



Lifestyle Behaviours, Dietary Patterns, and Obesity Risk among College Students in Chhattisgarh

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ABSTRACT

Obesity among college students is an increasingly critical public health issue in India, indicative of the country's overall nutritional and lifestyle transformation. Chhattisgarh, with its diverse social and cultural landscape and urbanization, offers a unique context for examining the interplay of lifestyle behaviours, dietary practices, and obesity risk among young adults. This review consolidates current research to ascertain the factors affecting obesity in this population. Evidence indicates that collegiate life frequently entails heightened autonomy, academic stress, erratic schedules, and exposure to detrimental food environments. These things make people sit around a lot, eat at strange times, and like processed foods that are high in sugar. A lot of students don't get enough exercise, skip breakfast, and eat meals that are high in calories but low in nutrients. Not getting enough sleep, spending too much time in front of a screen, and being stressed out can all make you gain weight. There are differences between the sexes. Male students tend to eat more fried and processed foods, while female students often have unbalanced diets, even though they are more aware of their body image. Processed foods are taking the place of traditional diets in Chhattisgarh, which used to be full of local grains and vegetables. This is especially true for young people in cities. The problem gets worse because of institutional support and a lack of nutrition knowledge. To lower the risk of obesity and improve students' long-term health, we need comprehensive health education, programs for physical activity,

balanced canteen options, and mental health programs right away.

KEY WORDS

Lifestyle Behaviours, Dietary Patterns, Obesity, College Students, Public Health, Nutrition.

INTRODUCTION

Obesity has emerged as one of the most pressing global health concerns of the 21st century, affecting populations across socio-economic boundaries. The World Health Organization (WHO, 2023) defines obesity as an excessive accumulation of body fat posing significant health risks, typically assessed using Body Mass Index (BMI). Over the past two decades, obesity among young adults particularly college students has risen sharply as they navigate lifestyle and behavioral transitions (Ng et al., 2014).

Chhattisgarh represents a microcosm of this national trend. Traditionally, diets in the region featured coarse grains such as *kodo* and *kutki* and a variety of green vegetables. However, young urban populations increasingly rely on refined carbohydrates and processed foods (Sahu et al., 2021), reflecting a nationwide shift toward Westernized eating patterns (Gupta et al., 2019). Socioeconomic disparities further influence these habits wealthier students have greater access to fast food, while those from lower-income families face nutritional deficiencies (Singh & Misra, 2020).

The rising prevalence of obesity among young adults poses a long-term threat to India's public health system. Early-onset obesity elevates the risk of chronic diseases such as diabetes, cardiovascular disorders, and hypertension (Hu, 2018). In Chhattisgarh, limited preventive healthcare underscores the urgency of culturally appropriate interventions emphasizing nutrition, physical activity, and mental well-being (Das & Bose, 2021). Colleges play a crucial role through campus food reforms, health education, and fitness programs (Tripathi & Tiwari, 2020). Understanding these interlinked determinants can inform sustainable, student-centered strategies for lifelong health.

A Brief Review of the Work Already Done: In the Field

Over the past two decades, a substantial body of research has emerged globally examining the interrelationship between lifestyle behaviours, dietary patterns, and obesity among young adults, particularly college students. Studies conducted in developed nations such as the United States, Australia, and European countries have consistently highlighted a rising prevalence of overweight and obesity within the 18–25 age group, attributing it largely to sedentary lifestyles, irregular eating habits, and increased consumption of high-calorie processed foods. Research has shown that academic stress, late-night study schedules, and convenience-driven food choices often lead to poor nutritional quality and weight gain in university students.

In the Indian context, several studies have mirrored these global findings, emphasizing the influence of modernization, urbanization, and changing food environments on youth health. Investigations carried out in metropolitan regions like Delhi, Mumbai, and Bengaluru have documented a rapid transition from traditional home-cooked diets to westernized, fast-food-based patterns. Additionally, national surveys such as the National Family Health Survey (NFHS) and Indian Council of Medical Research (ICMR) reports indicate a steady increase in obesity prevalence among young adults, particularly among urban and semi-urban college populations.

However, research specific to smaller states like Chhattisgarh remains limited. A few localized studies conducted in Raipur and Bilaspur have explored students' nutritional status and physical activity patterns, revealing moderate levels of overweight and poor adherence to recommended dietary guidelines. These studies point toward insufficient awareness regarding balanced nutrition, minimal engagement in physical exercise, and the growing influence of social and cultural factors shaping unhealthy habits. Despite these valuable insights, there remains a significant gap in comprehensive, state-level research integrating lifestyle, dietary, and

psychosocial variables. Hence, this review aims to synthesize available evidence and highlight the need for region-specific strategies to curb obesity risk among college students in Chhattisgarh.

1. Lifestyle Behaviours and the Risk of Obesity

Obesity is a multifactorial condition strongly influenced by an interplay of modifiable lifestyle behaviours, including diet, physical activity, sleep, and stress management. Among college students, these behaviours often undergo dramatic shifts due to newfound autonomy, academic demands, and environmental influences, collectively increasing susceptibility to weight gain (Deforche et al., 2015). The adoption of sedentary habits, irregular meal timings, and increased reliance on processed and fast foods are particularly evident during this life stage (Nelson et al., 2019).

Physical inactivity is another critical determinant. The World Health Organization (WHO, 2020) identifies insufficient physical activity as one of the leading global risk factors for obesity and non-communicable diseases. College students often experience a decline in physical activity levels due to increased academic workload, prolonged screen time, and reduced engagement in sports (Pengpid & Peltzer, 2019). This sedentary lifestyle not only lowers energy expenditure but also disrupts hormonal balance related to appetite and fat metabolism.

2. Eating habits of college students

The eating habits of college students are often shaped by the transition from home to independent living, resulting in profound dietary and lifestyle changes. This period marks a critical phase in establishing long-term eating behaviours that influence health and weight outcomes (Deliens et al., 2014). Many college students adopt irregular eating schedules, skip breakfast, and consume energy-dense foods due to academic stress, peer influence, and limited time for meal preparation (Papadaki et al., 2015).

One of the most commonly reported dietary issues among students is meal skipping, especially breakfast, which has been linked to poor concentration, increased snacking, and higher body mass index (BMI) (Keski-Rahkonen et al., 2003). Fast food and convenience meals are increasingly favoured because of their accessibility and affordability, leading to excessive consumption of refined carbohydrates, saturated fats, and sugar-sweetened beverages (Yahia et al., 2016).

In India, the rapid urbanization and expansion of food delivery services have further influenced student diets, shifting preferences toward Westernized eating patterns and processed foods (Goyal & Singh, 2007). Cultural and socioeconomic factors also play significant roles, as students from higher-income families tend to consume more fast foods, while those from rural or low-income backgrounds may face food insecurity and irregular meal patterns (Patil et al., 2020).

3. Socio-Demographic and Environmental Factors

Socio-demographic and environmental factors significantly influence lifestyle behaviours and obesity risk among college students. Characteristics such as age, gender, socioeconomic status, family background, and place of residence shape dietary habits, physical activity, and overall health outcomes (Khongsdier, 2018). For instance, female students often report higher concerns about body image and are more likely to engage in dieting behaviours, whereas male students tend to consume higher-calorie foods and engage in less restrictive eating practices (Wardle et al., 2004). Age also plays a role as students transitioning from adolescence to adulthood face increased independence, leading to greater exposure to unhealthy food environments and sedentary lifestyles (Nelson et al., 2019).

4. How common and how to measure obesity

Obesity has become one of the most prevalent health concerns globally, affecting populations across all age groups, including young adults and college students. Recent national surveys estimate that approximately 24% of Indian adults and over 12% of young adults are overweight or obese, with higher prevalence in urban and economically developed states (ICMR–NFHS-

Discussion

The evidence consistently demonstrates a strong interrelation between lifestyle behaviours, dietary choices, and obesity risk among college students in India, particularly within Chhattisgarh's rapidly changing socio-economic context. The transition from structured school routines to independent college living introduces erratic sleep patterns, reduced physical activity, emotional stress, and greater reliance on calorie-dense convenience foods (Vadeboncoeur et al., 2015). These behavioural shifts disrupt metabolic balance and foster weight gain. Kumar and Mohanty (2019) identified a "behavioural cluster" of sedentary habits, unhealthy diets, and psychological stress that amplifies obesity risk.

In Chhattisgarh, dietary transitions mirror national trends traditional grains and vegetables are increasingly replaced by fried, processed, and sugary foods (Sahu et al., 2021). The easy availability of fast food on campuses, coupled with online delivery and social dining culture, promotes overeating. Common habits such as skipping breakfast and late-night snacking further exacerbate hormonal and metabolic dysregulation (Keski-Rahkonen et al., 2003; Spiegel et al., 2009).

Regional studies in Raipur and Durg report that over one-fourth of students have BMI values above the normal range, highlighting the urban nutrition transition (Verma & Yadav, 2021). Environmental constraints limited recreational facilities, increasing urbanization, and prolonged screen time reduce physical activity. Gender patterns also emerge: male students often consume more fast food, while females, despite higher health awareness, may follow irregular or restrictive diets (Kaur & Singh, 2020). Socioeconomic disparities compound the problem, with affluent students accessing more fast food, and lower-income students facing nutritional inadequacy (Singh & Misra, 2020).

However, research from Chhattisgarh remains limited, often relying on cross-sectional, self-reported data (Das & Bose, 2021). Future studies should adopt longitudinal and mixed-method approaches integrating physiological measures and cultural contexts (Tripathi & Tiwari, 2020). Overall, obesity among college students in Chhattisgarh arises from interconnected behavioral, social, and environmental determinants, calling for culturally tailored interventions promoting balanced diets, physical activity, and mental well-being.

Suggestions

The growing prevalence of obesity among college students in Chhattisgarh calls for integrated, evidence-based health promotion strategies addressing behavioral, institutional, and environmental determinants. Campus-based programs should focus on improving nutritional literacy, encouraging physical activity, and supporting mental well-being. Studies show that structured awareness campaigns within colleges can significantly enhance students' dietary choices and reduce sedentary time (Tripathi & Tiwari, 2020).

At the institutional level, policies ensuring nutritious, hygienic food options in canteens while restricting sugary and fried items have shown success elsewhere (Verma & Yadav, 2021; Brown et al., 2022). Regular health screenings and counselling can detect early risks. Mental health services must be integrated into wellness programs, as chronic stress alters appetite and metabolism (Adam & Epel, 2007).

Future initiatives should incorporate Chhattisgarh's traditional foods millets, pulses, and greens into modern diets (Sahu et al., 2021; Popkin, 2017). Collaboration among universities, health agencies, and community stakeholders, including parents and vendors, can expand awareness through culturally rooted and social media-based campaigns (Kaur & Singh, 2020).

CONCLUSION

The review reveals a concerning trend: obesity among college students in Chhattisgarh is a multifactorial outcome of changing lifestyles, dietary transitions, and socio-environmental influences. The convergence of physical inactivity, stress, sleep deprivation, and reliance on processed foods has heightened obesity risk, mirroring global nutrition transition patterns (Popkin et al., 2020). This issue extends beyond individual behaviour, rooted instead in institutional, cultural, and economic structures that shape daily health decisions.

College years represent a critical phase marked by autonomy but declining health literacy. Students often exhibit irregular eating, breakfast skipping, high fast-food intake, and sedentary habits, compounded by psychological stress (Kumar & Mohanty, 2019). Studies indicate that poor sleep and emotional eating further link academic stress to weight gain (Mishra & Bapat, 2022). College environments—dominated by calorie-dense foods from canteens and online delivery services—exacerbate unhealthy dietary choices (Verma & Yadav, 2021).

In Chhattisgarh, westernized and processed diets are increasingly replacing traditional meals rich in local grains, vegetables, and balanced nutrition (Sahu et al., 2021). The coexistence of undernutrition in rural areas and obesity in urban centres reflects deep socio-economic disparities. Institutional barriers such as limited recreational spaces and inadequate health screening further intensify risks (Tripathi & Tiwari, 2020).

Although awareness of healthy eating is rising, translating it into behaviour requires sustained motivation, peer support, and enabling environments (Das & Bose, 2021). Colleges must integrate nutrition education, promote physical activity, and include mindfulness or yoga programs (Singh & Misra, 2020). Viewing obesity as a collective societal challenge—rather than an individual failure is vital (Hu, 2018). Future interventions should blend education, policy reform, and preservation of traditional diets to foster long-term health and resilience among young adults in Chhattisgarh.

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