www.ijpm.ir

Assessment of Health-Promoting Behavior and Lifestyle of Adolescents of a North Indian City

Sonika Raj, Suraj Singh Senjam, Amarjeet Singh

School of Public Health, Post Graduate Institute of Medical Education and Research, Chandigarh, India

Correspondence to:
Dr. Sonika R Goel,
Centre for Public Health, Panjab University, Chandigarh, India.
E-mail: sonikagoel007@yahoo.com

Date of Submission: Jan 14, 2012

Date of Acceptance: Sep 13, 2012

How to cite this article: Raj S, Senjam SS, Singh A. Assessment of health-promoting behavior and lifestyle of adolescents of a north indian city. Int J Prev Med 2013;4:1189-93.

ABSTRACT

Background: Several health-compromising behaviors (e.g., smoking, alcohol) as well as health-enhancing behaviors (e.g., physical exercise, nutrition) are adopted in adolescence and they often persist into adulthood. Thus, there is a definite need to investigate the health behavior of adolescents rather than focus on adults since it will be far more difficult for adults to change their unhealthy habits adopted in their youth. Therefore, the present study was conducted to ascertain health-promoting behavior and lifestyle of university graduates of Chandigarh.

Methods: The present cross-sectional pilot study was conducted in Chandigarh during 2009 among university graduates of Chandigarh aged 17-20 years. A semi-structured, pretested questionnaire comprising of 28 items was used to get information from students regarding their involvement in diet, physical exercise, spirituality and philanthropy. Height, weight, waist and hip circumference of the respondents were measured using standardized equipments and procedures.

Results: Mean score of health-promoting lifestyle profile of university graduates was found to be 67.5 ± 12.1 (maximum attainable score = 106). Fourteen students were found to be overweight. Frequent intake of fast food and less consumption of fruits and vegetables was reported by the students. Majority of students exercised as part of their daily routine.

Conclusions: The result of the study showed that North Indian students had reasonably good orientations toward health behaviors, with a mean score of 67.5. The topics related to diet, physical exercise, spiritual growth and philanthropy promotion should be incorporated within the curriculum of students for their all round personality development.

Keywords: Adolescents, health promotion, lifestyle behavior, philanthropy, yoga

Original Article

INTRODUCTION

Modern science through improved sanitation, vaccination, antibiotics and medical attention has eliminated the threat of

death from most infectious diseases. But now, too many people are dying relatively young from noncommunicable diseases like heart diseases and cancer. The main contributing factor for this epidemiological transition is change in our lifestyle toward the unhealthy continuum, e.g., tobacco use, excessive alcohol consumption, unhealthy dietary habits and physical inactivity. This means that death from lifestyle diseases like hypertension, diabetes and cancer are now the primary causes of death.

Lifestyle is the way a person lives. This includes patterns of social relations, consumption, entertainment and dress. The term lifestyle also reflects an individual's attitudes, beliefs and, essentially, the way the person is perceived by himself/herself and, at times, also how he/she is perceived by others.

This rapidly growing epidemic of noncommunicable diseases is responsible for 60% of the world's deaths.[1] At least 50% of the deaths in the US each year are due to unhealthy lifestyle.[2] In India also, the situation of lifestyle diseases is quite alarming. The disease profile is changing rapidly. The World Health Organization (WHO) has identified India as one of the nations that is going to have most of the lifestyle disorders in the near future. Nowadays, not only are lifestyle disorders becoming more common but they are also affecting the younger population. Hence, the population at risk shifts from 40+ to maybe 30+ or even younger. Already considered the diabetes capital of the world, India now appears headed toward gaining another dubious distinction of becoming the lifestyle-related disease capital as well. A study conducted jointly by the All India Institute of Medical Sciences and the Max Hospital shows that the incidence of hypertension, obesity and heart disease is increasing at an alarming rate, especially in the young, urban population.

In most of these lifestyle diseases, the onset is insidious and is usually after the age of 30 years. By the time interventions are planned and implemented, the damage to health has already occurred.

Adolescents are a unique population with specific health concerns and needs. Adolescence is the peak age of onset for serious mental illness like depression and psychosis. Physical, emotional, social and sexual change makes adolescents overloaded with stress, which can result in anxiety, withdrawal, aggression, poor coping skills and actual physical illness. Adolescents constitute about 22.8% of the population of India.

It is well documented that behaviors developed during this period influence health in adulthood.[3] Several health-compromising behaviors (e.g., smoking, alcohol) as well as health-enhancing behaviors (e.g., physical exercise, nutrition) are adopted in adolescence, and they often persist into adulthood. The WHO estimates that 70% of premature deaths among adults are due to behavior (smoking, illicit drug use, reckless driving) initiated during adolescence.[4] Therefore, helping adolescents establish healthy lifestyles and avoid developing health risk behaviors is crucial and should be started before these behaviors are firmly established. The demands on young people are new and unprecedented; their parents could not have predicted many of the pressures they face. How we help adolescents meet these demands and equip them with the kind of education, skills and outlook they will need in a changing environment will depend on how well we understand their world.

There is a definite need to investigate the health behavior of adolescents rather than focus on adults since it will be far more difficult for adults to change their unhealthy habits adopted in their youth. Many studies have demonstrated a positive relationship between health-promoting lifestyle and quality of life. McDaniel[5] found a positive correlation between health-promoting lifestyle and quality of life in 91 older adults, aged 60-92 years. It was also demonstrated that there exists a relationship between positive health outcomes and such behaviors as regular exercise,[6] not smoking,[7] maintaining ideal weight,[8] eating a well-balanced diet[9] and managing stress.[10] It was planned to undertake a lifestyle intervention project among the college students of Chandigarh. Hence, the present pilot study was performed to create an elementary baseline data about the prevalence of lifestyle-associated risk factors among the college students of Chandigarh.

OBJECTIVES

To ascertain the health-promoting behavior and lifestyle of adolescents of Chandigarh.

METHODS

The present cross-sectional study was conducted in Chandigarh during 2009 among University graduates of Chandigarh aged 17-20 years. An estimated sample size of around 50 students was taken. One college under the university was randomly selected from Chandigarh. A class of graduate students was selected randomly from that college and all the students of the class were included after taking written consent for participation. Students pursuing their graduation (regular) course were eligible for participation in the study. Students who were doing their graduation through correspondence (distant learning) or during the evening study hours were excluded from the studies.

A semi-structured, pretested questionnaire comprising of 28 items regarding activities like diet, physical exercise, spirituality and philanthropy was used in the study. All items are scored on a scale from 1 to 4; 1 = never, 2 = sometimes, 3 = often, 4 = routinely, except items of philanthropy that had only two scores. Six items were negatively stated. These were reversed before the total score was computed. A composite score was obtained, which ranged from 28 to 106. In analyzing health-promoting behavior, only those who reported often (score = 3) or routinely (score = 4) in each item were considered as health-promoting behavior. To calculate the mean of the lifestyle profile, the scores for all items were summed and then divided by the numbers of items. Higher mean scores denoted positive health-promoting lifestyle or behaviors.

Height, weight, waist and hip circumference of the respondents were measured using standardized equipments and procedures.

Data were analyzed using the software SPSS-16th version. Data were analyzed using frequencies, percentages and Chi-square test.

RESULTS

The response rate for the different questions of the study varied from 80% to 90%. In this survey of 50 students, 30.6% (n = 15) of the respondents were males and 69.3% (n = 35) were females. The students were in the age group of 17-20 years. All the students belonged to the science stream. Mean score of lifestyle profile of university graduates was found to be 67.5 ± 12.1 (maximum attainable score = 106). Around one-third (n = 14) of the students were found to be overweight [Table 1]. Frequent intake of fast food (n = 12), less consumption of fruits (n = 26) and vegetables (n = 22) and skipping of breakfast (n = 19) were also reported by the students [Table 2]. Majority (n = 37) of the students exercised as part of their daily routine, but less involvement in yoga (n = 6) and outdoor games (n = 17) was noted [Table 3]. Majority (n = 48) of the students had faith in God [Table 4]. Only five students were involved in some kind of philanthropy.

Table 1: Anthropometric measurements of the respondents

BMI	**Total (n=45)***
Underweight/normal	31
Overweight	14
Waist hip ratio	**Total (n=40)***
Low risk	37
High risk	3

*Rest were reluctant to provide information. BMI = Body mass index

Table 2: Distribution of students with habits related to diet (n=49)*

Dietary habits	**Routinely**	**Never**
Avoidance of fried food	11	38
Limit usage of sugar or sweets	12	37
Skipping of meals	28	21
Have breakfast regularly	30	19
Take green leafy vegetables	22	27
Take fruits	26	23
Take fast food	12	37
Take soft drink	16	23
Eating out	32	17

*One student did not give the information

Table 3: Distribution of students with habits related to exercise (n=49)*

Physical exercise habits	**Routinely**	**Never**
Frequency of exercise	35	14
Exercise during daily activities	37	12
Frequency of yoga	6	43
Walk or cycle to college	32	17
Frequency of outdoor games	17	32
Habit of morning or evening walk	28	21

*One student did not give the information

Table 4: Spiritual health status of students (*n*=49)*

Spiritual health domains	Always	Never
Keep reminding about the purpose of life	45	4
Hopeful about future	32	7
Satisfaction with oneself	36	12
Any special efforts to achieve your goals	19	27
Find day interesting and challenging	27	22
Remembering about importance of life	38	9
Have faith in God	48	1
Accept new experience and challenges	40	8
Have positive attitude	32	17

*One student did not give the information

DISCUSSION

Health-promoting lifestyle among adolescents has become a research focus worldwide. Life of the students in college is a transitional period, offering good opportunities for establishing health-promoting lifestyles. Most research on health-promoting behaviors has been undertaken in the US and European countries, where university students are little engaged in health-promoting behaviors, especially healthy diet and physical activity.[11-13] However, data on health-promoting lifestyles among university students in India are limited.

The results from our study provide a glimpse of the lifestyle of North Indian college students in Chandigarh. Overall, it was observed that they had a reasonably healthy lifestyle. However, about one-fourth of the students (n = 14) were overweight, more so in females. However, in a study conducted by Rao *et al.*, more boys (72.5%) were in the overweight category.[14] This may be due to unhealthy dietary habits like frequent intake of fried foods and sweets in comparison with lesser intake of fruits and green leafy vegetables. Moreover, students like to lead a carefree life and may find it awkward to show too much concern about their health. This scenario also implies that the bombardment by health-related articles or media advertisements probably do not have much impact on health concern or behaviors of young people.

A higher frequency of eating out and having fast food was also reported. Similar findings were also found in other studies.[15,16] This may be because majority of the students lived in hostels. They had their meals in the mess/canteen, where the food variety was limited. Fresh fruits and vegetables are seldom available in the university canteen. Skipping of meals, especially breakfast, was also observed in nearly one-third (n = 19) of the students. It was a matter of concern since skipping meals is bad for the health of students who need sufficient energy and nutritive diet, as they live an active life.

Majority of the respondents (n = 35) reported that they exercised as part of their daily routine. This may be due to the fact that adolescents of today are more conscious about their physique and appearance.[14,17,18] Similar results were also found in other studies.[19,20] However, contrary results were found in a study wherein low level of physical activity was found among Iranian women.[21] However, yoga was practiced by only six students as compared with exercise (n = 35), which is similar to the findings of other studies.[16] This indicates less awareness among students about yoga and its benefits. This may also be indicative of lack of interest of yoga among students and also because yoga requires a special technique. It was also found that only one-third of the students went for outdoor games. Apparently, in the modern era of computers, Internet and mobile phones provide more choices of entertainment. The young generation, consequently, tends to lose interest in outdoor games.

The present study also revealed that majority (n = 48) of the students had faith in God. Most (n = 36) were satisfied with themselves and were clear about the purpose and importance of their life. Around two-third (n = 32) of the students had a positive attitude toward life. They were willing to accept new experiences and challenges. However, only about one-third (n = 19) made any special efforts to achieve their life goals and around half (n = 27) did not find their day interesting and challenging. This could be probably due to the fact that they were not provided with enough opportunities and had lack of support by family and college authorities. Only five students were involved in some kind of philanthropy. This could be due to the reason that the youth of today are busy in achieving their goals. They do not receive any value inculcation on these aspects, neither in the family nor in their curriculum.

CONCLUSIONS AND RECOMMENDATIONS

The present study provided a glimpse about the prevailing lifestyle of the university graduates of a

modern city of North India. The result of the study showed that North Indian students had reasonably good orientations toward health behaviors with a mean score of 67.5.

Based on the findings of the study, it is recommended that topics related to diet, physical exercise, spiritual growth and philanthropy promotion should be incorporated within the curriculum of students for their all round personality development. The related information, education and communication materials should be disseminated widely in the community. Basic health workers like auxillary nurse, midwives and accredited social health activist should be empowered in assessment of risk factors of noncommunicable diseases.

LIMITATIONS

The subjects were selected from one college only. All the information collected in the study was based on self-report. Therefore, it is possible that these may be socially desirable responses, i.e., the health-promoting behaviors may not be their real or actual behaviors.

REFERENCES

1. World Health Report 2002. Reducing Risks and Promoting Healthy Life. Geneva: WHO; 2002.
2. Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention. United States Public Health Service, United States, 1979.
3. Khan A.Adolescents and Reproductive Health in Pakistan: A Literature Review. The Population Council, Pakistan Office. 2000. Available from: http://www.infoforhealth.org/youthwg/PDFs/PopC/other/rr_11.pdf. Accessed on October 14,2011.
4. Ali DB. The Mind Body Interaction: Interdependence of Physical and Mental Health. Karachi. 2009. Available from: http://www.aku.edu.pk/AKUH/health_awarness/pdf/Interdependence-of-Physical-and-Mental-Health. Accessed on 10 November, 2011.
5. McDaniel RW. Relationship of participation in health promotion behaviors to quality of life in older adults (Doctoral dissertation, University of Texas at Austin, 1987). Ann Arbor, MI: University Microfilms International. (UMI No. 8717481).1987
6. Marcus B, Forsyth L. How are we doing with physical activity? Am J Health Promot 1999;14:118-24.
7. Orleans C, Cummings K. Population-based tobacco control: Progress and prospects. Am J Health Promot 1999;14:83-91.
8. Foreyt JP, Goodrich GK. Impact of behavior therapy on weight loss. Am J Health Promot1994;8:466-68.
9. Glanz K. Progress in dietary behavior change. Am J Health Promot 1999;14:112-7.
10. Antonovsky A. Unraveling the mystery of health. How people manage stress and stay well. San Francisco: Jossey-Bass; 1987.
11. Steptoe A, Wardle J, Cui W, Bellisle F, Zotti AM, Baranyai R, *et al*. Trends in smoking, diet, physical exercise and attitudes toward health in European university students from 13 countries. Prev Med 2002;35:97-104.
12. Laska MN, Pasch KE, Lust K, Story M, Ehlinger E. Latent class analysis of lifestyle characteristics and health risk behaviors among college youth. PrevSci 2009:10;376-86.
13. American College Health Association.American college health association national college health assessment spring 2006 reference group data report (abridged). J Am Col Health 2007;55:195-206.
14. Rao CR, Darshan BB, Das N, Rajan V, Bhogun M, Gupta A. Practice of physical activity among future doctors: A cross sectional analysis.Int J Prev Med 2012;3:365-9.
15. Wang D, Ou C, Chen M, Duan N.Health-promoting lifestyles of university students in mainland china. BMC Public Health 2009;9:379.
16. Senjam SS, Singh AJ. Does sense of coherence determines health promoting behaviors: A evidence from a study of north Indian students. Indian J Med Res 2011: 134:645-52
17. Frazier A, Lisonbee LK.Adolescent concerns with physique.The School Review1950;589:397-405.
18. Sabiston CM, Sedgwick WA, Crocker PR, Kowalski KC, Mack DE.Social physique anxiety in adolescence an exploration of influences, coping strategies, and health behaviors. JAdolesc Res 2007;22:78-101.
19. Qidwai W, Ishaque S, Shah S, Rahim M.Adolescent lifestyle and behaviour: A survey from a developing country. PLoS One 2010;5:e12914.
20. Katzmarzyk PT, Malina RM, Song TM, Bouchard C. Television viewing, physical activity, and health-related fitness of youth in the Québec Family Study. J Adolesc Health 1998;23:318-25.
21. Enjezab B, Farajzadegan Z, Taleghani F, Aflatoonian A, Morowatisharifabad MA.Health promoting behaviors in a population-based sample of middle-aged women and its relevant factors in yazd, Iran. Int J Prev Med 2012;3 Suppl 1:S191-8.

Source of Support: Nil, **Conflict of Interest:** None declared.