Original Article

Exploring Health Related Beliefs and Behaviours among Young Adults Attending a Professional College

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How to cite this article: Anubhav Joshi, Deepshikha Chaudhary, Jayanti Semwal et. al. Exploring Health Related Beliefs and Behaviours among Young Adults Attending a Professional College. Indian Journal of Public Health Research and Development / Vol. 16 No. 4, October-December 2025.

Abstract

Background: The college period is a critical phase of young adulthood which offers growth opportunities but also presents challenges such as maintaining nutrition, managing time, coping with stress, and developing identity. During this time, young adults form health-related beliefs and behaviours that significantly impact long-term well-being.

Aim & Objective: To assess health beliefs and behaviours, substance use prevalence, and common reasons for substance use among young adults in a professional college.

Methods and Material: A cross-sectional study was conducted among students aged 18–25 years enrolled in M.B.B.S., B.Sc. Nursing, BPT, and Yoga Sciences at a medical university in Northern India. Data was collected using a semi-structured questionnaire.

Results: Among 396 participants, the average healthy lifestyle belief score was 25.9. Nutrition- and physical activity-related behaviour scores were 22.22 and 19.47, respectively. MBBS students demonstrated better healthy lifestyle beliefs. Males engaged more in physical activity, while B.Sc. Nursing students showed better nutrition behaviours. Substance use was higher among males and B.Sc. Nursing students, often cited to feel good or relieve tension.

Conclusions: Health-related beliefs and behaviours vary among young adults. National health policies and prevention strategies in education are essential to improve outcomes and reduce substance use.

Key-words: Young adults; Programs; Health related beliefs; Health related behaviours; Substance use

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Submission date: February 3, 2025 **Revision date:** March 21, 2025 **Published date: September 24, 2025**

Introduction

The World Health Organization defines health as a "state of complete physical, mental, and social well-being, and not merely the absence of disease". Lifestyle includes a person's beliefs, attitude and behaviours towards life.[2] It contributes significantly, accounting for 60% of the quality of life.[2].Nutrition, physical activity, substance use, sleep habits, social interactions are some examples of lifestyle.

The college years mark a transformative period for young adults, characterized by new opportunities and challenges, including managing daily life, academic responsibilities, expanding social networks, and taking charge of personal health. This phase of early adulthood is critical, as individuals develop health-related beliefs and behaviours that are often carried into later life. However, the biological, social, and psychological transitions during this age make young adults particularly susceptible to high-risk health behaviours. Research indicates that adopting healthier behaviours becomes increasingly difficult as individuals age. [2,3]

Changes associated with starting college, such as greater independence, behavioural autonomy, increased workloads, and heightened stress levels, can impact health. These factors often lead to compromises in nutrition, physical activity, and stress management. Poor nutrition among students is driven by factors such as unlimited access to food, unhealthy dietary options, irregular meal patterns, and time constraints. The preference for fast food due to its convenience exacerbates nutritional imbalances, increasing risks of weight fluctuations and non-communicable diseases (NCDs) such as diabetes, cardiovascular diseases, hypertension, and deficiencies like anaemia and vitamin insufficiencies.

Additionally, significant proportions of university students fail to meet recommended physical activity levels and engage in prolonged sedentary behaviours.[4] Restful sleep, another essential component of health, is often inadequate among college students globally. [5,6] Substance use, including alcohol, tobacco, and drugs can further complicate health management, negatively impacting academic performance.[7]

Existing research on health beliefs and behaviours among young adults in college often overlooks the unique challenges faced by students in specific professional programs. Studies may lack focus on these specific contexts, neglect the influence of cultural and socioeconomic factors, and underrepresented diverse student populations.

This research gap is significant because understanding the unique health challenges faced by students in these demanding programs is crucial for improving their well-being. Addressing health concerns can significantly enhance academic performance and professional success, contributing to the achievement of SDG 3: Ensure healthy lives and promote well-being for all at all ages, specifically target 3.4 to reduce premature mortality from non-communicable diseases (NCDs) by one-third by 2030. Furthermore, this research can inform the development of targeted interventions, equitable support systems, and effective health promotion programs tailored to the specific needs of students in professional colleges.

Aim & Objective(s)

1. To assess the health-related beliefs among young adults (18-25 years) attending a professional college.
2. To assess the health-related behaviours in terms of nutrition and physical activity among them
3. To find substance use (Alcohol, Smoking, Tobacco and other Illicit drugs) patterns among them

Materials and Methods

Study Setting and Population: A cross-sectional study was conducted among students enrolled in the constituent colleges of a medical university in Northern India. These included students from Bachelor in Medicine and Surgery (MBBS), Bachelor in Sciences-Nursing (BSc. -Nursing), Bachelor in Physiotherapy (BPT), and Bachelor in Sciences-Yoga (Yoga Sciences) programs.

Sample Size Calculation: Done using formula $n=(Z1-\alpha/2)^2 P(1-P)/d^2$ where $(Z1-\alpha/2)$ =1.96 at 95% CI, anticipated proportion (P) of 50% and margin of error with absolute precision (d) of 5%.[2] This yielded an initial sample size of 385 (approximately 400). Adjusting for a finite population size of 2000

using the formula n′ = n / [1+ (n-1)/2000], the sample size was recalculated to be 323. Accounting for a non-response rate of 10%, a minimum of 355 respondents was required.

Inclusion Criteria: Participants were students aged 18–25 years attending the various programs of the medical university in Uttarakhand who were not suffering from any serious mental illness.

Sampling Technique: A simple random sampling technique was employed to select participants. A list of students aged 18–25 years attending the various medical programs was compiled. Participants were then randomly selected using a computer-generated random number table to achieve the desired sample size.

Study Instrument: The study utilized a weighing machine (Omron HN-286 Digital Weight Scale) for measuring weight and a stadiometer (Generic 220 cm wall-mounted stadiometer, Model No. EBIVAEB72126) for measuring height.

A semi-structured questionnaire was also administered, incorporating the following validated tools:

- Healthy Lifestyle Belief Questionnaire.[8]
- Healthy Lifestyle Behaviour II Questionnaire.[9]
- Alcohol Use Disorder Identification Test - Concise Questionnaire.[10]
- Fagerström Test for Nicotine Dependence Questionnaire.[11]
- Drug Use Disorder Identification Test - Concise Questionnaire.[12]

The questionnaire consisted of 47 items covering demographic details, healthy lifestyle beliefs, healthy lifestyle behaviours related to nutrition and physical activity, and substance use.

Data Collection Procedure: Participants were asked to complete the study questionnaire. Their height and weight were measured using the aforementioned equipment.

Statistical Analysis: The data were analysed using IBM SPSS version 2023. Qualitative variables were expressed as frequencies and percentages, while quantitative variables were summarized as means and medians. Chi-square test and Kolmogorov–Smirnov test were applied to compare qualitative and quantitative variables respectively, and to determine statistical significance. A p-value of <0.05 was considered statistically significant.

Results

The cross-sectional study conducted at the medical university included 396 participants. The mean age, height, weight, and BMI were 20.2 ± 1.7 years, 165.3 ± 10.2 cm, 62.6 ± 13.2 kg, and 22.8 ± 4.1 kg/m², respectively. The mean healthy lifestyle belief score was 25.9 ± 6.4, while the healthy lifestyle behaviour scores for nutrition and physical activity were 22.22 ± 6.0 and 19.47 ± 6.3, respectively. Demographic details are summarized in Table 1.

Differences were evaluated based on gender, age, and course pursued. Age was arbitrarily classified into three groups: 18 to < 20 years, 20 to < 22 years, and 22–25 years. Due to skewed data representation, the median was used as the measure of central tendency for statistical analysis. Physical activity differed significantly based on gender, with males being more active than females. Students aged 22–25 years had higher nutrition and physical activity scores compared to other age groups. MBBS students had better healthy lifestyle belief scores than other courses. Nutrition scores were highest among BPT students, while Yoga Science students were the most physically active. Differences in healthy lifestyle belief scores and the nutrition and physical activity domains of the healthy lifestyle behaviour scores based on socio-demographic variables are presented in Table 2.

Substance use was avoided by most young adults regardless of gender, age, or course. However, alcohol, smoking, oral tobacco, and illicit drug use were significantly higher among males compared to females. Males were more likely to engage in hazardous drinking than females. Young adults aged 22–25 years were significantly more likely to consume alcohol, smoke, and chew tobacco, while those aged 20 to < 22 years were more likely to engage in hazardous drinking. Among courses, B.Sc. Nursing students had the highest involvement in alcohol consumption, hazardous drinking, smoking, oral tobacco, and illicit drug use. Differences in substance use (alcohol, smoking, tobacco chewing, and illicit drugs) based on socio-demographic variables are shown in Table 3.

The most common reasons for substance use were to feel good or high and to relax and relieve tension (Figure 1).

Table 1: Demographic details of the participants.

Demographic details	**Num (%)** or **Mean±SD**
Gender	
Male	175(44.2)
Female	221(55.8)
Age (in years)	
18 to <20 yrs	153(38.6)
20 to < 22 yrs	165(41.7)
22-25 yrs	78(19.7)
Programs Pursued	
B.P.T.	67 (16.9)
BSc. -Nursing	93 (23.5)
M.B.B.S.	190 (48.0)
Yoga Sciences	46 (11.6)
Height (in cm)	
Males	172.8 ± 8.2
Females	159.4 ± 7.3
Weight (in Kg)	
Males	70.2 ± 12.5
Females	56.5 ± 10.3
Body Mass Index (Kg/m2)	
Males	23.5±3.9
Females	22.3± 4.1

Table 2: Differences in Healthy Lifestyle Belief Score and Nutrition and Physical Activity domains of Healthy Lifestyle Behaviour Score based on socio-demographic variables.

Study variables	**HLBS P value**	**HLBehv.S Nutrition P value**	**Physical activity P value**
Gender	.821	**.122**	**.004**
Male	26 (31-21)	22 (28-18)	21(22-16)
Female	27(31-20)	22(25-18)	17(23-15)
Age (in years)	.301	**.011**	**.046**
18 to ≤ 20	27(31-21)	22(26-18)	18(25-16)
20 to ≤ 22	27(31-20)	21(25-18)	17(24-14)
22 to 25	25.5(29-20)	24(29.5-18)	21(26-15)
Programs.	**.001**	**<.001**	**<.001**
BPT	21(29-18)	24(30-19)	20(27-16)
BSc. -Nursing	26(31-24)	22(29.5-17)	20(26-14)
MBBS	28(31-22)	20(24-18)	16(22-14.8)
Yoga Sciences	25(29.3-20)	23(28-20)	24(27-19.5)

Quantitative variables are expressed as Median (Interquartile range)

HLBS: Healthy Lifestyle Belief Score; HLBehv.S : Healthy Lifestyle Behaviour Score

Table 3: Difference in Substance Use (Alcohol, Smoking, Tobacco chewing and Illicit Drugs) based on sociodemographic variables

Substance use	Gender Num(%)		Age Groups(in years) Num (%)			Programs Pursued Num (%)			
	Male	Female	18 - < 20	20 - < 22	22-25	BPT	BSc. Nursing	MBBS	Yoga Sciences
[1] Alcohol Use									
Do not take alcohol	130(74.3)	189(85.5)	136(88.9)	130(78.8)	53(67.9)	56 (83.6)	64(68.8)	160(84.2)	39(84.8)
Non-Hazardous drinking	31(17.7)	22(10.0)	10(6.5)	23(13.9)	20(25.6)	11(16.4)	19(20.4)	18(9.5)	5(10.9)
Hazardous drinking	14(8.0)	10(4.5)	7(4.6)	12(7.3)	5(6.5)	0(0.0)	10(10.8)	12(6.3)	2(4.3)
P value	0.02		0.008			<.001			
[2] Smoking									
Yes	29(16.6)	7(3.2)	7(4.6)	16(9.6)	13(16.7)	1(1.5)	23(24.7)	8(4.2)	4(8.7)
No	146(83.4)	214(98.8)	146(95.4)	149(90.4)	65(83.3)	66(98.5)	70(75.3)	182(95.8)	182(95.8)
P value	.001		0.01			<.001			
[3] Oral Tobacco									
Yes	11(6.3)	1(0.5)	3(2)	5(3.0)	4(5.1)	0(0)	9(9.7)	3(1.6)	0(0)
No	164(93.7)	220(99.5	150(98)	160(97)	74(94.9)	67(100.0)	84(90.3)	187(98.4)	46(100.0)
P value	.001		.438			.001			
[4] Illicit Drugs Use									
Yes	21(12.0)	7(3.2)	9(5.9)	10(6.1)	9(11.5)	0(0.0)	16(17.2)	7(3.7)	5(10.9)
No	154(88.0)	214(96.8)	144(94.1)	155(93.9)	69(88.5)	67(100.0)	84(90.3)	187(98.4)	46(100.0)
P value	.001		.228			<.001			

[1]Alcohol Use: Score = 0: No use., 0 < Score < Hazardous: Non-hazardous and Hazardous: >4 (men), >3 (women).

[2]Smoking: Score =0: No., ≥1 = Yes.

[3]Oral Tobacco: 0: No., 1=Yes

[4]Illicit Drug Use: Score =0: No., ≥1 = Yes.

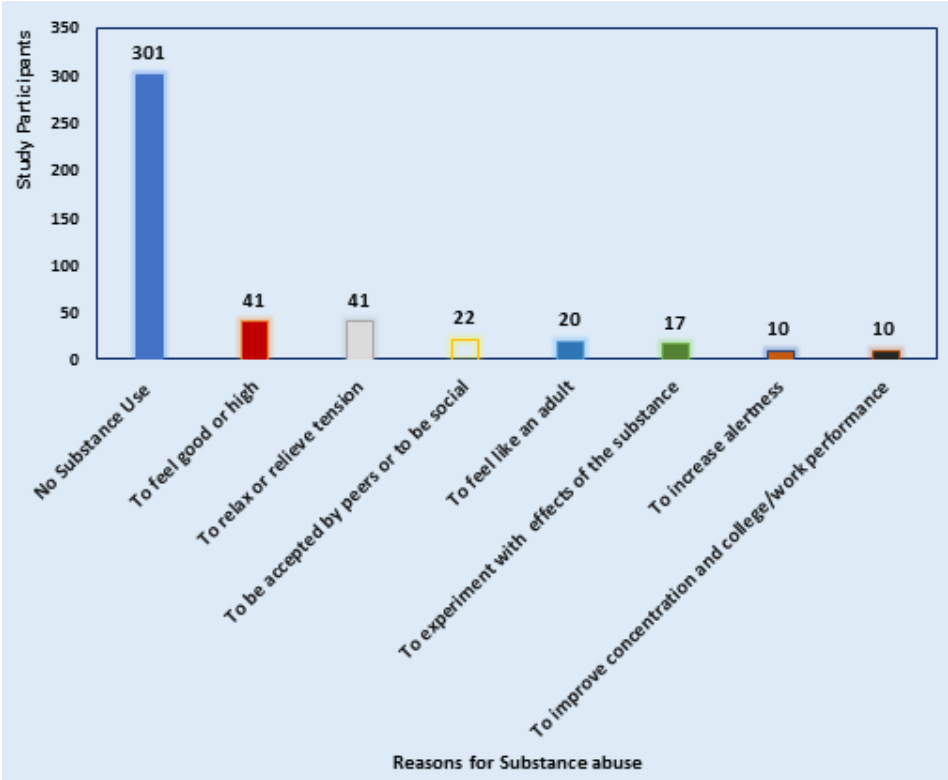

Fig 1: Reasons for Substance use among young adults

Discussion

College life marks a transition from adolescence to adulthood, with physical, psychological, and social changes alongside increasing responsibility for personal health. During this period, new health beliefs and behaviours can develop, making it crucial to understand these aspects in young adults to design effective interventions.

Significant differences in healthy lifestyle belief scores across four programs may reflect the level of health-related information provided within the curricula, influencing students' beliefs .Males being more physically active than females, possibly due to higher interest in body fitness, exercise, and gyms[13]. Studies show men are motivated by intrinsic factors, such as enjoyment and challenge, while women often need extrinsic motivation.[14]

The lowest scores in nutrition and physical activity among MBBS students suggests academic workload and stress may impact health behaviours. The Healthy lifestyle behaviour domains were independent, with good nutrition not necessarily correlating with high physical activity, and vice versa.

Substance use in college students is a global issue. [15,16] Alcohol (53.5%) was the most common substance, followed by smoking (27.3%), tobacco chewing (8.2%), and cannabis (6.8%). [15] Alcohol consumption and hazardous drinking were higher in males than females, [17] with smoking, tobacco chewing, and illicit drug use also more prevalent among males, [18,19] likely due to increased impulsivity and poor stress coping in males.

The most common reasons for substance use were to experience a high, relax, and relieve tension, followed by peer influence and experimentation. These findings align with previous research linking stress and social influences, like peers, to substance use in young adults. [20-22]

This study, using the healthy lifestyle belief and behaviour scores, provides insight into young adults' health attitudes. It suggests strategies for promoting healthy lifestyles among college students. Regular health education programs, integration of health-promoting activities into curricula, and campus facilities like gyms and sports complexes should be

provided. Mental health support, including stress-coping counselling, should be emphasized to reduce stress-related substance use. MBBS students should be encouraged to adopt better nutrition and engage in physical activity, while young males, those aged 20–25, and B.Sc. Nursing students require regular substance use screening and counselling.

This study applies a healthy lifestyle belief score along with a healthy lifestyle behaviour score that shows a glimpse of attitude about healthy lifestyle among youngsters. The study provides information that could help direct the creation of thorough and well-planned interventions for college students to encourage the adoption of healthy lifestyle attitudes and practices.

The study offers new insights into discipline-specific, gender and age patterns in health behaviours, as well as factors influencing substance use among young adults. It calls for the need for tailored health promotion, curriculum-based education, stress management, and substance use interventions.

Suggestions: There is a need for regular health education programs to increase awareness about health promoting lifestyles. Healthy lifestyle education programs should be added to the educational curriculum. Facilities like gym, sports complex, park, cycling tracks should be provided in the university/college campus for encouraging physical activity. Mental health should not be neglected and regular counselling especially coping with stress should be offered periodically to students as stress can potentially trigger substance use. MBBS students should be encouraged to adopt good nutritional habits and for physical activity. Young adult males, Age group 20-25 years and B.Sc. Nursing students are examples of target groups who require regular screening and counselling for substance use.

Conclusion

The study revealed a concerning gap between healthy lifestyle beliefs and actual behaviours among young adults in college. This is especially concerning because having bad habits as a young adult can greatly raise the chance of getting non-communicable illnesses (NCDs) such cancer, diabetes, heart disease, and stroke in their late age. It will take a multifaceted approach to solve this problem. Making thoughtful decisions about their food, exercise, and stress reduction are all ways that they can take action to enhance their health. Colleges and universities can create supportive environments by promoting healthy eating options, providing accessible fitness facilities, and offering mental health services. Government policies can also play a crucial role by regulating unhealthy food and beverage industries, subsidizing healthy food options, and promoting physical activity through public health campaigns. By working together, we can empower young adults to adopt healthier lifestyles, reduce their risk of NCDs, and build a healthier future for themselves and society.

Recommendation: The study highlights health education on nutrition, physical activity, and substance use, integrating health promotion into curricula. It recommends improved infrastructure, mental health support, substance use monitoring, targeted interventions, and national policies for young adults' health, alongside further tailored research.

Limitations of the study: The study had the following limitations: Data was collected through a self-reported questionnaire, which may have led to socially desirable responses. There was a lack of homogeneity in the number of responses across courses and genders, which could affect the generalizability of the results. During statistical analysis, to reduce complexity, the substance use questionnaires were not fully scored according to their scoring systems but were only used to capture whether subjects had used a particular substance.

Relevance of the study: The study addresses critical health areas for college students—nutrition, physical activity, mental health, and substance use—during a formative phase for lifelong habits. It focuses on high-risk groups and integration into national policies highlighting its importance in preventive healthcare and youth well-being.

Acknowledgement: We appreciate the hard work of all healthcare professionals who provided their valuable time despite their busy schedules. We are also grateful to all the participants for their full cooperation, which was essential in bringing this research to fruition.

Financial Support/Sponsorship: Nil

Conflict of Interest: There are no conflicts of interest.

Ethical Approval: The ethical approval was given by IEC of Himalayan Institute of Medical Sciences on 17/05/2024. The reference number for the ethical approval is SRHU/HIMS/RC/2024/88

Informed consent: The participants for the study were selected only after obtaining informed consent.

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