Health promoting lifestyle among secondary school students of government schools in Sandhikharka municipality

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INTRODUCTION

Health promotion is the process of making people able to increase control over their own health.1 It constitutes of social and environmental interventions, that are beneficial in prevention of probable risk factors, protection of health as well as maintain quality of life and promotion of healthy behaviors.1 Health is the fundamental right of Human beings. Health promoting lifestyle behaviours are regarded as all of the actions and beliefs that human beings follow to remain healthy and prevent from diseases.2-4 Therefore the health of people are based on lifestyles4 of the individual as nutritional consumption, capability of people to express in social environment, accountability of owns health, exercise, support within people and the process of handling stress.5-7 Various health behaviours’ either health enhancing or health compromising has been introduced in adolescents stage of life.8-10

ABSTRACT

Background: Health behaviours’ are most likely introduced in adolescence stage of life. Socio-demographic and socio-economic factors have found to influence health directly or indirectly. Therefore, study was conducted to assess the status of health promoting lifestyle among secondary school students of Government Schools as well as their associations with socio-demographic and socio-economic variables.

Methods: The cross sectional study was performed among Government School students. Health promoting lifestyle proforma (HPLP) was prepared consisting of 2 parts. Part-I sociodemographic and socio economic characteristics and part-II health promoting lifestyle profile-II developed by Walker et al. was modified into Nepalese version. It consists of 46 items divided into 7 subscales (health responsibility, physical activity, food practices, spiritual growth, self-concept, interpersonal relations and stress management). Descriptive statistics was used to describe HPLP. Data was analyzed by using SPSS. Chi-square test was used to identify the associations.

Results: The overall HPLP mean score of respondents was 2.99±0.27, with the highest mean scores for spiritual growth (3.2±0.28) and interpersonal relations (3.16±0.28) and the lowest mean score for physical activity (2.80±0.25) and nutrition (2.84±0.29). Only, Occupational status of mother were found to be significantly associated with the Health-Promoting Lifestyle.

Conclusions: This study showed that the status of health promoting lifestyle among secondary level students was good with ample room for improvement as adoption of sedentary lifestyle is increasing remarkably. Therefore, health education and promotion programs might be prerequisite to promote the health of Youths.

Keywords: Government schools, Health promoting lifestyle, Secondary school students, Sandhikharka municipality
life, which is likely to contribute 70% of premature deaths. Nearly 71% of global deaths are caused due to Non-communicable diseases (NCD). (WHO, 2018) Majority of these NCD are most likely to be prevented from the modifiable behaviours’ as tobacco use, alcohol consumption, sedentary lifestyles and consumption of processed foods. One of the survey report found health behaviour of the school aged children are affected by their socio economic status, age and gender. These unhealthy lifestyle are the contributing factor for NCD resulting in 3.5 million deaths in South East Asia.

The situation of Nepal is similar to the world that unhealthy behaviours’ are initiated at the age of 14-18 years and those people who have been involved in health compromising behaviours’ are found to have low physical activity, under/over nutrition, keep themselves isolated from family and friends, have high level of stress and can’t take the responsibility of their health.

**METHODS**

Cross-sectional study was conducted in Sandhikharkha Municipality among secondary school students of Government schools, which lies in Province 5 of Nepal. Secondary school students studying in Government schools of Sandhikharka Municipality and students available during the time of data collection included were included in research while students studying in private school were excluded from the study because this study aims to see the condition of state run schools rather than the profit oriented private schools. Study was conducted from May to July 2019. The sample size was calculated by using formula, \[ n = \frac{Z^2 \cdot p \cdot (1-p)}{d^2} \] where, p=50% (0.5, standard value) and q=(1-p)=0.5 and d=0.05. The final size of the sample with a 10% response rate was 422. Three Government schools were selected randomly, then Probability Proportionate Sampling (PPS) was done for selecting students number in each school and systematic sampling was done for selection of students in each school.

A structured questionnaire was distributed among students for collection of data. The questionnaire consists of two parts: Part 1 consists of socio-demographic and socio-economic characteristics of respondents. Part 2 deals with Health-Promoting Lifestyle Profile (HPLP II) developed by Walker et al. to collect health-promotion information. HPLP II comprises 52 questions, which are divided into six domains, namely, physical activity with eight questions, nutrition with nine questions, spiritual growth with nine questions, health responsibility with nine questions, and stress management with eight questions. Each question was answered based on a 4 Likert scale with a scoring range of 1 to 4.

The lowest possible score individual score for HPLP was 52 (1x52), and the highest possible score was 208 (4x52). For each domain, the scores for the questions were added and divided by the number of items in the subscales for obtaining the subscales scores. The overall score was obtained by adding the scores for all the items and dividing by the total number of items. The lowest possible overall or mean score was one, and the highest possible overall or mean score was 4. Out of score 4, score less than 2.5 was considered poor, and the score between 2.5-4 was considered good. This tool has already been used in Patan Academy of Health Sciences in Nepal to measure the Health-related lifestyle behavior among undergraduate medical students. Similarly, these tools were used in the students below 20 years in Saudi Arabia to measure the health-promoting lifestyle of university students.

The questionnaire was translated into Nepali language. The translated questionnaire was pretested in Shree Gambhir Samundra Setu Secondary school of Imadol, Lalitpur. The Nepali translated Questionnaire of HPLP had a Cronbach’s alpha of 0.895, showing high internal consistency and acceptable. The collected data were entered, coded, analyzed, and interpreted according to the objective of the study using Statistical Package for Social Science software (SPSSv22.0). The data was presented into frequency, percentage, mean and standard deviation. Chi-square test (at 5% level of significance and 95% CI) was done to measure the associations between the sociodemographic and socioeconomic factors with health promoting lifestyles of students.

The study was conducted after the ethical clearance provided by the Institutional Review Committee (IRC) of Mannomohan Memorial Institute of Health Sciences. The informed consent was taken before data collection after explaining objectives of the study. All ethical consideration were followed properly. This study was done only among secondary school students of Government schools in the Sandhikharka Municipality, so before generalizing the findings, more research should be conducted.

**RESULTS**

The study was conducted among 422 secondary school students of Government Schools. The mean age of the respondents was 15.15±0.3508 years and the range between them was 14 to 20 years.

The socio-demographic characteristics of the respondents are shown in Table 1. Just over the half of the respondents (50.7%) were above 15 years, and. The female respondents (52.4%) were more compared to the male (47.6%). Almost all respondents (99.1%) were of Hindu religion and nearly one third (32.2%) of them were of Chhetri ethnicity. Similarly, just about three fifth (59.5%) of the respondents had a nuclear type of family (Table 1).

The socio-economic characteristics of the respondents are displayed in Table 2. Over two fifth of the respondent’s
fathers (43.4%) had completed secondary level education and very few (6.4%) were illiterate.

Similarly, above two fifth (43.4%) were involved in foreign employment. Very few (8.3%) of the respondent's mothers were illiterate, and nearly half of them (48.8%) were homemakers. Almost all of the respondents (97.6%) were above the poverty line (Table 2).

It was found, overall health-promoting lifestyle of the respondents was 2.99±0.22 out of a score of four, which was relatively good.

The highest mean score in the subscale was 3.2±0.28 for spiritual growth, and the lowest was 2.80±0.25 for physical activity (Table 3).

It was found that the age group, gender, ethnicity, religion and type of family has no significant relationships on health promoting lifestyle (Table 4).

Only one factor is found to be associated with health promoting lifestyle i.e. occupational status of mother (Table 5).

| Table 1: Socio-demographic factors of the respondents. |
| --- | --- | --- |
| Factors | Frequency | Percentage |
| **Age group (years)** | | |
| <15 | 208 | 49.3 |
| ≥15 | 214 | 50.7 |
| Total | 422 | 100.0 |
| **Gender** | | |
| Male | 201 | 47.6 |
| Female | 221 | 52.4 |
| Total | 422 | 100.0 |
| **Ethnicity** | | |
| Brahmin | 128 | 30.3 |
| Chhetri | 136 | 32.2 |
| Janajati | 55 | 13 |
| Dalit | 101 | 23.9 |
| Others | 2 | 0.5 |
| Total | 422 | 100.0 |
| **Religion** | | |
| Hindu | 418 | 99.1 |
| Buddhists | 3 | 0.7 |
| Muslim | 1 | 0.2 |
| Total | 422 | 100.0 |
| **Type of family** | | |
| Nuclear | 251 | 59.5 |
| Joint | 149 | 35.3 |
| Extended | 22 | 5.2 |
| Total | 422 | 100.0 |

| Table 2: Socio-economic factors of the respondents. |
| --- | --- | --- |
| Factors | Frequency | Percentage |
| Educational status of father | | |
| Illiterate | 27 | 6.4 |
| Literate | 48 | 11.4 |
| Primary level | 79 | 18.7 |
| Secondary level | 202 | 47.9 |
| Higher education | 61 | 14.5 |
| University level | 5 | 1.2 |
| Total | 422 | 100 |
| Occupational status of the father | | |
| Farmer | 106 | 25.1 |
| Involvement in Public sector | 38 | 9.0 |
| Involvement in Private sector | 15 | 3.6 |
| Foreign employment | 183 | 43.4 |
| Business | 51 | 12 |
| Labor | 28 | 6.6 |
| Others | 1 | 0.2 |
| Total | 422 | 100 |
| Economic status | | |
| Below poverty | 10 | 2.4 |
| Above poverty | 412 | 97.6 |
| Total | 422 | 100 |

| Table 3: Health-promoting lifestyle profile total and subscale mean scores of respondents. |
| --- | --- |
| HPLP Subscales | Mean scores |
| Overall health-promoting the lifestyle | 2.99±0.27 |
| Physical activity | 2.80±0.25 |
| Nutrition | 2.84±0.29 |
| Spiritual growth | 3.2±0.28 |
| Interpersonal relations | 3.16±0.28 |
| Health responsibility | 2.94±0.29 |
| Stress management | 3.04±0.24 |
### Table 4: Socio-demographic factors associated with health-promoting lifestyle of the respondents.

| Characteristics       | Health promoting lifestyle of the students | Total | P value |
|-----------------------|------------------------------------------|-------|---------|
|                       | Poor health promoting lifestyle          | Good health promoting lifestyle |       |         |
|                       | N (%)                                    | N (%) |         |         |
| **Age group (years)** |                                          |       |         |         |
| <15                   | 114 (54.8)                               | 94 (45.2) |        | 0.483   |
| ≥15                   | 110 (51.4)                               | 104 (48.6) |      |         |
| **Total**             | 224 (53.1)                               | 198 (46.9) |      | 422     |
| **Gender**            |                                          |       |         |         |
| Male                  | 100 (49.8)                               | 101 (50.2) |        | 0.191   |
| Female                | 124 (56.1)                               | 97 (43.9) |        |         |
| **Total**             | 224 (53.1)                               | 198 (46.9) |      | 422     |
| **Ethnicity**         |                                          |       |         |         |
| Brahmin               | 68 53.1                                  | 60 46.9 |        | 128     |
| Chhetri               | 70 51.5                                  | 66 48.5 |        | 136     |
| Janajati              | 29 52.7                                  | 26 47.3 |        | 55      |
| Others                | 57 55.3                                  | 46 44.7 |        | 103     |
| **Total**             | 224 53.1                                 | 198 46.9 |      | 422     |
| **Religion**          |                                          |       |         |         |
| Hindu                 | 221 (52.9)                               | 197 (47.1) |        | 418     |
| Others                | 3 (75)                                   | 1 (25) |        | 4       |
| **Total**             | 224 (53.2)                               | 197 (49.76) |      | 422    |
| **Type of family**    |                                          |       |         |         |
| Nuclear               | 136 54.2                                 | 115 45.8 |        | 251     |
| Joint                 | 82 55.0                                  | 67 45  |        | 149     |
| Extended              | 6 27.3                                   | 16 72.7 |        | 22      |
| **Total**             | 224 53.1                                 | 198 46.9 |      | 422     |

### Table 5: Socio-economic factors associated with health-promoting lifestyle of the respondents.

| Characteristics          | Health Promoting Lifestyle of the students | Total | P value |
|-------------------------|------------------------------------------|-------|---------|
|                         | Poor health promoting lifestyle          | Good health promoting lifestyle |       |         |
|                         | N (%)                                    | N (%) |         |         |
| **Educational status of father** |                                          |       |         |         |
| Illiterate              | 16 59.3                                  | 11 40.7 |        | 27      |
| Literate                | 30 62.5                                  | 18 37.5 |        | 48      |
| Primary level           | 46 58.2                                  | 33 41.8 |        | 79      |
| Secondary level         | 95 47.0                                  | 107 53.0 |        | 202     |
| Higher education        | 35 57.4                                  | 26 42.6 |        | 61      |
| University level        | 2 40.0                                   | 3 60.0 |        | 5       |
| **Total**               | 224 53.1                                 | 198 46.9 |      | 422     |
| **Educational status of mother** |                                          |       |         |         |
| Illiterate              | 23 65.7                                  | 12 34.3 |        | 35      |
| Literate                | 40 51.3                                  | 38 48.7 |        | 78      |
| Primary level           | 51 57.3                                  | 38 42.7 |        | 89      |
| Secondary level         | 92 50.3                                  | 91 49.7 |        | 183     |
| Higher education        | 16 48.5                                  | 17 51.5 |        | 33      |
| University level        | 2 50.0                                   | 2 50.0 |        | 4       |
| **Total**               | 224 53.1                                 | 198 46.9 |      | 422     |
| **Occupational status of the father** |                                          |       |         |         |
| Farmer                  | 61 57.5                                  | 45 42.5 |        | 106     |
| Involvement in Public and Private sector | 31 58.5                                  | 22 41.5 |        | 53      |

Continued.
The study displayed, overall health-promoting lifestyle of the students was 2.99±0.22 out of a score of four which is relatively good which has been found alike with the study conducted in Turkey. A HPLP of greater than 2.5 is considered being good, which is Consistent with the previous results conducted in the study among undergraduate Medical students in Nepal. Of the six health promoting lifestyle domains, spiritual growth and interpersonal relations had the highest mean score which was similar with the study conducted in Nepal as well as India. These results might be due to prevailing cultural and religious belief in the people residing in those similar settings.

It can be concluded that the culture of older generation of being engaged in Prayers, God-worship and cultural rituals are inherited by the younger ones as well. Furthermore, the result have shown that the lowest mean score of HPLP domains, were for physical activity and nutrition, being consistent with the results of other studies. It can be remarked that these could have been due to more involvement of students in indoor games rather than outdoor games; prompt increment in sedentary lifestyle as well as the fascination and temptation of people towards the junk food as a result of eye-catching advertisements.

A same group of the participants were taken in the study conducted among adolescents in Portugal, where the mean age of the participants was 15.15±1.583.26 There was no significant associations found between age and HPLP mean scores (p=0.483), which differed from the study conducted in India. This might be due to developing countries like Nepal, has given less priority to Health Promoting Lifestyle and had not included much about in school curriculum, resulting in being less aware about healthy lifestyle.

The result of this study revealed that male students (50.2%) were involved in health-promoting lifestyle measures than female students (43.9%), which is concurrent with the study conducted in Britain. It might stress on the patriarchal Nepalese society, where more concern and care is provided to the male than female. However, no associations was found between health-promoting lifestyle and gender (p=0.191), consistent with the study conducted in Japan. Nevertheless, this study was found to be just opposite to the study conducted among university students in Saudi Arabia where there was significantly associations between health-promoting lifestyle and gender (p=0.001).

This study found out that the majority of the students (99.1%) were Hindu and indicated that there was no significant associations seen between religion and health-promoting lifestyle (p=0.377) found to be consistent with the studies conducted done in India.

Moreover, the results of this study demonstrated that the majority of the students who are bought up in nuclear type of the family are found to have poor health-promoting lifestyle. This is likely to be due to parents being unable to provide sufficient time to their children because of involvement of parents in earning, which makes them busy. This study showed to have no associations between types of family with health-promoting lifestyle (p=0.56). This result was found to be distinctive from the study conducted in Saudi Arabia.

This study found out the majority of the respondents parents were well-read, which is similar with the study conducted in Iran. In addition, it was found that, those students whose father have completed at least high schools had good health practice compared to others which differs from the study conducted in Turkey. It might be due to prevailing culture of male having more influence on family than female. However, no associations was seen between HPLP scores and educational status of father and mother with p-value 0.242 and 0.570 respectively, which is different from the
study conducted in China, where the parents who have completed university level education is found to be associated with health behavior.32

Majority of the respondent’s mother were homemaker and father were involved in Foreign employment, which was dissimilar from the study conducted in central Nepal, where head of the family were involved in farming.18 Significant associations were found between occupation status of mother and HPLP (p=0.002) which differed from the study conducted in Iran, where occupational status of parents have no any relationships with health promoting lifestyles.33 It can be said that the income of the mother is also one of the contributing factor for promoting health in Nepal, economic support from Government is minimal, whereas countries like Iran where economical support is provided from Government has different perspective.

No associations was seen between economic status and HPLP scores (p=0.402). The respondents who were above poverty line had poor health promoting lifestyle, which differ from the study conducted in Iran.34

CONCLUSION

From the study, it can be conclude that the health promoting lifestyle of the secondary level students is moderate because Health promotion is at shade in context of Nepal. Although Nepal has been adopting strategy to promote health of the people through different settings as schools, workplace etc. It is limited in the written form only and Nepal Government might have understood Health promotion is just giving information to the people regarding health. Despite, majority of diseases has been developed due to unhealthy lifestyles adopted from advertisement or little knowledge regarding health promotion and prevention. The burden of these diseases can be reduced through health promotion which includes providing health information, creating safe environment, engaging community people to promote health and adopting healthy policies. In addition school is the best setting for promoting health because childhood is the best period for learning and shaping behaviour. Therefore, Health promotion in schools should be strengthened by Government as it is the best period to shape children behaviour. Programs need to be developed to enhance the lifestyle of people especially youths as they are the working group of nations in the upcoming years.

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