



## Promoting Healthy Living through Education: Combating the Surge of Lifestyle Diseases

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### Abstract

India has seen a rapid increase in non-communicable diseases (Lifestyle Diseases) over the past few decades, mainly due to adulterated food, unhealthy eating habits, physical inactivity, and increasing stress. The study aims to highlight the increasing prevalence and impact of lifestyle diseases such as obesity, diabetes, hypertension, and cardiovascular disorders in modern society. It seeks to analyze the link between lifestyle choices and health outcomes, emphasizing the role of physical activity, balanced nutrition, and mental well-being. Additionally, it focuses on identifying effective educational strategies for promoting healthy habits and preventing lifestyle diseases while encouraging collaboration among educational institutions, healthcare professionals, and policymakers to develop comprehensive health promotion programs. Using a qualitative methodology, the study explores how learners and teacher experience, interpret major lifestyle diseases with risk behaviors, analyze in educational strata, and outcome metrics. The study revealed a significant rise in lifestyle diseases linked to poor dietary habits, physical inactivity, and stress. It found that educational interventions effectively improved awareness and encouraged healthier behaviors. The results emphasize the need for sustained efforts and collaboration among educators, healthcare professionals, and policymakers to promote preventive health measures. In conclusion, adopting balanced nutrition, regular exercise, and mental well-being practices, supported by coordinated health promotion programs, is essential to reduce the burden of lifestyle diseases.

**Keywords:** Healthy Behaviour, Education, Dietary Habits, Physical Activity, Health Literacy

### Introduction

This study studied how education can curb the surge of lifestyle diseases- notably cardiovascular disease, type 2 diabetes, cancer, and obesity- by shaping knowledge, skills, and environments that sustain healthy behaviour. Grounded in evidence that effective health education combines awareness with practical skill-building, we argue that education empowers individuals to make informed choices and to translate intentions into everyday routines (e.g., balanced diet, regular physical activity, tobacco and alcohol avoidance, and stress management). It further supports primary prevention by reducing modifiable risk factors and enables early detection through improved recognition of warning signs. Because chronic diseases disproportionately affect disadvantaged groups, the paper positions education as a lever for equity- improving health literacy and access while addressing structural barriers such as food deserts, unsafe spaces for activity, and limited primary care. Education also operates at the societal level by catalyzing policies and environmental supports- healthier school meals, smoke-free norms- that make healthy choices easier and more affordable. India's burden of NCDs is escalating and contributes to around

65% of all deaths. NCDs typically present in individuals aged 55 years or older in many developed countries, but in India their onset occurs a decade earlier ( $\geq 45$  years of age). (NAMS report, 2024).

Lifestyle diseases principally cardiovascular diseases, type 2 diabetes, cancers, and obesity etc. - now account for the largest share of morbidity and mortality in most regions of the world. Their acceleration over the past two decades is tightly linked to rapid urbanization, dietary transitions (toward energy-dense, ultra-processed foods), declining physical activity, tobacco and alcohol exposure, and compounding psychosocial stress. In this context, education- formal, non-formal, and community-based emerges as a foundational, cost-effective to shape knowledge, attitudes, and behaviours and to reduce modifiable risk factors across the life course.

Health education is more than the transmission of facts; it is an empowerment process that develops self-efficacy and equips people with practical skills to translate intentions into routines. Effective programs integrate risk awareness (e.g., the harms of smoking, sedentary living, and excess sodium and sugar), behavioural skills (meal planning, grocery label reading, structured and incidental physical activity, stress-coping), and supportive environments (family, school, workplace, and neighbourhood cues) so that healthier choices become easier choices. Evidence from community implementations shows that when educational efforts are paired with demonstrations and hands-on practice- such as guided hand washing, active play sessions, or healthy cooking- communities register measurable gains in knowledge, reported behaviour change, and adoption of clean and healthy living practices.

Lifestyle diseases concentrate in communities facing structural barriers- limited access to fresh foods, safe spaces for activity, primary care, affordable diagnostics, and culturally responsive health information. Tailored educational strategies that recognize these social determinants can narrow disparities by improving health literacy, enabling early help-seeking, and building collective efficacy. Also adulterated food silently worsens lifestyle diseases by introducing toxins and lowering nutritional quality. At a systems level, education initiatives can catalyze broader social and environmental reforms- school food standards, smoke-free policies, protected cycle lanes, and active-living urban design- that scaffold individual behaviour with healthier defaults.

The preschool and school ecosystems illustrate the reach of educational settings. Teachers and principals serve as proximate role models whose engagement, expectations, and classroom routines strongly influence children's movement, screen time, and eating behaviours. Research in early-childhood contexts points to the value of combined supports- face-to-face guidance (lectures, workshops, modeling) complemented by simple digital tools that supply activity ideas, prompt breaks in sedentary time, and encourage parent-school dialogue. Such hybrid approaches can lift educator confidence, translate curriculum intent into daily practice, and seed behavioural norms early, when habits are most malleable.

Within households and communities, clean and healthy living behaviour (CHLB/PHBS) packages- balanced diet, routine physical activity, sleep hygiene, tobacco and alcohol avoidance, immunisation, and periodic screening- provide a pragmatic scaffold for action. Community-based programmes that begin with local needs assessment, co-design with health workers, and participatory education (talks, demonstrations, Q&A) reliably gain traction. Public engagement is strengthened when content is context-specific (e.g., addressing locally prevalent conditions such as hypertension, diabetes, or acute respiratory infections), when sessions are interactive rather than didactic, and when follow-up supports (peer groups, reminders, accessible facilities) are in place.

Despite consensus on the promise of education, the surge of lifestyle diseases will not be reversed by information campaigns alone. Educational efforts must be embedded within a multi-level framework: individual skills and motivation; meso-level supports in families, schools, workplaces, and primary care; and macro-level policies that reshape food and activity environments, constrain marketing of unhealthy products, and secure affordable screening and counseling.

## Review of Related Literature

Prasiwi et al. (Dec.) primarily focused on education and obesity prevention through promoting healthy lifestyles. They conducted a pre-test and post-test involving 25 participants from Pucangan Village in the Montong District. The findings showed an improvement in participants' knowledge after receiving education related to obesity. BMI calculations revealed that 11 individuals were classified as obese. The study concluded that increasing awareness and knowledge about obesity prevention can be effectively achieved through educational interventions, and continuous efforts are essential to prevent obesity. Yunita et al. (2025) examined the effectiveness of educational videos on promoting clean and healthy living behavior. Using a pre-test and post-test design, they collected data from 40 first-semester students at STIKes Bhakti Mulia through purposive sampling. The mean score of healthy behavior increased from 24.48 before education to 30.50 after. The paired t-test yielded a p-value of 0.000, indicating a significant improvement. The study concluded that educational videos are effective in enhancing adolescents' clean and healthy living behavior. Garg (2025) highlighted the growing global threat of lifestyle diseases such as cardiovascular disorders, diabetes, obesity, and mental health issues. The study emphasized the impact of sedentary lifestyles, unhealthy diets, and chronic stress, calling for comprehensive strategies through public health policies, education, and community involvement. It also discussed successful global interventions applicable in low-resource settings. The study concluded that urgent, coordinated action and lifestyle modifications are essential to prevent lifestyle diseases and improve global well-being.

## Objectives of the Study

1. To highlight the growing prevalence and impact of lifestyle diseases such as obesity, diabetes, hypertension, and cardiovascular disorders in modern society.
2. To analyze the relationship between lifestyle choices and health outcomes, emphasizing the importance of physical activity, balanced nutrition, and mental well-being.
3. To identify effective educational strategies and interventions for promoting healthy habits and preventing lifestyle diseases.
4. To encourage collaboration between educational institutions, healthcare professionals, and policymakers in developing comprehensive health promotion programs.

## Research Questions

1. How prevalent are lifestyle diseases such as obesity, diabetes, hypertension, and cardiovascular disorders in modern society, and what are their major impacts on public health?
2. What is the relationship between lifestyle choices—such as diet, physical activity, and mental well-being—and the occurrence of lifestyle diseases?
3. Which educational strategies and interventions are most effective in promoting healthy habits and preventing lifestyle diseases among individuals and communities?
4. How can collaboration between educational institutions, healthcare professionals, and policymakers enhance the development and implementation of comprehensive health promotion programs?

## Methodology of the Study

This study is conducted using qualitative research methods. This research paper also includes secondary data from various research studies, government reports, and other reliable sources.

## Discussion

*The increasing prevalence and impact of lifestyle diseases (obesity, diabetes, hypertension, heart disease etc.) in modern society:*

The burden of lifestyle diseases has expanded alongside urbanization, dietary shifts toward ultra-processed foods and digital lifestyles that compress physical activity and sleep. Rising prevalence amplifies economic costs through lost productivity and health-care expenditure, and it deepens inequities as low-income communities face higher exposure to obesogenic environments and fewer opportunities for prevention. Educational interventions therefore must be scaled proportionately to risk, with targeted outreach to high-burden groups and with content adapted to local food systems, cultural norms, and resource constraints.

Crucially, prevalence trends signal the need for earlier intervention across the life course. Establishing healthy routines in preschool and primary school, reinforcing them in adolescence, and supporting behaviour maintenance in adulthood can bend risk long before clinical disease emerges.

Here is some information provided by the National Academy of Medical Sciences (India) that, the global adult obesity prevalence is 13% as against 4.9% in India, and for overweight, the prevalence is 39% global and 22% for India, virtually indicating that one in four Indians has a weight problem of abundance. Recently concluded NFHS-5 (National Family Health Survey-5) found that 21% of women and 24% of men aged 15 years and above were suffering from hypertension. NCDs, such as diabetes, hypertension, cardiovascular diseases (CVDs), cancer, and chronic respiratory diseases are the leading cause of death and are responsible for 74% of deaths worldwide. Metabolic syndrome is a cluster of conditions that occur together, increasing the risk of heart disease, stroke, and T2DM. In India, metabolic syndrome has been identified as a major public health problem with the prevalence ranging from 10% to 30%. In India, the reported prevalence of NAFLD (Non-alcoholic fatty liver disease) ranges from 9% to 53%, with a pooled prevalence of 38.6% among adults. One of the caveats in interpreting epidemiological data on NAFLD from India is that most of the studies have been conducted in the hospital setting and are therefore liable to referral bias, with the actual burden being lower in the community. The pooled prevalence of NAFLD in rural areas (29.2%) is substantially lower than that in urban areas (40.8%). Few studies have simultaneously looked at the prevalence of NAFLD in urban and rural communities and corroborate that the risk of NAFLD in urban-domiciled populations may indeed be higher compared to rural domicile. Studies also suggest that there may be a possible geographic variation in the burden of NAFLD in India, with the pooled prevalence being lower in the eastern states (14.5%) compared to those in the north (29.1%) and south (40.1%) India.

The following table of lifestyle diseases lists the name of the disease, symptoms of the disease, causes and effects of the disease, and how it can be addressed through proper education plans:

**Table 1: Lifestyle Diseases**

Disease name	Symptoms	Cause	Effect	Educational Solutions / Strategies
<b>Cardiovascular Disease (CVD)</b>	Chest pain, shortness of breath, palpitations, fatigue; may be silent until acute event	Atherosclerosis is from high LDL, hypertension, diabetes, smoking, inactivity, high-sodium/high-fat diets, chronic stress	Myocardial infarction, stroke, heart failure; reduced quality of life; premature mortality	<ul style="list-style-type: none"> <li>• Include lessons on heart-healthy lifestyles in health education curriculum.</li> <li>• Conduct workshops on stress management and physical fitness.</li> <li>• Encourage participation in regular aerobic exercises through school/college programs.</li> <li>• Promote awareness campaigns on reducing salt, sugar, and fat intake.</li> </ul>
<b>Hypertension</b>	Often asymptomatic	Genetics, high sodium	Target-organ damage	<ul style="list-style-type: none"> <li>• Educate students and communities about the importance of low-sodium</li> </ul>

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	; headaches, dizziness, blurred vision in some cases	intake, obesity, sedentary lifestyle, alcohol, stress, sleep apnea	(heart/brain/kidneys/eyes); elevated CVD and stroke risk	diets. <ul style="list-style-type: none"> <li>• Promote mindfulness and yoga sessions for stress reduction.</li> <li>• Organize regular health check-up camps to monitor blood pressure.</li> <li>• Train students to identify early symptoms and risk factors.</li> </ul>
<b>Obesity</b>	High BMI/waist circumference, exertional breathlessness, fatigue, joint pain	Energy surplus, ultra-processed/high-calorie diets, inactivity, endocrine/genetic factors, inadequate sleep	Increased risk of type 2 diabetes, CVD, osteoarthritis, certain cancers; psychosocial impacts	<ul style="list-style-type: none"> <li>• Integrate nutrition education and practical cooking demonstrations in schools.</li> <li>• Implement daily physical activity or sports programs.</li> <li>• Encourage healthy eating through school canteen reforms.</li> <li>• Teach goal-setting for weight management and self-monitoring.</li> </ul>
<b>Blood Pressure Fluctuations (Labile BP)</b>	Episodic headaches, lightheadedness, palpitations; variable clinic/home readings	Stress, pain, stimulants, medication non-adherence, autonomic dysfunction, dehydration; poor monitoring	Vascular strain, dizziness/falls; may precipitate stroke/cardiac events in high-risk individuals	<ul style="list-style-type: none"> <li>• Conduct awareness sessions about the role of stress, sleep, and hydration.</li> <li>• Educate on the importance of regular medical monitoring.</li> <li>• Include relaxation techniques (e.g., breathing exercises) in classroom routines.</li> <li>• Promote consistent lifestyle habits and time management skills.</li> </ul>
<b>Cancer</b>	Unintended weight loss, persistent fatigue, lumps, abnormal bleeding, non-healing sores (varies by type)	Genetic mutations; tobacco/alcohol; obesity; dietary carcinogens; infections	Local invasion, metastasis, organ failure; treatment-related morbidity and mortality	<ul style="list-style-type: none"> <li>• Organize awareness programs on cancer prevention (avoiding tobacco, maintaining diet, physical activity). <ul style="list-style-type: none"> <li>• Include information on early detection and screening in health classes.</li> <li>• Encourage participation in community outreach programs.</li> <li>• Promote understanding of environmental and lifestyle risk factors.</li> </ul> </li> </ul>
<b>Diabetes Mellitus Type 2</b>	Polydipsia, polyuria, polyphagia, blurred vision, recurrent infections.	Insulin resistance from central adiposity, high-sugar/refined-carb diets,	Micro/macrovascular complications (retinopathy, nephropathy, neuropathy, CVD); acute	<ul style="list-style-type: none"> <li>• Educate on the role of balanced nutrition and sugar control.</li> <li>• Incorporate lessons on the dangers of sedentary lifestyles.</li> <li>• Conduct health camps for glucose monitoring and counseling.</li> </ul>

		inactivity; genetic susceptibility	hyperglycaemi c crises	<ul style="list-style-type: none"> <li>• Teach the importance of maintaining healthy body weight and exercise.</li> </ul>
<b>Mental Health Disorders (Anxiety/Depression)</b>	Persistent low mood/ anhedonia, excessive worry, sleep/appetite changes, difficulty concentrating	chronic stress, trauma, inflammation, social isolation	Functional impairment; reduced healthy behaviours; cardiometabolic risk and mortality	<ul style="list-style-type: none"> <li>• Include mental health education as part of life skills curriculum.</li> <li>• Conduct regular counseling sessions and peer-support programs.</li> <li>• Train teachers to identify early signs of distress.</li> <li>• Promote open discussion and awareness to reduce stigma.</li> </ul>

### ***Analysis of the relationship between lifestyle choices and health outcomes, with an emphasis on physical activity, balanced nutrition, and mental well-being:***

Evidence across settings demonstrates a graded, cumulative relationship between day-to-day behaviours and population health outcomes. Regular moderate-to-vigorous physical activity is associated with reductions in hypertension, type 2 diabetes, and cardiovascular events, while balanced nutrition- higher intake of vegetables, fruits, whole grains, legumes, and unsalted nuts; lower intake of added sugars, sodium, and ultra-processed foods- shifts metabolic risk profiles (blood pressure, fasting glucose, lipid ratios, waist circumference). Mental well-being interact bidirectionally with these behaviours: stress and poor sleep increase hedonic eating and inactivity, whereas consistent routines, social support, and basic coping skills protect against relapse. The practical implication for education is to teach behaviour ‘bundles’ (movement + meal pattern + stress coping + sleep+ kitchens/classrooms, and simple self-monitoring) that reduce reliance on willpower alone.

Small, actionable routines- 10-minute movement breaks, half-plate vegetables at main meals, water-first beverage choice, a nightly wind-down ritual- create early wins that reinforce self-efficacy. Education that includes brief practice episodes (label reading, active-play drills, breathing exercises).

### ***Identifying effective educational strategies and interventions for developing healthy habits and preventing lifestyle diseases:***

Three design principles consistently distinguish effective programmes. First, skills-forward pedagogy: pair risk awareness with practical ‘how-to’- meal planning templates, shopping lists, portion guides, and micro-activity menus that fit busy schedules. Second, learning by doing: demonstrations, guided practice, and role-modeling outperform didactic lectures, especially when materials are culturally resonant and low-cost. Third, environmental alignment: adjusting defaults in the immediate setting (water availability, stair prompts, healthy snack options, screen-time breaks) transforms education from advice into a lived context. Social reinforcement like peer groups, family pledges, or classroom ‘health captains’ normalizes the new habits and creates accountability.

### ***Encouraging collaboration between educational institutions, healthcare professionals and policymakers in comprehensive health promotion programs:***

Promoting health and preventing lifestyle diseases in India requires strong collaboration between **educational institutions, healthcare professionals, and policymakers**. Each plays a unique and complementary role in developing a comprehensive and sustainable health promotion framework. **Role of Educational Institutions:** i) Schools, colleges, and universities serve as key platforms for early health education. ii) They can integrate health awareness, nutrition, physical fitness, and mental well-being into the curriculum. iii) Organizing workshops, seminars, and community outreach programs helps build lifelong healthy habits among

students and families. iv) Institutions can also conduct surveys and small-scale research projects to understand local health challenges and propose practical solutions. **Role of Healthcare Professionals:** a) Doctors, nurses, dietitians, and public health experts can provide scientific guidance and accurate health information. b) They can collaborate with schools and colleges to conduct regular health check-ups, vaccination drives, and health awareness sessions. c) Their expertise ensures that educational programs are evidence-based and tailored to local health needs. d) Healthcare professionals can train teachers and community workers to identify early signs of diseases and promote preventive care. **Role of Policymakers:** i) Government agencies and local bodies play a vital role in providing policy support, funding, and regulatory frameworks for health promotion programs. ii) They can establish partnerships between the education and health sectors to create large-scale national initiatives, such as “Fit India” or “School Health Program.” iii) Policymakers can ensure equitable access to health education and facilities, particularly in rural and low-resource areas. iv) They can also mandate health education as a part of school and college curricula to ensure uniform implementation.

Schools can integrate short activity breaks and nutritious canteen standards; primary-care teams can provide brief opportunistic counseling. Municipal leaders can improve walk ability and regulate marketing of ultra-processed foods. A shared calendar of campaigns, common toolkits, and data-sharing agreements reduce duplication and allow each sector to reinforce. Teachers mentored by health educators; community health workers linked to clinics; workplace champions supported by public health- extend reach while preserving fidelity.

Policy levers convert educational intent into durable change: smoke-free ordinances, front-of-pack labeling, healthy school meal policies, protected cycling/walking infrastructure, and procurement standards for public institutions.

Education prevents onset, supports early detection, and improves self-management across these conditions. meal planning, budgeting for healthy foods, and integrating short, regular physical-activity into daily routines, healthy cooking, guided activity breaks, stress-coping and sleep-hygiene practices- convert knowledge into action. For CVD, hypertension, diabetes, and obesity, priority messages include sodium and sugar reduction, fibre-rich diets, weight management, medication adherence, and home monitoring (BP, weight, glucose). For cancer, programmes promote tobacco/alcohol avoidance, vaccination (HPV, HBV), sun safety, and screening literacy. For mental health disorders, psycho education normalizes help-seeking, teaches coping strategies, and counters stigma- improving adherence to healthy routines overall. When paired with supportive environments and simple education makes healthy choices easier to adopt and sustain.

## Conclusion

Education is the most powerful tool in the fight against lifestyle diseases. By spreading awareness about balanced nutrition, regular physical activity, stress management, and the dangers of food adulteration, people can make informed choices that protect their health. Health education in schools, workplaces, and communities encourages individuals to adopt preventive habits rather than relying on treatment after illness strikes.

Promoting healthy living through education helps build a society that values well-being, moderation, and mindfulness. When people understand the link between daily choices and long-term health outcomes, they become more responsible toward their own bodies and the environment. Ultimately, a well-informed population leads to reduced healthcare costs, improved quality of life, and a healthier, more productive nation.

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