

**Original Article:**

**Assessment of Lifestyle in rural youth using Simple Lifestyle Indicator Questionnaire (SLIQ)**

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**Abstract**

**Background:** Youths are precious human resources of every country. An unhealthy lifestyle among youth is a serious and often unnoticed problem which can lead to various Non-communicable diseases. This study was done in a rural area of Bihar with the objective to assess their lifestyle using Simple Lifestyle Indicator Questionnaire (SLIQ). **Materials and Methods:** A cross sectional study done in a rural nursing college of Bihar. A validated SLIQ was used to assess the lifestyle which included dietary consumption, physical activity, and self perceived stress, tobacco and alcohol consumption. Life style was assessed by calculating SLIQ score. **Results:** Study included 151 rural students with a male female ratio of 0.78:1 and age group ranging from 18-31 years. 53.7% consumed green leafy salad more than six times per week and 67.5% had fresh fruits less than three times per week although 66.9% ate high fibre cereals twice or more times per day. Light, moderate and strenuous exercise was preferred by 71.6%, 33.8% and 16.5% respectively. Alcohol abuse was observed in 15.2% while 13.9% consumed tobacco. Self perceived stress scoring showed stressful lifestyle among 27.1% of students. Mean SLIQ score was 5.31 (SD=2.37). **Discussion:** Rural students consumed more of green leafy salad and high fibre cereals as compared to fresh fruit intake. Most of them were engaged in light exercise. Substance abuse like alcohol and tobacco was almost similar. About one fourth students showed stressful lifestyle. Lifestyle and health promotion policies are required for youth to decrease NCD's.

**Keywords:** Lifestyle; Rural youth; Physical Activity; Stress; Substance Abuse

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**Introduction**

WHO made the declaration of delivering Health for all by year 2000.<sup>1</sup> Health is a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity.<sup>2</sup> Rapidly growing epidemic of non communicable disease (NCD) is responsible for 60% of world's death. In India also the situation of lifestyle diseases are quite alarming.<sup>3</sup> The WHO has identified India as one of the nations that is going to have most of the lifestyle disorders in near future. The lifestyle disorders are affecting younger population shown by the shift of age affected from 40+ to 30+ or even younger.<sup>4</sup> WHO defines adolescence as age spanning from 10-19 years, youth as those in 15-24 years and those

two overlapping age groups as young people with the age group of 10-24 years.<sup>5</sup> The National Youth Policy of India (2003) defines the youth population as those in the age group of 15-35 years.<sup>6</sup> A variety of factors contributes to an individual's health and their risk of illness. They include environmental factors, economic status, and social conditions as well person's behaviour and habits. Individual's behaviour and habits contributes to their lifestyle. The lifestyle is related to person's quality of life and well being.

Lifestyle issues like dietary habit, physical activity, smoking, alcohol consumption and self reporting stress have shown to predispose people to higher risk of developing cardiovascular illnesses and

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other NCD's.<sup>7</sup> Significant lifestyle changes due to rapid urbanization, dominance of personal transport, the introduction of labour saving devices, the easy availability of high fat and dense caloric food, increased communication devices as well as decreased occupational work demand.<sup>8</sup>

The rapid change of today's society has brought a change in our lifestyle. As the standard of living has increased, our diet has become richer.<sup>9</sup> But the physical activity has decreased.<sup>10</sup> With increased stress of life, Substance abuse and dependency on substance can begin at any age, but are more common during adolescence and young adult.<sup>11, 12</sup> Studies on health promotion and better lifestyle are mostly done in western countries. So, the aim of this study was to assess the lifestyle of young rural students of a nursing college in Jamuhar, Bihar.

### Materials and methods

This was a cross sectional study carried out at Narayan Nursing College in Bihar. This college is situated in Jamuhar village, which is situated in a rural area of Rohtas District. The study was an interview based study done in the month of January, 2016.

The ethical clearance and permission to conduct the study was taken. The students of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> year were selected for study. The study participants were briefed about the aims of the study and they were ensured about the confidentiality by one of the authors. Written consent as well was obtained from the students. The rural students were only included into the study who were resident of villages and had lived there all their life or living in other village area previously. Students of urban area, those migrated to urban area or those migrated from urban to rural area were excluded from the study group.

The questionnaire contained Socio-demographic variable of students. 12 question Simple lifestyle indicator Questionnaire (SLIQ) was used to assess the lifestyle of students. SLIQ has 5 components consisting of 3 questions on dietary habits, 3 on physical activity, 3 on alcohol consumption, 2 on smoking and 1 on stress. The dietary component consists of green leafy salad, fresh fruits and high fibre cereals; the physical activity component consists of light, moderate and vigorous exercise; alcohol consumption included type and times of consumption of alcohol; smoking habits- yes/no, if no, ever smoked; self assessment of stress on a likert scale of 1 to 6. A level of 1 or 2 was considered very stressful, 3 or 4 were in moderate while, 5 or 6 were categorized as easy going. Each component is assigned a category score of 0, 1 or 2, based on raw

scoring of questions related to each component.<sup>13</sup>

The responses were collected, entered and analysed in MS Excel 2010.

### Results

The study included 151 students. All students were from rural background. There were 66 (43.7%) males and 85 (56.3%) females, giving a male female ratio of 0.78:1, with the age group ranging from 18 to 31 years. The mean age for male was found to be 20.8 years and for females it was 21.9 years. The mode age of male and female was 19 years and 20 years respectively. There were 9 (13.6%) married males and 43 (50.5%) married females.

The eating habits of participants in the past one year were assessed. 23.8% participants consumed green leafy salad less than once or one time per week. Six times per week or higher frequency of eating green leafy salad was observed in 53.7%. 67.5% consumed fresh fruits less than 3 times per week but high fibre cereals was consumed twice per day or more by 66.9% [Figure 1].

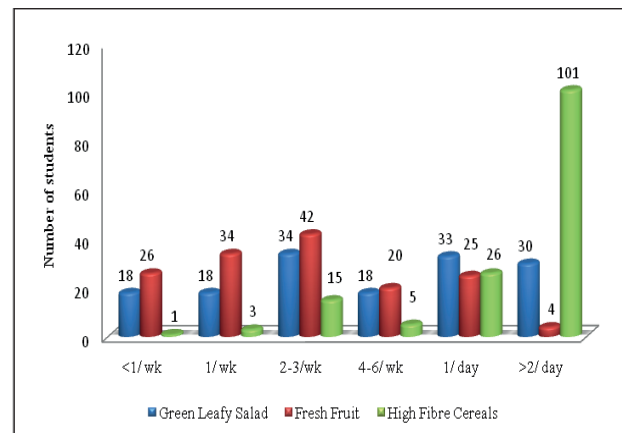


Figure 1: Consumption of dietary components among students (N=151)

In the study, 71.6% were engaged in light, 33.8% in moderate and 16.5% in strenuous exercise which was greater than four times per week. [Figure 2]

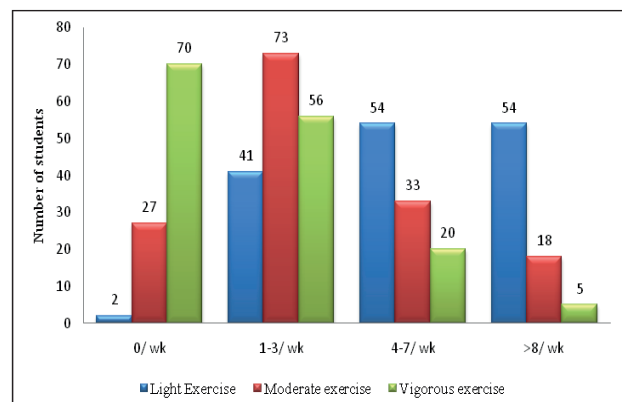


Figure 2: Type of physical exercise among students (N=151)

When self assessment of stress in everyday life was analyzed, 21.3% were easygoing, 51.6% were having moderate stress level but 27.1% were having very stressful life [Figure 3].

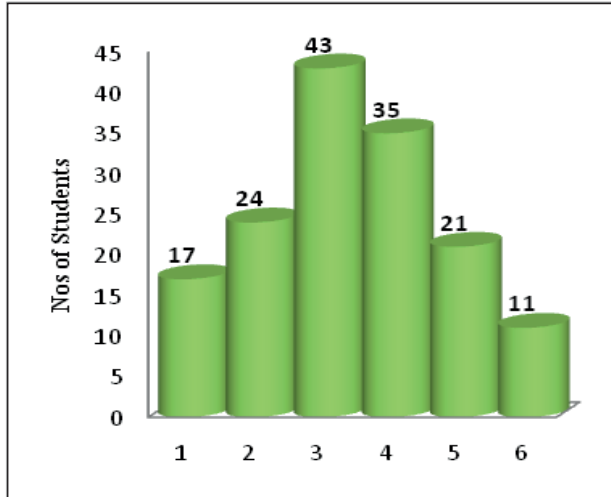


Figure 3: Stress assessment

13.9% students used tobacco of which 6.6% used smokeless form like gutkha, pan masala etc. and 7.3% smoked cigarettes [Figure 4].

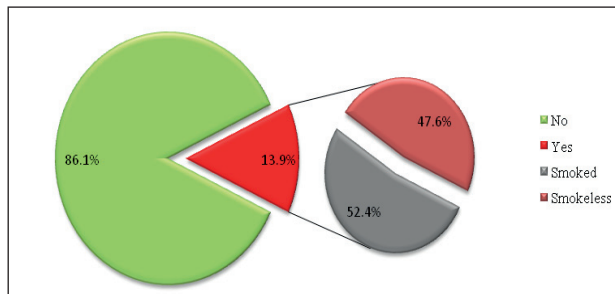


Figure 4: Tobacco Consumption

15.2% had alcoholic beverages and majority used the drink occasionally [Figure 5].

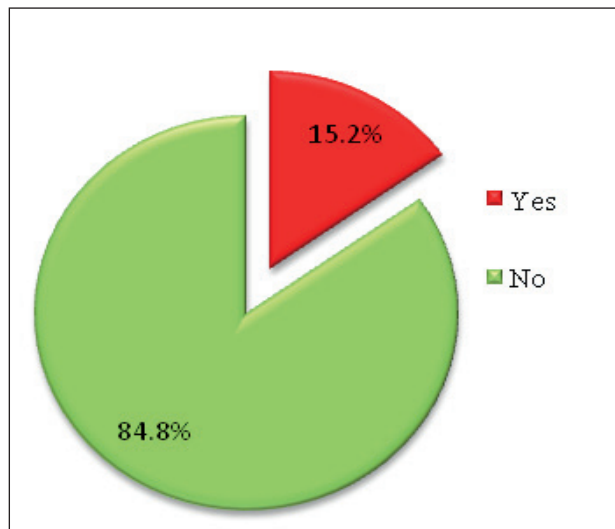


Figure 5: Alcohol Consumption

The mean raw scores of diet habits, physical activity, alcohol consumption, smoking habit and stress score were 9.05 (SD=3.15), 9.25 (SD=5.13), 3.34 (SD=1.39), 1.04 (SD=0.23)), and 1.22 (SD=0.12) [Table 1].

Table 1: Raw Scores of study participants

	Diet Score	Exercise Score	Life Stress Score	Alcohol Score	Smoking Score
Minimum	0	0	1	0	0
Maximum	15	24	6	2	2
Mean	9.05	9.25	3.34	1.34	1.22
SD	3.15	5.13	1.39	0.23	0.12

Individual components were calculated as the assigned category score and their sum was the SLIQ score [Table 2].

Table 2: Individual and SLIQ Category Scores of study participants

	Diet Score	Exercise Score	Life Stress Score	Alcohol Score	Smoking Score	SLIQ score
Minimum	0	0	0	0	0	0
Maximum	2	2	2	2	2	10
Mean	1.17	0.64	0.94	1.34	1.22	5.31
SD	0.70	0.63	0.69	0.23	0.12	2.37

The SLIQ score was used for classifying the lifestyle of the participant as unhealthy (15.2%), intermediate (66.2%) or healthy (18.5%) [Figure 6].

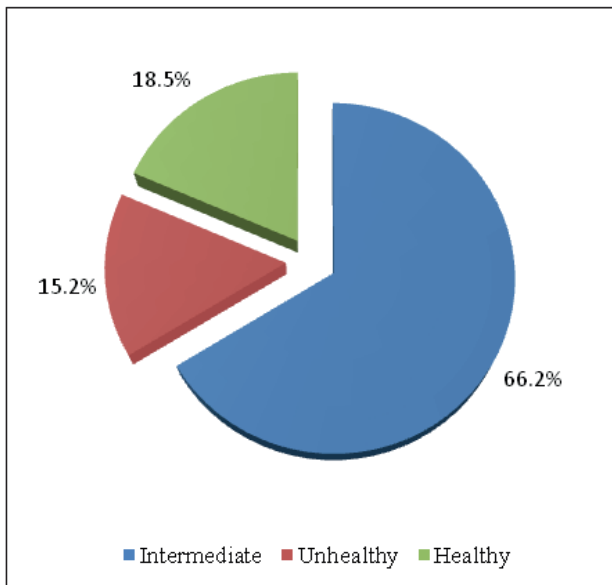


Figure 6: Lifestyle classification

### Discussion

Studies on Lifestyle and Health promotion among college students have been undertaken in American and European countries, but there are only few similar studies in India.<sup>4</sup> Youth is the window of opportunity that sets the stage for a healthy and productive adulthood and to reduce the likelihood of health problems in later years.<sup>6</sup> Life of students in college is a transition period offering good opportunities for establishing health promoting lifestyles. The behaviours and social problems either start or peak during these years. These problems are linked to several factors such as environmental, surrounding influences or personal choices.<sup>5</sup> There is a concern that dietary changes, less physical activity, access to tobacco, alcohol and processed food may increase population exposure to risk factors for NCD's. This study analysed the lifestyle of rural young population to assess the future risk for NCD's.

It was found that more than half of study participants consumed green leafy salad or vegetables six times per week or higher while one fourth consumed less than once or one time per week. The study correlates with the study done by WHO "STEPS" approach under integrated disease surveillance project where people consumed vegetables 4-7 days.<sup>14</sup> A study done in school going adolescents in Baroda showed that 75% had consumed green leafy vegetables in the last 24 hours.<sup>15</sup> US studies conducted on college going students observed that the students did not consume the recommended fruits or vegetables.<sup>16</sup>

The lifestyle transformation has considerable impact on reducing physical requirement and thus

the physical activity becomes secondary.<sup>8</sup> Regular participation in physical activities are associated with longer and better quality of life, reduced risks of a variety of diseases and many psychological and emotional benefits.<sup>17</sup>

Majority of the students in the study were engaged in light exercise like dusting, sweeping, leisurely walking and volunteer work. It is a known fact that traditionally rural children are very much engaged in field activities along with their parents. Also, rural students are expected to be more involved in moderate exercise activities like brisk walking, bicycling, weeding, digging etc. But it was found that only 33.8% students were in moderate exercise group.

In a study, it was observed that in the rural areas the physical exercise varies seasonally depending on the field work.<sup>18</sup> When field work was not available, sedentary activities like television viewing was the preferred choice.<sup>19</sup> Parent and peer involvement and encouragement significantly affects the number of perceived benefits, barriers, cues and involvement in physical activity.<sup>20</sup> Studies shows that the benefits for exercise are improving health, appearance, maintenance of body weight and psychological well being. Barriers of physical activities are workload, lack of motivation, lack of sporting place etc.<sup>20, 21, 22</sup> A WHO study suggested that participation in physical activities of adolescent and young adults improves their lifestyle on a regular basis.<sup>23</sup>

Stress is a consequence of situation arising from an interaction of the person with his environment and places, physical or psychological demands or both.<sup>5</sup> In the study, self assessment of stress was done. A little more than half of students were facing moderate stress in their life while one fourth was highly stressed. Similar results were seen by Sahoo et al who used depression anxiety stress scale (DASS) among young people and observed that 20% of them experience stress.<sup>24</sup>

Throughout the world, substance abuse like tobacco, alcohol has become a widespread phenomenon affecting all segments of the society particularly adolescents and young adults.<sup>25</sup> The common reasons for the use of them are feeling of grown up, seniors do the same, persons should enjoy the life and even used for cleaning teeth.<sup>26</sup>

In this study tobacco consumption was found to be 13.9% with equal number of students taking smokeless and smoked form of tobacco. A college based study done in Bangalore by Bhojani et al showed the prevalence of tobacco as 15.7% among

students.<sup>27</sup> Tobacco use begins during adolescence and the number of smoked or smokeless tobacco increases with age. The tobacco addiction is a major threat in our society. Indian studies among adolescents suggested tobacco as the most common substance abuse, both smoked and smokeless which is 33.1% and 56.2% respectively.<sup>28</sup>

The major concern of tobacco consumption is associated with behaviour and long range consequences. Its use is directly associated with alcohol and other substances and risky sexual behaviour, which can lead to lifelong problems and chronic diseases.<sup>29</sup> 15.2% students consumed alcoholic beverages, although occasionally. Sinha et al showed that regular use of alcohol in early adolescent is associated with increased rates of alcohol consumption in adult life.<sup>12</sup>

Independence obtained during the transition period

leads to shift of lifestyle habits, thus leading to risk factors of non communicable disease include hypertension, increased concentration of cholesterol in blood, inadequate intake of fruit and vegetable, being overweight or obesity, physical inactivity and tobacco use.<sup>8</sup>

The frequency of consumption of Lettuce or green leafy salad, with or without vegetables was less among students. The study confirms that rapid change in lifestyle has changed the habits and behaviour of young rural adults. A multicentre study is required to assess lifestyle of different societies and these can be guiding principles for their betterment.

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**Conflict of interest:** Nil

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