

Impact of Parental Care on Depression and Academic Performance of Adolescent Girl Students with and without Parental Care at selected High Schools of Thiruvananthapuram Corporation, South India, Kerala

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ABSTRACT

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Introduction: The mental health status of girl students belonging to poor homes specifically their depressive adolescent mental health has not been studied. Poor mental health can cause lower academic performance. Depression in girls with no parental support is multifactorial. In the study the term 'parental care' was used to denote the students who live with parents and those who were 'without parental care' live in poor homes.

Aims and Objectives: To assess the mental health with special emphasis on the depression of parentless girls from poor homes of Thiruvananthapuram Corporation, the capital of Kerala State. The study also aimed to compare the depression scores, academic and other socio-demographic factors of adolescent girls with and without parental care in High Schools of Thiruvananthapuram Corporation.

Methodology: Cross sectional study involving 130 girl adolescent students of standard 8 to 10 who hailed from families of varied socioeconomic background were selected. 40 students belonged to poor homes and are without parental care/presence. KADS scale was administered for measuring mental health and the period of study was February 2016 to September 2016.

Study tool: Predesigned and pretested semi-structured questionnaire containing three sections- A. Questions on socio-demographic profile of students, B. Questions pertaining to depression mental health status of students using Kutcher ADAS 11 point score and C. Questions pertaining to academic performance of students.

Data collection method was self administered questionnaire.

Data entry and analysis: Data entered in excel sheet was analysed using SPSS software version 16.0. CHI-square test and unpaired t/Mann Whitney U test was done.

Observations: Statistical analysis of KADS score indicated that both type of students with and without parental care has similar cumulative score varying from 1 to 19.

Conclusion: Statistical analysis does not show prevalence of depressive mental health among the adolescent girl students of Thiruvananthapuram who hail from poor homes. It is however, noted that almost double numbers of girls without parental care are in the upper limit of KADS score. Though more students with parental support scored marks above 80% marks, the upper KADS scores of the students without parental care did not reflect in their academic performance.

Keywords: Adolescents, Mental health, Role of parental care

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INTRODUCTION

Sound mental health plays a vital role in the period of adolescence and mental maturity is very important in this period because mental health is linked with physical health, social health, emotional and functioning at school and common places. Adolescence is increasingly recognized as the second major 'window' of opportunity and risk in development, next only in significance to early childhood development. It is a

transitional period from childhood to adulthood and relationship between adolescents and their parents are vital. Lack of intimacy, lack of parental involvement, lack of guidance, lack of parental attachment, blaming, and anger can lead to delinquent behaviour among adolescents. Research has shown that teens with difficulties in relating to parents and peers are at greater risk for developing symptoms of depression and show later deficits in social functioning.

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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 period¹. 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 bond with their child.¹⁰⁻¹²

There are many poor homes in Thiruvananthapuram Corporation and many girl students from them study in different schools of the area. The mental health status of these girls specifically their depressive adolescent mentality is a matter of concern. The cause of lower academic performance of the poor home occupants compared to their classmates need to receive special attention. There can be varied concerns regarding the cause of depression from the girls who receive parental support. The current study is taken up with a view to assess the mental health with special emphasis on the depression of parentless girls from poor homes of Thiruvananthapuram, the capital of Kerala State. 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 Corporation.

REVIEW OF LITERATURE

Adolescence is a period of biological, cognitive and social change of such magnitude and rapidity that it is no surprise to find that it is associated with the onset or exacerbation of a number of health-related problems including depression,¹ eating disorders,² substance abuse and dependence,³⁻⁵ risky sexual behaviour,⁶ anti-social and delinquent activity⁷ and school dropout.⁸

Several studies were located in which researchers examined relationships between adolescent depression and aspects of parenting style such as support or acceptance, discipline, and control, addressed singularly or in various combinations. One study addressed criticism and positive behaviours, and two studies addressed family parenting styles and their relationship to outcomes, including depression.^{8,9} Another research¹⁰ assessed maternal critical and positive interaction behaviours among mothers of “relatively depressed adolescents”, aged 14-18 years, in a predominantly Caucasian but ethnically diverse sample. These mothers were compared with mothers of adolescents who did

not have symptoms of depression. Adolescents with depressive symptoms responded to maternal criticism with depressive behaviour, in contrast to adolescents without depressive symptoms. Depressed affect in the adolescent was followed by less positive and supportive responses from mothers. Mothers of adolescents who were in the depressed group demonstrated less positive and supportive behaviour overall. A study of 175 Mexican-origin families of 11-15 year old adolescents from low income inner city areas in the Southwest U. S. and similarly found that maternal support, defined as acceptance and attachment, was negatively related to adolescent depression.¹¹ A cross-national study of the interrelationships of parenting and adolescent outcomes in the United States and 11 other countries¹² made a sophisticated and complex dominance analysis of three aspects of parenting style, parental support, psychological control and behavioural control, was conducted based on adolescent reports regarding both mothers and fathers. Parental support was consistently linked to lower levels of depressive feeling in adolescents across groups both cross-sectionally and longitudinally, demonstrating causal linkages. A research studied the different influences of parenting style on adolescent mental health that were due to acculturative status by examining low income Mexican American and Euro American² families of children 8-13 years of age.¹³ Both Mexican American and Euro American families with low levels of conflict and hostile control, who were accepting and used consistent discipline, were more likely to have children with fewer depressive symptoms and conduct disorder.

One study examined the relationship of controlling parenting style with adolescent depression in a multiethnic balanced sample of Caucasian, Latino and African American girls.¹⁴ There was no significant relationship between firm maternal control and depression in Caucasian and Latino girls, but a negative relationship of firm control with depression was found in the African American group. This suggests that the meaning of similar parenting behaviours is differently constructed by different ethnic groups. Firm control may be more normative and adaptive in African American groups, buffering the risk for depression in African-American girls.

Researchers examined the contribution of family parenting styles to depression of 451 eighth graders enrolled in a longitudinal study.⁹ Family parenting styles were formed by combining individual styles of two parents, who were classified as authoritative, authoritarian, indulgent, or uninvolved based on youth ratings

and research observation. When at least one parent was authoritative, children had significantly lower levels of depression as well as delinquency.

Family parenting style explained 11 % of the variance in adolescent depression. A combination of an authoritative parent with either an authoritative or indulgent parent, or a combination of two indulgent parents were associated with better outcomes than a combination of an uninvolved mother and an indulgent or uninvolved father.

An examination⁸ of relationships between parenting styles and depression among 3,993 15-year-olds in California found that adolescents who reported that their parents had an authoritative style were least likely to have depressive symptoms, followed by adolescents who had permissive, autocratic, and unengaged parenting. These authors identified three subgroups at particular risk for depression: African-American boys with unengaged parents, and Asian girls with either autocratic or unengaged parents.

In summary, parental support demonstrated a negative relationship with depression across studies and cultural groups. In addition, although hostile control demonstrated a positive relationship with adolescent depression in one study, firm control demonstrated a negative³ relationship with adolescent depression among African American families. Slight evidence suggests a positive relationship of inconsistent discipline with adolescent depression.

Initiatives in India

A study¹⁸ 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 pupils showed that thirty participants (8.7%) had an abnormal SDQ score and 53 (15.3%) had a borderline abnormal SDQ score showed that abnormal SDQ scores were more common among females than among males. The difference was most pronounced on the emotional symptoms subscale showing that mental health problems are widespread among Indian adolescents.¹⁸ 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 programme. Lack of trained human resource for mental health

care and treatment is another challenge,¹⁶ considering few institutions available for mental health professional training. Besides these, major challenge is lack of political commitment and realization that mental health is an important aspect of our health system which has far reaching implication for the development of the country.

AIMS AND OBJECTIVES

1. To assess the depression status of adolescent girl students (13-15 years) in selected High Schools of Thiruvananthapuram Corporation using Adolescent Depression Assessment Scale (ADAS) given by Kutcher.¹⁷
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 Corporation.

MATERIAL AND METHODS

Study design: Cross sectional study

Study area: Selected schools of Thiruvananthapuram Corporation such as Sreevaraham, Palkulangara, Kamaleswaram-East Fort and Pattom

Study duration: From February 2016 to September 2016

Study population: Girl students belonging to selected high schools of Thiruvananthapuram.

Sample size: 130

$$\text{As per } d^2 = \frac{4PQ(P=47.33\%)}{(18.5\% \times 47.33)^2} = \frac{4(47.33 \times 52.77)}{(18.5\% \times 47.33)^2}^{15}$$

P= Prevalence rate observed from a previous study where p=47.33% from a study by Celien T.M and Antony J.A.¹⁵

$$Q = (100 - P)$$

i.e. 52.77

D= allowed error % of P

i.e. 18.5 % of 47.33

Inclusion criteria: Girl students of standards 8 to 10 in selected high schools of Thiruvananthapuram Corporation, Thiruvananthapuram district, Kerala state. In case of absence of any student on the day of survey, 2 attempts were taken to contact them on a later convenient date. Students whose parents did not provide consent were omitted from the study.

Exclusion criteria: Those girl students who are not willing to provide consent.

Study tool: Predesigned and pretested semi-structured questionnaire containing the following sections.

Section A: Questions on socio-demographic profile of students

Section B: Questions pertaining to depression mental health status of students using ADAS 11 point score given Kutcher.¹⁷

Section C: Questions pertaining to academic performance of students.

Data collection methods: Self administered questionnaire will be used. Care will be taken to obtain individual answers by separating them from one another during the record of their answers and avoiding bias generated from group discussion. Data collection was administered with the help of 11 point Adolescent Depression Assessment Scale (ADAC) devised by Kutcher.¹⁷ Total Score interpretation is in such that score 0-15 indicates the respondent were not depressed whereas score 16 and above indicated possible depression which required more thorough assessment.

Data entry and analysis: Data were entered in excel sheet and trial version of SPSS software trial version 16.0 version for data analysis. All qualitative data were analyzed for proportions and quantitative variables using mean and standard deviation. CHI-square test and Whitney U test was used as test of significance for qualitative and quantitative variable respectively. P value <0.05 or a Confidence interval of 95% will be taken as statistically significant.

Ethical consideration (clearance pending): Ethical clearance was obtained from the Institutional Ethical Community. An informed consent was obtained from the Parents, Headmasters/Class teachers of the concerned schools in the study area. An informed consent was sought from students and the confidentiality of information was maintained. All the respondents whose consent was not obtained were omitted from data collection. At the end of the study the outcome was communicated with the School authorities so that necessary steps to improve the follow-up activities with regard to depressive mental health of the girls from poor home girls could be taken.

OBSERVATIONS AND RESULTS

The results of the data collected based on socio-demographic and Kutcher Depression characteristics of female adolescent girl students of Thiruvananthapuram are analysed statistically and presented below.

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 10 th	79(87.8%)
	More than 10 th	15(37.5%)
Mothers education	Upto 10 th	11(12.2%)
	More than 10 th	25(62.5%)
Socio economic status	APL	65(72.2%)
	BPL	25(27.8%)
Income	5000-10,000 rupees	38 (42.2%)
	10,000-20,000 rupees	52 (57.8%)
	Above 20,000rupees	63 (70 %)
Family Type	Nuclear	22 (24.4 %)
	Extended	68 (75.6 %)

*- Fathers education was found to be statistically significant by Chi square test (p < 0.001).

Table 1 shows the socio-demographic parameters of the adolescent female students with and without parental care. 79 respondents with parental care had their fathers' educated upto class 10 while 15 out of 40 poor home occupants had their parents having academic achievement up to 10th. However, 62.5% of the later had educated more than 10th class while only 12.2% of the respondents with parental care had achieved so. Such significant variation was not observed in the case of mothers' education where 65 respondents' mothers studied up to 10th while 28 have attended higher classes. Chi-square test also showed statistical significance (p < 0.001) in the distribution of values of fathers' education.

Table 2. KADS cumulative Score for Depression mental status of the total study subjects

Score	N - 130(%)
1 – 10	73.8 %
10 – 15	24 (18.5 %)
More than or equal to 15	10 (7.7 %)
Total	130

Table 2 indicates that 73.8% of the respondents had KADS score between 0 to 15, 18.5% between 10 to 15 and 10% above 15.

Table 3 indicated that 65% of the respondents with parental care and 77.5% respondents without parental care had KADS scores between 2 to10. Twenty percent

Table 3. Comparison of KADS scores of respondents with or without parental care

Score	With care (n-90)	Without care (n-40)
2 – 10	65 (72.2 %)	31 (77.5 %)
10 – 15	20 (22.2%)	4 (10 %)
More than or equal to 15	5 (5.6 %)	5 (12.5 %)

Table 4. Comparison of the Depressive Mental Health 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

of respondents with parental care and 10% with parental care had KADS scores between 10 to 15. Respectively 5.6% of respondents with care and 12.5% respondents without parental care had scores above 15.

Table 4 and the above histogram (**figure 1**) compares the depression status of female adolescent students with and without parental care by analysing responses from a self administered 11 point Kutcher scale variables. The cumulative score of the response scale varied from 1 to 19 for both the students with and without parental care. Corresponding mean values of the Kutcher score fluctuated between 8.37 (SD±4.0) and 8.48 (SD±4.6). The P value deduced from Mann Whitney U test did not show any statistical significance.

Table 5 shows that 69% of the respondents had their mothers without any job apart from being housewife when only 30% of the poor home students had their mothers without a job. In case of fathers, both the type of respondents, with or without parental care, a considerable portion is occupied with skilled jobs.

Table 6 shows that 54.4% of respondents with parental support scored above 80% marks, while only 7.5% of those students without parental care scored that grade.

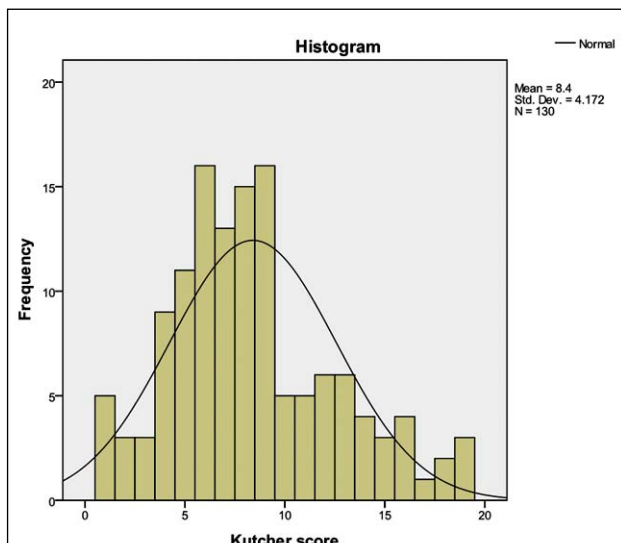


Figure 1. Histogram showing Kutcher scores of students with and without parental care

Table 5. Comparison of fathers' and mothers' occupation

Variables	With care	Without care	
Mother's occupation	No job	62(68.9%)	12(30%)
	Unskilled	4(4.4%)	Nil
	Skilled	11(12.2%)	13(32.5%)
	Office going	2(2.2%)	Nil
	Business	1(1.1%)	Nil
	Professional	2(2.2%)	Nil
	Executive	2(1.1%)	Nil
	Retired	8(8.8%)	6(15%)
	Respondent poor home occupant	Not applicable	9(22.5%)
	Father's occupation	No job	4(4.4%)
Unskilled		26(28.9%)	2(8%)
Skilled		32(35.6%)	14(35%)
Office going		4(4.4%)	Nil
Business		10(11.1%)	Nil
Professional		4(4.4%)	Nil
Executive		9(10.0%)	Nil
Retired		1(1.1%)	Nil
Respondent poor home occupant		Not applicable	24(60%)

Table 6. 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- Marks scored above 80 % and Involvement in games was found to be statistically significant by Chi square test (p < 0.001).
2- Involvement in arts & in academic clubs was found to be statistically significant by Chi square test (p - 0.01).

Thirty seven out of forty students without parental care scored below 80% marks. Similarly respectively 91.1% and 87.8% of the students with parental support involved in games and arts, only 42.5 and 70% of the students without parental care participated in games and arts. 57.5% of female adolescents from poor homes did not participate in games. Similarly 68% of the poor home occupants were not interested in participating in academic clubs. Marks scored above 80 % and Involvement in games was found to be statistically significant (p < 0.001). Similarly involvement in arts & in academic clubs was also found to be statistically sig-

nificant by Chi square test ($p = 0.01$).

DISCUSSION

Adolescence is a transitional period from childhood to adulthood and relationship between adolescents and their parents are vital. Lack of intimacy, lack of parental involvement, lack of guidance, lack of parental attachment, blaming, and anger can lead to delinquent behaviour among adolescents. According to UNICEF (2011) report it is estimate that around 20 percentage of the world's adolescence have a mental health or behaviour problems. The report highlighted that among 1.2 billion adolescence stands at the crossroads between childhoods and the adult world, around 234 million of them live in India and this shows that about one-quarter of India's population are adolescence.

Depression is the single largest contributor to the global burden of disease for people aged 15–19, and suicide is one of the three leading causes of mortality among people aged 15–35. About half of Lifetime mental disorders begin before age 14, the prevalence of mental disorders among adolescents has increased in the past 20–30 years; the increase is attributed to disrupted family structures, growing youth unemployment and families' unrealistic educational and vocational aspirations for their children.¹⁹

Depressive mental health of female adolescents with and without parental care

An 11 point Kutcher Adolescent Depression Scale (KADS) administered on 130 students in which 40 are from poor homes indicated that both type of the students has similar cumulative score. Also the score varied from 1 to 19 for both the types. Statistical analysis does not show prevalence of depressive mental health Though there are no validated diagnostic categories associated with particular ranges of scores, one study at China opines about the KADS-11CV, as a short and user-friendly self-report tool that suggests good clinical and research utility with excellent reliability and validity in regards to the diagnosis of adolescent Depression in China.²¹

Another study carried out in the home state using longitudinal data from self-reports and observer ratings of family interaction regarding 76 adolescent girls and their parents, one research investigating the effects of parental warmth and supportiveness on adolescents' depressed affect, indicated that girls with more emotionally distant parents were more likely to manifest symptoms of depression.²⁰

Socio-demographic factors and occupation of parents

Socio-demographic parameters indicate that 87.8% of the respondents with parental care had their fathers' educated upto 10th class while 37.5% of those without such care had their parents having academic achievement upto 10th. However, 62.5% of the later had educated more than 10th class while only 12.2% of the respondents with parental care had achieved so. Such significant variation was not observed in the case of mothers' education. Compared to fathers, the mothers of poor home occupants have more education. Variation in fathers' education showed high statistical significance ($p < 0.001$)

Majority (69%) of the respondents with parental care had their mothers without having a job apart from being housewives. However, only a minority (30%) of the students from poor homes had their mothers jobless. In case of fathers, both the types of respondents, a considerable portion is occupied with skilled jobs. It is also notable that 22.5% and 60% the female adolescents in poor homes do not have mothers and fathers respectively.

Academic performance of adolescents

More than half of the students (54.4%) with parental support scored above 80% marks, when only 7.5% of those students without parental care could score that grade. Majority (92.5%) of the students without parental care scored below 80% marks. Corresponding distribution was visible in responses regarding student involvement in games. While 91.1 and 87.8% of the students with parental support involved in games and arts, only 42.5 and 70% of the students without parental care respectively involved in games and arts. More than half (57.5%) of those adolescents from poor homes was reluctant to participate in games. Similar distribution was noticed in the students' involvement in academic clubs that almost 68% of the poor home occupants were not interested in participating in academic clubs. Statistically significant distribution was observed in Chi square test for the student involvement in games and arts and in academic clubs.

This clearly that parental care has a direct say in academic performance and extracurricular activities of adolescent girls of Thiruvananthapuram. Though there can be a negative relationship between the education and mental health of the participant, a close observation of the results of the current study shows that upper KADS score of the students without parental

care does not necessarily reflect their academic performance.

CONCLUSIONS

Since adolescence is a transition period, the mental health during the period needs special care especially for girls. An 11 point Kutcher Adolescent Depression Scale (KADS) administered on 130 students in which 40 are from poor homes indicated that both type of students has similar cumulative score varying from 1 to 19. Statistical analysis does not show prevalence of depressive mental health among the adolescent girl students of Thiruvananthapuram who hail from poor homes. It is however noted that 6 (15%) out of total 13 students who have collective scores above 15 are from poor homes, which shows that almost double numbers of girls without parental care are in the upper limit of KADS score. Socio-demographic factors of the study area indicate that 87.8% of the respondents with parental care had their fathers' educated up to 10th class while only 37.5% of those without such care had their parents having academic achievement up to 10th. However, majority of the students from poor homes had their mothers with some type of employment. Though more students with parental support scored marks above 80% marks, the upper KADS scores of the students without parental care did not reflect in their academic performance. However,

From the general trend in academic performance, parental care shows a direct say in academic performance and extracurricular activities of adolescent girls of Thiruvananthapuram.

SUMMARY

There are many poor homes in Thiruvananthapuram Corporation and many girl students from them study in different schools of the area. The mental health status of these girls specifically their depressive adolescent mental health is not studied. Poor mental health can cause of lower academic performance. There can be varied concerns regarding the cause of depression for the girls who receive no parental support. The current study is taken up with a view to assess the mental health with special emphasis on the depression of parentless girls from poor homes of Thiruvananthapuram Corporation, the capital of Kerala State. The study also aimed to compare the depression scores, academic and other socio-demographic factors of adolescent girls with and without parental care in High Schools of Thiruvananthapuram Corporation.

For this Cross sectional study involving 130 girl adolescent students who hail from families of varied socioeconomic background are selected among which 40 students come from poor homes. KADS scale was administered for measuring mental health and the period of study was February 2016 to September 2016. Statistical analysis of KADS score indicated that both type of students with and without parental care has similar cumulative score varying from 1 to 19. Statistical analysis does not show prevalence of depressive mental health among the adolescent girl students of Thiruvananthapuram who hail from poor homes. It is however, noted that almost double numbers of girls without parental care are in the upper limit of KADS score. Though more students with parental support scored marks above 80% marks, the upper KADS scores of the students without parental care did not reflect in their academic performance. However, from the general trend in academic performance, parental care has a direct say in academic performance and extracurricular activities of adolescent girls of Thiruvananthapuram.

END NOTE

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Conflict of Interest: None declared

Editor's Remarks: There is a recent belief that parenting has less influence on development and academic performance in adolescent period and peer influence matters more. This study concludes that parental influence does matter. Since the study was done in the community setting it assumes importance.

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