



Original Research Article

Adolescent Health Status in South India- An Observational Study

Asha Hegde¹, Asha Kamath², Kallol Roy²

¹Department of Pediatrics, Melaka Manipal Medical College, Manipal, Manipal University, Karnataka, India

²Department of Community Medicine, Kasturba Medical College, Manipal, Manipal University, Karnataka, India

Corresponding Author: Kallol Roy

Received: 01/08/2015

Revised: 24/08/2015

Accepted: 27/08/2015

ABSTRACT

Purpose: Adolescence is a transitional stage of physical and psychological human development. Interpersonal relationship pressures, cognitive changes, sexual maturations, substance use behaviour peak during adolescence. A lacuna in studies reporting the intact profile of adolescent health status was seen. Our study aims to assess the general health practices, food habits, adolescent health changes, awareness about HIV/AIDS and adolescent friendly health services among adolescents of two districts.

Methods: First informed consent and paediatric assent was obtained from parents. 1000 participants using simple random sampling were recruited. A pretested and validated questionnaire in local language was administered to participants to fulfill the study objective. Time taken to fill it completely was 50 minutes. Data analysis was done using SPSS 15. Proportions and percentages were used to report data.

Results: A total of 1000 adolescents had participated in the study of which 59% were males. The mean age (SD) of participants was 17 ± 0.8 years. The food habits of adolescents were good. They regularly had fruits, vegetables, avoided fast foods. Regarding reproductive health; 55% males did not respond to query of wet dreams. Awareness levels about HIV/AIDS transmission were good (68%). Knowledge regarding family planning measures, about STI was less (21%, 22%). Around 79% were unaware of teen clinics. Teen clinic was favoured to be opened at government health centres by 46% of participants.

Conclusions: The adolescents had taken good care about their general health but had insufficient information about nutritious foods. Appropriate interventions for adolescents must be designed to improve their overall health status

Keywords: Adolescents, Health status, South India, Observational study.

INTRODUCTION

The transitional phase (10-19 years) between commencements of puberty to adulthood is termed as adolescence (WHO).

(1) The needs and characteristics of adolescents show a lot of discrepancy over this transitional phase. This is a time of significant physical, psychological and social changes in and around the adolescent.

Except adolescence, there is no other period where we attain maximal growth in terms of physical and mental health. It is during this age that healthy lifestyle habits should be inculcated for a long term health and well being. Lack of healthy food habits, excessive use of electronic gadgets, regularly eating junk food, watching more TV, less physical activity etc. are the present

practices seen among adolescents. ^(2,3) Owing to their lifestyle, it is mandatory that extra care should be given to adolescents. Regular health checkups, proper counselling regarding adolescent changes, cordial environment at home and school should be provided.

The pace of physical changes may not be smooth and regular among adolescents. They may undergo awkwardness in their appearance. Ex- when girls are not aware or ready for the beginning of their menstrual periods, they may be anxious. If boys are not aware about nocturnal emissions they may start worrying. During mid to late adolescence, they feel the need to establish their sexual identity by being more at ease with their body and sexual feelings. ⁽⁴⁾

Most issues of adolescence arise due to lack of understanding, awareness about physical, psychological, socio-cultural changes in and around them. Psychologically, this stage is vulnerable for boys/girls as they get easily carried away by perceptions generated by parents, teachers, friends and siblings who are unaware of how to guide adolescents. At present, wrong messages, information cited by media, internet influences the adolescents' health status.

Two of the factors reported by WHO for increase in number of teenage deaths is HIV/AIDS and suicide. ⁽⁵⁾ An estimated 2.2 million adolescents of whom 60% (girls), live with HIV and many even do not know they are infected. Overall, the levels of correct knowledge about HIV among adolescents aged 15–19 remain low, with fewer girls having correct knowledge than boys.

In India, the adolescent changes are not well discussed with adolescents due to various taboos that prevail from past. The chances of them being misled and being at risk is more. Services that guide adolescents

by addressing their queries regarding general health, adolescent changes, and personal queries are scanty.

Our study aims to assess the general health practices, food habits, adolescent health changes, awareness about HIV/AIDS and adolescent friendly health services among adolescents of two districts.

MATERIALS AND METHODS

A cross sectional study was adopted to address our objective. The study was done in two districts of Karnataka; Dakshina Kannada and Udupi. The study was conducted from June to August 2014. Our study population comprised of adolescents whose age ranged from 15-19 years. Adolescents not within this age were not selected. Sample size was calculated by anticipating 10% of the adolescents reporting a need for health care with a relative precision of 20% for a confidence level of 95%, hence a sample size of 1000 was included in the present study. The sampling was done using simple random sampling. To conduct the study, a standardized self administered questionnaire was developed. There were 63 questions to address our objective. Before administering the questionnaire, the researcher explained the aim and purpose of the study. Time allotted to fill questionnaire was 50 minutes. The data collected was entered and analyzed using SPSS 15. Findings were depicted in proportions and percentages.

Ethical Issues:

Institutional ethical clearance was obtained prior to the study. A written informed consent and paediatric assent were obtained from the parents and participants. Consent was obtained from all authorities wherever the study was conducted.

RESULTS

A total of 1000 participants had participated in the study. Their mean age

was 17 ± 0.8 years. There were 592 (59.2%) females. Majority (85.6%) of them were Hindus. Most of the participants (79.4%) reported to be staying with parents.

Most of the participants (91.6%) consumed at least one meal and also (88.9%) breakfast regularly at home. About $3/4^{\text{th}}$ of the participants (69.9%) reported that they do not consume milk every day. Cool drinks, chocolates were consumed more than five times per week by over half of the participants (55%). The perception about their health status was good. Almost all (93.4%) agreed that their health was good.

Table 1: Baseline characteristics of participants (N=1000)

		Frequency	Percentage (%)
Gender	Males	408	40.8
	Females	592	59.2
Age	15	101	10.1
	16	395	39.5
	17	454	45.4
	18	45	4.5
	19	5	0.5
Religion	Hindu	856	85.6
	Muslim	111	11.1
	Christian	16	1.6
Living with	Both parents	794	79.4
	Only Father	93	9.3
	Only Mother	4	0.4
	Relatives	61	6.1
	Non-relative (Hostels,PG)	47	4.7

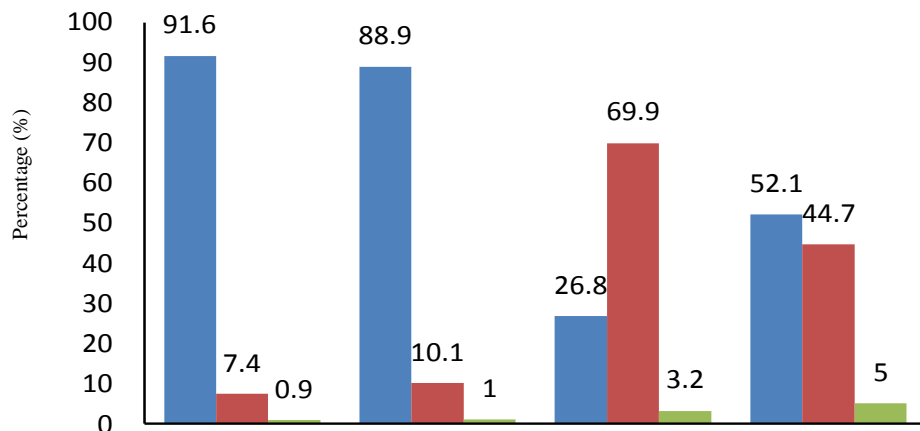


Figure 2: Graph displaying the food habits of participants (N=1000)

The determinants of adolescent health status as ranked by participants accordingly were minor/absence of illness, good lifestyle, good nutrition and avoiding ill habits. Nearly half of the participants (47.6%) did not respond. Also 66% of the participants reported to visit doctors in the last 12 months for their regular health checkups. Around half of the participants (55%) agreed to maintain proper food habits and 27% of the participants did not do any physical exercise. This could be an indicator of the sedentary lifestyle among the adolescents. A minimal proportion (11%) of them agreed to consume many sweets. The response to the practice of ill habits was

very less. Around 90% of them reported that they do not consume alcohol or smoke cigarettes.

Table 2: General determinants of good health - views of participants (N=1000)

Items	Frequency	Percentage (%)
No Answer	476	47.6
Minor/Absence of illness	182	18.2
Good and healthy lifestyle	159	15.9
Good nutrition	148	14.8
Avoidance of ill habits	35	3.5

Pertaining to their reproductive health changes, girls were aware of the reproductive changes they undergo and yet to undergo. However, boys were not aware about the reproductive health issues. Owing

to their sexual feelings, a small group of participants reported to get physically attracted to opposite sex (4.1%) and 3.6% of them reported to be attracted to same sex. Also 8% of them reported to access pornography and 5% had sexual encounters.

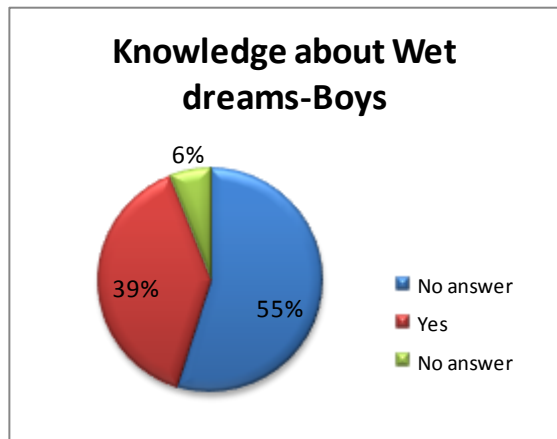


Figure 3: Knowledge about wet dreams among boys (N=408)

The awareness levels about HIV/AIDS, STI and about myths regarding HIV/AIDS were good (78%). However, the knowledge about contraceptive measures was very poor (28%).

Table 3: Source of information regarding mental health issues (sad, feeling low etc) and adolescent changes

Source	Yes (N)	Percentage (%)
Mother	237	23.7
Father	66	6.6
Brother/Sisters/Cousins	51	5.1
Relatives	44	4.4
Friends	250	25
Teachers	92	9.2
Boy/girl friends	228	22.8
Radio/TV	93	9.3
Newspapers/books	114	11.4
Internet	42	4.2

The most common issues/queries that disturb adolescent minds are psychological changes and addiction towards ill habits like drinking alcohol, smoking cigarettes and consuming tobacco, drugs. A handful participants (about 6% and 4%) reported that there were places in the community to obtain information about how

to avoid ill habits and how to resolve mental health issues like being sad, being lonely. To share their mental health status our participants reported comfort with mothers who are close (24%), friends (25%) and boyfriends/girlfriends (23%).

Awareness about teen clinics was low (21%) among the participants. Around 46% of them preferred adolescent friendly health clinics to be set up at government centres and 28% of them wanted these clinics at schools. They preferred these places because they stressed on easy accessibility and confidentiality of services.

DISCUSSION

Milk and vegetable consumption was low among the study participants. Our study findings were parallel to studies done abroad. (6,7) Socio economic status (SES) of parents played a pivotal role in the determining food habits of the child. (7,8) The pattern of consuming breakfast and having at least one meal at home by our participants were good. Indian adolescents were seen more closely associated with parents during meals and having breakfast (9,10) as compared to studies which show adolescents frequently skipped breakfast and meals with family. (6,11,12)

Due to media, friends, academic overload etc. the consumption of soft drinks, chocolates and junk foods have increased to a greater extent. (6,9,11,13) This finding was also observed in our study. Almost half (55%) of the participants consumed soft drinks more than 5 times per week.

On studying the participant's perceptions on good health status their perceptions of good health ranked in the following hierarchy 'having well balanced diet, absence of illness, good lifestyle, good health care facilities, access to health checkups, avoiding ill habits like smoking, drinking alcohol'. These views obtained were subjective and they were not

researched upon further. Systematic reviews done to assess general health practices among adolescents displayed similar patterns of well being among adolescents. (14,15)

Assessing the adolescent and reproductive changes among adolescents, it was seen that females were well aware about female adolescent and reproductive changes. However, only few males (33%) had knowledge about wet dreams (nocturnal emissions). This can be interpreted as lack of proper information given to adolescent boys or hesitation by boys to discuss about these changes with some reliable source. Various studies (16-19) display the similar findings that adolescent male's reproductive health is often neglected. Considering the prevailing trend in India, during puberty a great taboo exist in adolescents discussing their reproductive health with parents, health care providers. Internet plays a dual role in attracting adolescents to it. Mostly adolescents tend to use media to address their queries regarding adolescent changes do not get proper information about reproductive health changes. (20)

Regarding contraceptive measures only a minimal percentage of adolescents had awareness (21% about condoms). This clearly indicates the lack of importance given to adolescent reproductive health. Supporting our finding, other studies have found the awareness levels of adolescents regarding contraceptive measures to be low as well. (21-23)

Mental health status of adolescents is a vital aspect needed to be addressed for their all round development. Often mental health issues are neglected because parents or caregivers tend to think that any sort of psychological, behavioural issues tend to normalize as age increases. Also rapid urbanization, modern lifestyle, social taboos contribute to the ignorance of mental health. Globally, such findings are common. (24-26)

To address all issues that adolescents come across, it is ideal to provide adolescent friendly health services which guides adolescents on matters related to Sexual Reproductive Health (SRH), mental health (27) etc. It can be considered as one roof stops to all issues that adolescent expect help for. The teen clinics in India have not gained much importance or attention because of lack of publicity, accessibility, confidentiality issues. (23,28,29) Even in our study, there was a poor awareness about teen clinics (21%).

Limitations:

Being a cross sectional study, temporal association between the outcome and cause could not be predicted. A different study tool was used which could be a reason for different findings from other studies.

ACKNOWLEDGEMENT

Indian Council of Medical Research (ICMR) for funding the study (ICMR:HSR/Adhoc/39/2013)

REFERENCES

1. Organization WH. Young people's health-a challenge for society: report of a WHO Study Group on Young People and" Health for All by the Year 2000"[meeting held in Geneva from 4 to 8 June 1984]. 1986.
2. Lazcano-Ponce EC, Hernández B, Cruz-Valdez A, Allen B, Díaz R, Hernández C, et al. Chronic disease risk factors among healthy adolescents attending public schools in the state of Morelos, Mexico. Archives of medical research. 2003;34(3):222-36.
3. Deaton A, Drèze J. Food and nutrition in India: facts and interpretations. Economic and political weekly. 2009: 42-65.
4. Tolman DL, Strieppe MI, Harmon T. Gender matters: Constructing a model of adolescent sexual health. Journal of sex research. 2003;40(1):4-12.

5. Mathers C. Global burden of disease among women, children, and adolescents. *Maternal and Child Health: Springer*; 2009. p. 19-42.
6. Gillman MW, Rifas-Shiman SL, Frazier AL, Rockett HR, Camargo Jr CA, Field AE, et al. Family dinner and diet quality among older children and adolescents. *Archives of Family Medicine*. 2000;9(3):235.
7. Shi Z, Lien N, Kumar BN, Holmboe-Ottesen G. Socio-demographic differences in food habits and preferences of school adolescents in Jiangsu Province, China. *European Journal of Clinical Nutrition*. 2005;59(12):1439-48.
8. Abudayya AH, Stigum H, Shi Z, Abed Y, Holmboe-Ottesen G. Sociodemographic correlates of food habits among school adolescents (12–15 year) in North Gaza Strip. *BMC Public Health*. 2009;9(1):185.
9. Bharati D, Deshmukh P, Garg B. Correlates of overweight & obesity among school going children of Wardha city, Central India. *Indian Journal of Medical Research*. 2008;127(6):539.
10. Ramachandran A, Snehalatha C, Vinitha R, Thayyil M, Kumar CS, Sheeba L, et al. Prevalence of overweight in urban Indian adolescent school children. *Diabetes research and clinical practice*. 2002;57(3):185-90.
11. Birch LL, Fisher JO. Development of eating behaviors among children and adolescents. *Pediatrics*. 1998;101(Supplement 2):539-49.
12. Vereecken CA, Inchley J, Subramanian S, Hublet A, Maes L. The relative influence of individual and contextual socio-economic status on consumption of fruit and soft drinks among adolescents in Europe. *The European Journal of Public Health*. 2005;15(3):224-32.
13. Neumark-Sztainer D, Story M, Perry C, Casey MA. Factors influencing food choices of adolescents: findings from focus-group discussions with adolescents. *Journal of the American Dietetic Association*. 1999;99(8):929-37.
14. Hanson MD, Chen E. Socioeconomic status and health behaviors in adolescence: a review of the literature. *Journal of behavioral medicine*. 2007;30(3):263-85.
15. Walker ZA, Townsend J. The role of general practice in promoting teenage health: a review of the literature. *Family practice*. 1999;16(2):164-72.
16. Agampodi SB, Agampodi TC, Piyaseeli U. Adolescents perception of reproductive health care services in Sri Lanka. *BMC health services research*. 2008;8(1):98.
17. Teevale T, Denny S, Percival T, Fleming T. Pacific secondary school students' access to primary health care in New Zealand. *New Zealand Medical Journal*[Research Support, Non-US Gov't]. 2013;126(1375):58-68.
18. Mehta B, Kaur A, Kumar V, Chawla S, Malik M, Khatri S. Adolescent Reproductive and Sexual Health in India: The Need to Focus. *Journal of Young Medical Researchers*. 2013;1(1):1.
19. Marcell AV, Klein JD, Fischer I, Allan MJ, Kokotailo PK. Male adolescent use of health care services: where are the boys? *Journal of Adolescent Health*. 2002;30(1):35-43.
20. Malbon K, Romo D. Is it ok 2 txt? Reaching out to adolescents about sexual and reproductive health. *Postgraduate medical journal*. 2013;89(1055):534-9.
21. Araoye MO, Fakeye OO. Sexuality and contraception among Nigerian adolescents and youth. *African Journal of Reproductive Health*. 1998;2(2):142-50.
22. Falah-Hassani K, Kosunen E, Shiri R, Rimpelä A. Emergency contraception among Finnish adolescents: awareness, use and the effect of non-prescription status. *BMC Public Health*. 2007;7(1):201.

23. Mehta B, Kaur A, Kumar V, Chawla S, Malik M, Khatrif S. Adolescent Reproductive and Sexual Health in India: The Need to Focus. *Journal of Young Medical Researchers*. 2013;1(1):1.
24. Durlak JA, Wells AM. Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American journal of community psychology*. 1997;25(2): 115-52.
25. Meltzer H, Gatward R, Goodman R, Ford T. *Mental health of children and adolescents in Great Britain: TSO London*; 2000.
26. Burns BJ, Phillips SD, Wagner HR, Barth RP, Kolko DJ, Campbell Y, et al. Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2004;43(8):960-70.
27. Patel V, Flisher AJ, Hetrick S, McGorry P. Mental health of young people: a global public-health challenge. *The Lancet*. 2007;369(9569):1302-13.
28. Santhya K, Jejeebhoy SJ. *Young people's sexual and reproductive health in India: Policies, programmes and realities: Population council. Regional office for South and East Asia*; 2007.
29. Paul VK, Sachdev HS, Mavalankar D, Ramachandran P, Sankar MJ, Bhandari N, et al. Reproductive health, and child health and nutrition in India: meeting the challenge. *The Lancet*. 2011;377(9762):332-49.

How to cite this article: Hegde A, Kamath A, Roy K. Adolescent health status in south India- an observational study. *Int J Health Sci Res*. 2015; 5(9):1-7.

International Journal of Health Sciences & Research (IJHSR)

Publish your work in this journal

The International Journal of Health Sciences & Research is a multidisciplinary indexed open access double-blind peer-reviewed international journal that publishes original research articles from all areas of health sciences and allied branches. This monthly journal is characterised by rapid publication of reviews, original research and case reports across all the fields of health sciences. The details of journal are available on its official website (www.ijhsr.org).

Submit your manuscript by email: editor.ijhsr@gmail.com OR editor.ijhsr@yahoo.com