PSYCHOSOCIAL RISK STATUS OF RURAL ADOLESCENT GIRLS USING 'HEEADSSS' APPROACH

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ABSTRACT

INTRODUCTION

Adolescents constitute about 22 per cent of India's population. This huge section of population represents a great 'demographic dividend' and offers a dependable potential to drive and sustain economic growth that India has experienced in last few years. Adolescents are generally considered healthy by themselves, their families, even healthcare providers and society at large. Yet they are known to suffer significant morbidity caused by risk taking behaviour and inadequate access to health care.

OBJECTIVES

To study the demographic profile of the adolescent girls living in rural areas.
To study the psychosocial risk profile of the adolescent girls using the 'HEEADSSS' approach.

MATERIALS AND METHODS

A cross-sectional observational study was conducted in Chinakakani village, the Rural Field Practice Area of NRI Medical College, Guntur for six months from February to July 2015. A total of 191 sample was selected by systematic random sampling method after listing out the adolescent girls residing in the study village. The pre- designed, pre-tested semi- structured schedule was administered to the respondents by interview method. WHO 'HEEADSSS' questionnaire is made appropriate and suitable to the rural areas consisting of eight components namely, Home and Environment, Education and Employment, Eating habits, Activities, Drugs, Sexuality, Suicide and Depression and Safety.

STATISTICAL ANALYSIS

The data collected was analyzed using Microsoft Excel and EPI Info statistical package. The psychosocial risk of each adolescent was quantified using a 100 point scale developed by the Institute of Medical Sciences, Banaras Hindu University, Varanasi.

RESULTS

Only 9.9% of the rural adolescent girls were found to be normal based upon the psychosocial 'HEEADSSS' risk score, 73.3% girls are having mild-to-moderate psychosocial risk, 13.6% and 3.1% were found with severe and very severe risk respectively.

CONCLUSION

Psychosocial risk is found to be high among the rural adolescent girls in the present study. A strategy aimed at these psychosocial risk factors should be developed taking into consideration both the adolescent girls as well as their parents.

KEYWORDS

Adolescent girls, psychosocial risk, 'HEEADSSS.'

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INTRODUCTION: The World Health Organisation (WHO) has defined 'Adolescence' as the period between 10 and 19 years, a critical period of life characterised by rapid growth and development, both physiologically, psychologically and socially.[1]

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Adolescents constitute about 22 percent of India's population.[2] This huge section of population represents a great 'demographic dividend' and offers a dependable potential to drive and sustain economic growth that India has experienced in last few years.[3] Adolescents are generally considered healthy by themselves, their families, even healthcare providers and society at large. Yet they are known to suffer significant morbidity caused by risk taking behaviour and inadequate access to health care.[4]

It is estimated that around 20 percent of the world's adolescents have a mental health or behavioural problem. 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. Unassisted mental health problems among adolescents are associated with low educational achievement, unemployment, substance use, risk-taking behaviours, crime, poor sexual and reproductive health, self-harm and inadequate self-care – all of which increase the lifetime risk of morbidity and premature mortality.[5]

OBJECTIVES:

1. To study the demographic profile of the adolescent girls living in rural areas.
2. To study the psychosocial risk profile of the adolescent girls using the 'HEEADSSS' approach.

MATERIALS AND METHODS: A cross-sectional observational study was conducted in Chinakakani village, the Rural Field Practice Area of NRI Medical College, Guntur, for six months from February to July 2015. The sample size was calculated by using the formula $4pq/l^2$ at 50 percent prevalence and 15 percent allowable error. The computed sample size was 178, which are increased to 191 subjects to make it more representative of the adolescent population. The population of Chinakakani village is 6230, consisting of a total of 1175 families residing in the village. The desired sample was selected by systematic random sampling method after listing out the adolescent girls residing in the study village. The pre-designed, pre-tested semi-structured schedule was administered to the respondents by interview method, only after taking an informed consent from them. Those subjects who would not like to participate were excluded from the study. Institutional ethical clearance was obtained prior to the start of the study.

Study Tool: General information pertaining to age, literacy status and occupation of subject, their parents, caste, religion, marital status, family income, total members in the family, number of siblings, etc. was recorded. WHO HEEADSSS questionnaire is modified by taking consideration of rural background to make it simple, favourable and appropriate. It includes eight components viz. Home and Environment, Education and Employment, Eating habits, Activities, Drugs, Sexuality, Suicide and Depression and Safety. The contribution of each parameter to the total score of 100 is given in Table 1.

Parameter	Maximum Allocated Score
Home and Environment	13
Education and Employment	14
Eating Habits	8
Activities	8
Drugs	15
Sexuality	12
Suicide and Depression	16
Safety	14
Total HEEADSSS score	**100**

Table 1: Contribution of each parameter to the HEEADSSS score of 100

STATISTICAL ANALYSIS: The data collected was analysed using Microsoft Excel and EPI Info statistical package. The psychosocial risk of each adolescent was quantified using a 100 point scale developed by the Institute of Medical Sciences, Banaras Hindu University, Varanasi.[6] The data was then be summarized in the form of Tables.

RESULTS: A total of 191 adolescent girls aged between 10 to 19 years were included in the study.

Socio-Demographic Characteristics (Table 2): Nearly 30% of the mothers and an equal percentage of the fathers of the adolescent girls were illiterate. Fourteen (7.3%) of the 191 adolescent girls are currently married. Two thirds of the adolescent girls are living in nuclear families, 48.7% subjects are from Backward Caste communities.

	Frequency	Percent
Age (In years)		
10 to 12	50	26.2
13 to 15	51	26.7
16 to 19	90	47.1
Religion		
Hindu	135	70.7
Christian	55	28.8
Muslim	1	0.5
Caste		
Upper Caste	45	23.6
Backward Caste	93	48.7
Scheduled Caste	50	26.2
Scheduled Tribe	3	1.6
Education		
Illiterate	2	1.0
Primary School	15	7.8
Middle School	63	33.0
High School	63	33.0
Intermediate	24	12.6
Degree (Currently Pursuing)	24	12.6
Occupation		
Unemployed	8	4.2
Student	150	78.5
Home Maker	24	12.6
Agricultural Labourer	6	3.2
Tailor	2	1.0
Computer Operator	1	0.5
Type of Family		
Nuclear	128	67.0
Joint	63	33.0
Per Capita Income of the Family (in Rupees)		
<979	1	0.5
980-2935	144	75.4
2936-4893	38	19.9
4894-7322	5	2.6
7323-9787	2	1.0
9788-19574	1	0.5

Table 2: Socio-Demographic characteristics of the adolescent girls (n=191)

Psycho-Social Factors of the Adolescent Girls:

a. **Home and Environment:** Nearly two-thirds of the adolescents have a single sibling at home and 88.5% do not have a separate room at home. Nearly half (48.7%) of the adolescents felt their father to be closest at home, whereas 45.5% felt their mother to be closest. One in every ten girls was living away from their homes for the last 6 months. About 5% of the girls have run away or tried to do so, 17.8% experienced physical violence at home and 7.3% opined their home to be unsafe place for them.

b. **Education and Employment:** More than three-fourths of the respondents were currently pursuing studies, 22% dropped out of education citing family pressure to discontinue education or on personal grounds. Among those adolescent girls currently pursuing studies, more than half (52.3%) have scored Grade I marks while 37% secured Grade II scores. Only 6% of those pursuing education ever felt of dropping out from school. Nearly 14% of the adolescent girls are currently working while studying and 6.8% do so for more than 4 hours a day.

c. **Eating Habits:** Nearly three fourths of the respondents have a habit of eating food while watching television. Two-thirds of the adolescent girls reported no recent weight change and 34% were concerned regarding their weight change.

d. **Activities:** Nearly two-thirds (34.6%) of the respondents showed no interest in sport or other activities, 33% had no hobbies. All the adolescent girls were habituated to watching television, 48% spend more than 2 hours a day in front of television. One in every four respondents (26.7%) has basic computer skills.

e. **Drugs:** Forty three percent of the adolescent girls faced the problem of alcohol and/or drugs usage by one or other family members.

f. **Sexuality:** Nearly one in every four adolescent girls is currently into romantic relationship and 10.5% girls ever had sex and 2.1% were forced to do sex. Only 28.3% respondents were aware of safe sex practices, 3% had fear of becoming pregnant, 78% had no knowledge regarding Sexually Transmitted Diseases.

g. **Suicide and Depression:** Twenty eight percent of the respondents felt sad more than usual, 23% felt bored all the time and 38.2% are currently experiencing sleep disturbances. Nearly 9% adolescent girls ever tried to kill oneself and 14.7% ever hurt oneself.

h. **Safety:** Nearly 14% had ever been injured, 11.5% were beaten by someone and 2.6% were injured accidentally. More than one-third of the girls (37.2%) were victims of domestic violence and 25.7% ever faced physical violence and 3 girls were victims of sexual abuse.

Psychosocial 'HEEADSSS' Risk Score: Nearly three fourths (73.3%) of the adolescent girls in the present study are having mild-to-moderate risk, 13.6% and 3.1% were found with severe and very severe risk respectively. Only 9.9% were found to be normal. (Table 3).

HEEADSSS' Score	Frequency	Percent
Normal (0-10.0)	19	9.9%
Mild Risk (10.1-20.0)	83	43.5%
Moderate Risk (20.1-30.0)	57	29.8%
Severe Risk (30.1-40.0)	26	13.6%
Very Severe Risk (>40.0)	6	3.1%
Total	**191**	**100.0%**

Table 3: 'HEEADSSS' Score

DISCUSSION: The illiterate girls constituted a minority (1%), which shows that girls in the rural areas are imparted a minimum school level education. The literacy rates are better in the present study when compared to the NFHS-3 data (22% were illiterate).[4]

Most of the girls are not entering the colleges. Nearly one-fourth of the girls were getting married once they finish school level education, remaining as housewives or working in fields as agricultural labourers.

Psychosocial Factors:

a. **Home and Environment:** Most of the adolescent girls (89.5%) are living with their parents; do not have a separate room for them. Most of the girls are having a sibling at home and they feel that their parents- either father (48.7%) or mother (45.5%) to be closest to them.

A 17.4% of the adolescent girls experienced violence at home, 7.3% of them felt unsafe at home and 5.2% of them have either ran away or tried to do so.

There were no studies in this regard for comparison.

b. **Education and Employment:** The academic performance of most of the adolescent girls in the present study is considerably good.

A 14% of the adolescent girls are working for a living and 4.7% are working more than 6 hours a day similar to observations made by Resnick MD, et al. in their longitudinal study on adolescent health in 1997 where adolescents in grades 7-12 were working 20 or more hours a week was associated with emotional distress of high school students ($P<0.01$).[7]

c. **Eating Habits:** The girls in the present study are less conscious about their weight gain when compared to study done by Dixit et al.[8] where the prevalence rates of dissatisfaction was higher among urban adolescent girls (30.2%) than in rural areas (22.5%).

d. Activities: The study subjects in the present study spend at least two hours a day watching television, which is similar to the study done by Sinha AK.[9] where 21.5% of the adolescent girls spend time watching television. There were no similar studies done before regarding computer skills of the adolescent girls.

e. Drugs: Substance abuse by the adolescent girls is absent in the present study, which is far better when compared to a study done by Narain, et al. in Noida.[10] where 80% adolescent girls initiated the use of tobacco before they attained 11 years. But, they are facing the consequences due to consumption by other family members.

f. Sexuality: In our study 78% of the girls do have no or poor knowledge about safe sex practices and Sexually Transmitted Diseases. Lack of awareness regarding safe sex practices is a matter of concern as one-fourth of the subjects are into romantic relationships during the adolescent period.

g. Suicide and Depression: Kumar S, et al. observed that suicidal behaviour increases markedly during adolescence.[11]

Hawton observed that precipitating events, which have led to a suicide attempt, are most often interpersonal problems between the adolescent and his parents or peers. When adolescents have problems in their close relationships with family and friends, they may lose important sources of social support which may in turn increase the risk of depression and suicidal behaviour.[12]

Mohan Raj, Rani and Karunanidhi Subbaiah opined that depression is under-recognized among urban adolescents because depressive symptoms are considered a familiar part of adolescent experience and 24% reported moderate to severe depression.[13]

h. Safety: The domestic violence faced by the adolescent girls (37.2%) in the present study is higher than in rural West Bengal (23.4%) as observed by Sarkar M.[14]

The prevalence of sexual violence experienced by the adolescent girls in the present study (1.6%) is less when compared to the NFHS-3 (5%).[4]

Psychosocial 'HEEADSSS' Risk Score: Only about 10% of the rural adolescent girls in the present study are within the normal zone (0 to 10 score). Nearly 3/4th of the adolescent girls (73.3%) are in the mild-to-moderate risk zone (10.1 to 30 score); 16.7% of the adolescent girls are facing severe to very severe risk (>30.1 score).

The principal investigator could not find previous studies done on the psychosocial risk score among the adolescents in India.

CONCLUSION: On the basis of this study, it is evident that psychosocial risk is high among the rural adolescent girls. A strategy should be developed aiming at the factors associated with the psychosocial risk of these girls as well as their parents. There is an urgent need to understand the problems of the adolescents and provide counselling to these future mothers to curtail the rising trend of psychiatric morbidity.

LIMITATIONS: Relevant studies involving the rural adolescent girls to compare the findings of the present study are not available. Small sample size and study done in a single village may limit the generalization of the findings to a larger population.

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