largest contributor to the global burden of disease for people aged 15–19. The increase is attributed to disrupted family structures, female gender, poor inter parental relationships and families' unrealistic educational and vocational aspirations for their children.[22,23] Another study had demonstrated that girls with more emotionally distant parents were more likely to manifest symptoms of depression.[24] A study of 175 Mexican-origin families of 11-15 year old adolescents from low income areas found that maternal support, defined as acceptance and attachment, was negatively

related to adolescent depression.[9] Parental support was consistently linked to lower levels of depressive feeling in adolescents across groups both in cross sectional and longitudinal studies.[25] Family parenting style explained 11% of the variance in adolescent depression.[26] When at least one parent was authoritative, children had significantly lower levels of depression as well as delinquency.[26]

The proportion of probable depression was higher in adolescents from poor homes, but no statistical significance was obtained in the present study. This could be a limitation of the study as the power was not adequate to capture the difference. The sample size was calculated for the primary objective which was to find out depression among adolescents.

More than half of the students (54.4%) with parental support scored above 80% marks while 92.5% of the students without parental care scored marks below 80%. Statistically significant difference was observed in Chi square test for the student involvement in games and arts and in academic clubs. A study done in Pakistan had showed a statistically significant association between high parental involvement and good academic achievement. The same study had also shown that those parents, who were least involved in academic activities of their children, had lesser.[27]

This clearly shows that parental care has a direct say in academic performance and extracurricular activities of adolescent girls in the study area. Significant association noted between the level of parental involvement in academic activities and the level of academic achievement of children.[28] A study by John Hopkins University revealed that involvement in sports had several positive outcomes including greater confidence in

academic activities.[29] Parental supervision after school hours is essential is achieving higher school grades and reduce school dropout rates as per Bernhardt.[30] There are reports from India about the role of parents in helping their children and its positive impact on academic achievement.[31]

One of the limitations of the current study was that the perceptions of the parents were not investigated in the present study. The study was restricted to adolescent girl students. The factors which influence the academic performance and other extracurricular activities of boys might be different. Similarly the effect of substance abuse among boys on mental health was also not addressed in the present study.

In short, parental support demonstrated a positive association between better academic and extracurricular performance. New education systems should incorporate health promotion in schools which should be a comprehensive one including teachers training, changes in curriculum, involvement of parents and society.

ACKNOWLEDGEMENTS

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