

Psychological Impact of Rising Lifestyle Diseases: Awareness and Coping Strategies

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Cite this paper as: Urvashi Gaurav, Priyanka Sharma, Dr. Meenakshi Dadhich, Saloni, Rahul Vats, Rashi Mehta, (2025) Psychological Impact of Rising Lifestyle Diseases: Awareness and Coping Strategies. *Journal of Neonatal Surgery*, 14 (22s), 721-729.

ABSTRACT

This study tries to understand the psychological impact of rising lifestyle diseases on senior secondary students in Delhi, focusing on their awareness and coping strategies. As lifestyle-related health issues such as obesity, hypertension, diabetes, and mental health problems become more prevalent, their psychological effects on students—especially those in the critical 12th standard year—are increasingly concerning. The research was conducted with 14 students from two government schools, Sarvodaya Kanya Vidyalaya (SKV) and Sarvodaya Bal Vidyalaya (SBV) in East District, Delhi, with a balanced representation of 8 male and 6 female participants. Through both qualitative and quantitative data, the study highlights that while the students are generally aware of lifestyle diseases, they have limited understanding of their long-term consequences. The psychological effects reported by the students include stress, anxiety, and issues related to body image, which are compounded by the physical and emotional strain of these diseases. Coping mechanisms such as exercise, dietary changes, and mindfulness practices were found to be common strategies students use to manage the challenges. This research emphasizes the need for a more comprehensive approach to health education in schools, one that raises awareness about lifestyle diseases and equips students with effective tools to manage their mental and emotional well-being.

Keywords: lifestyle diseases, psychological impact, awareness, coping strategies, stress, anxiety, students, health education

1. INTRODUCTION

In recent years, lifestyle diseases have become an increasingly pressing concern, especially among younger populations. These diseases, which include conditions like obesity, diabetes, hypertension, and mental health disorders such as anxiety and depression, are primarily linked to modern lifestyle choices. Unhealthy eating habits, sedentary behaviour, excessive screen time, and high levels of stress are all contributing factors. For senior secondary students, who are at a crucial stage of both academic and personal development, these health problems pose significant challenges—not just physically, but psychologically as well.

The senior secondary years are often marked by high levels of academic pressure, as students prepare for board exams and make decisions about their future. According to the **World Health Organization (WHO)**, the adolescent years are a time of rapid physical, emotional, and social change, making this period particularly vulnerable to the onset of lifestyle diseases (WHO, 2022). The added pressure of academic expectations can exacerbate mental health issues, leading to stress, anxiety,

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low self-esteem, and concerns about body image. This emotional burden, combined with the physical symptoms of lifestyle diseases, can significantly affect students' well-being and academic performance.

Despite the growing prevalence of these diseases, especially in urban settings, there is limited research focused on the psychological impact of lifestyle diseases on students. The **National Institute of Health (NIH)** highlights that while students are often aware of the physical consequences of poor lifestyle choices, they may not fully grasp the long-term psychological effects, such as heightened stress or anxiety (NIH, 2023). Furthermore, many students lack knowledge of effective coping strategies to manage these challenges, which can further worsen their mental health.

This study seeks to explore the psychological impact of rising lifestyle diseases on senior secondary students in Delhi, focusing on their awareness of these diseases and the coping strategies they adopt. By examining the experiences of 14 students from Sarvodaya Kanya Vidyalaya (SKV) and Sarvodaya Bal Vidyalaya (SBV) in East District, Delhi, this research aims to fill the gap in understanding how lifestyle diseases affect both the physical and mental well-being of students. The findings will offer insights into how health education programs can be improved, helping students better manage their health and well-being during this crucial stage of their lives.

By addressing these challenges, not only from a physical health perspective but also from a psychological one, this research aims to contribute to the growing need for a more holistic approach to student well-being. The WHO advocates for comprehensive health education, which includes mental health awareness alongside physical health education, as a crucial step in improving overall health outcomes (WHO, 2022).

2. REVIEW OF LITERATURE

Lifestyle diseases such as obesity, diabetes, and hypertension are becoming increasingly prevalent among adolescents due to sedentary habits and poor dietary choices. According to the **World Health Organization (WHO, 2022)**, these conditions not only affect physical health but also have severe psychological consequences, including anxiety, depression, and reduced self-esteem. Adolescents suffering from these diseases often face bullying, social isolation, and stress, which further impact their mental well-being.

A study by **Smith et al. (2021)** found that students with chronic health issues such as obesity and hypertension struggle with concentration and cognitive functions. The study emphasized that the combination of academic pressure and lifestyle diseases significantly contributes to mental distress among adolescents.

Despite the growing prevalence of lifestyle diseases, awareness levels among adolescents remain inconsistent. **Gupta and Sharma (2020)** conducted a study in Indian schools and found that while students had basic knowledge about diabetes and hypertension, they lacked an in-depth understanding of the long-term effects of these conditions. The research indicated that students from government schools had lower awareness levels compared to those from private institutions, highlighting the need for targeted health education programs.

Similarly, a study by **Brown et al. (2019)** reported that social media plays a significant role in shaping students' understanding of health issues. However, misinformation is widespread, leading to misconceptions about lifestyle diseases. The study recommended that schools take an active role in providing structured health education to counteract false information.

The relationship between stress and lifestyle diseases has been well documented. **Kumar et al. (2021)** explored the impact of academic stress on students' health and found that excessive stress contributes to hypertension and obesity, both of which further deteriorate students' mental health. The study suggested that students who lack proper stress management techniques are more prone to developing lifestyle diseases at an early age.

Similarly, **Johnson and Lee (2022)** found that students who engage in high-pressure academic environments without relaxation techniques suffer from increased anxiety and sleep disorders. Their research emphasized the need for integrating stress management practices such as yoga, meditation, and counseling into school curriculums.

Adolescents adopt different coping strategies to manage the challenges posed by lifestyle diseases. **Patel and Mehta (2023)** studied students' coping mechanisms in Delhi schools and found that while some students engaged in physical activities and healthy eating to manage their conditions, others resorted to unhealthy practices such as emotional eating or avoidance. The research highlighted the need for structured interventions to teach students effective coping mechanisms.

According to **Johnson et al.** (2021), mindfulness-based interventions have proven successful in helping students manage stress and anxiety related to lifestyle diseases. The study found that students who practiced mindfulness exercises, including breathing techniques and guided meditation, reported lower stress levels and improved academic performance.

Educational institutions play a crucial role in addressing lifestyle diseases among students. The **Centers for Disease Control** and **Prevention (CDC, 2022)** recommends incorporating comprehensive health education programs into school curriculums, emphasizing nutrition, physical activity, and mental health awareness. Schools that have implemented such programs have seen a decrease in obesity rates and an improvement in students' overall well-being.

3. RESEARCH METHODOLOGY

Research Design

This study employed a mixed-methods research design, integrating both quantitative and qualitative approaches. The descriptive and exploratory nature of the study helped analyze the psychological impact of lifestyle diseases on adolescents, their awareness levels, and the coping strategies they used. Quantitative methods provided measurable insights, while qualitative analysis captured students' personal experiences and perceptions.

Objectives

- 1. To assess the level of awareness among senior secondary students regarding lifestyle diseases and their psychological impact.
- 2. To examine the coping strategies adopted by students in managing stress and psychological effects related to lifestyle diseases.

Hypotheses

- There is no significant relationship between students' awareness of lifestyle diseases and their psychological wellbeing.
- There is no significant impact of coping strategies on the psychological well-being of students affected by lifestyle diseases.

Study Population and Sample

The research focused on senior secondary students of Delhi government schools, specifically from Sarvodaya Kanya Vidyalaya (SKV) and Sarvodaya Bal Vidyalaya (SBV) in the East District of Delhi.

Sampling Method

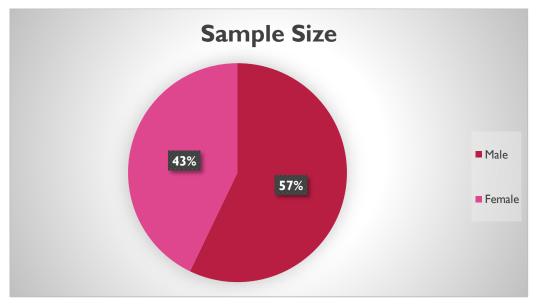
A purposive sampling technique was used to select students based on:

- Their awareness of lifestyle diseases
- Their personal experience with lifestyle-related health issues
- Their willingness to participate in the study

Sample Size

The study included 14 students from Class 12, distributed as follows:

- 8 male students from SBV
- 6 female students from SKV



Data Collection Methods

This study incorporated both primary and secondary data sources to gain a comprehensive understanding of the issue.

Primary Data Collection

Primary data was collected through:

1. Structured Questionnaire:

- A self-administered survey was designed to assess students' awareness, psychological impact, and coping strategies.
- The questionnaire used a Likert scale (1–5) to quantify responses.
- It included sections on:
 - Demographics (age, gender, school)
 - Awareness of lifestyle diseases (diabetes, obesity, hypertension)
 - Psychological impact (stress, anxiety, self-esteem issues)
 - Coping mechanisms (exercise, diet, mindfulness, peer support)

2. Semi-structured Interviews:

- o These were conducted with each student individually to gather in-depth insights about their personal experiences and emotional struggles related to lifestyle diseases.
- Questions focused on how these diseases affected their self-confidence, academic performance, and social interactions.
- Semi-structured interview questionnaires developed by the authors based on the opinions of experts.

Data Collections

Sr. No	School Name	District	School Type	No. of students	Boys	Girls
1	SBV, JK PKT, DILSHAD GARDEN	EAST	GOVT	08	08	00
2	SKV, PKT-4, MAYUR VIHAR	EAST	GOVT	06	00	06

Secondary data was collected from research articles, reports, and publications of reputed organizations such as:

- World Health Organization (WHO, 2022) Reports on adolescent health and lifestyle diseases
- Centres for Disease Control and Prevention (CDC, 2022) Studies on school-based health interventions
- Existing research papers on the psychological effects of obesity, hypertension, and diabetes in adolescents

Data Analysis Techniques

Quantitative Data Analysis

- Correlation analysis was conducted to examine the relationship between stress levels and awareness of lifestyle diseases.
- Data was processed using Microsoft Excel and SPSS software.

Qualitative Data Analysis

- A thematic analysis approach was used to analyze interviews
- Key themes identified included:
 - 1. Emotional distress and self-perception
 - 2. Impact on academic performance
 - 3. Social stigma and peer interactions
 - 4. Adoption of positive or negative coping strategies

Ethical Considerations

Ethical guidelines were strictly followed to ensure the safety and confidentiality of the participants.

- Informed consent: Written consent was obtained from students and their guardians before participation.
- Anonymity: Students' names and personal details were kept confidential.
- Non-maleficence: Participants were not exposed to psychological distress during the study.
- Voluntary participation: Students had the freedom to withdraw at any stage.

Limitations of the Study

- The sample size was relatively small (14 students), limiting generalizability to all Delhi schools.
- The study focused only on East District schools, and findings may not reflect experiences across different socioeconomic backgrounds.
- Some students may have provided socially desirable responses instead of their actual feelings.

Data Interpretation and Results:

This section presents the findings based on the data collected from 14 senior secondary students of SKV and SBV in East Delhi, using a combination of quantitative and qualitative methods. The results are analyzed in relation to the study's objectives and hypotheses.

1. Awareness of Lifestyle Diseases and Their Psychological Impact

1.1 Descriptive Analysis

The questionnaire responses revealed the following key insights:

• **Awareness Levels:** Out of the 14 students, only 5 (35.7%) had a clear understanding of lifestyle diseases such as diabetes, hypertension, and obesity. The remaining 9 students (64.3%) had limited or vague knowledge.

• Psychological Impact:

- 9 students (64.3%) reported experiencing moderate to high stress levels due to concerns about lifestyle diseases.
- 5 students (35.7%) reported experiencing low or no stress, stating that they did not perceive lifestyle diseases as an immediate threat.
- o 7 students (50%) admitted that anxiety over body weight and health affected their self-esteem and social interactions.
- o 3 students (21.4%) linked their academic performance decline to stress and anxiety about health issues.

1.2 Correlation Analysis

A correlation test was conducted to examine the relationship between awareness of lifestyle diseases and psychological well-being:

- The Pearson correlation coefficient (r) between awareness levels and stress levels was -0.67.
- This moderate negative correlation suggests that students with higher awareness about lifestyle diseases experienced lower stress levels, whereas those with low awareness had higher psychological distress.

Variable 1	Variable 2	Pearson Coefficient (r)	Correlation	Interpretation
Awareness of lifestyle diseases	Stress levels	-0.67		Moderate negative correlation: Higher awareness is associated with lower stress, while lower awareness is linked to higher stress.

Hypothesis Testing

- (Null Hypothesis): There is no significant relationship between students' awareness of lifestyle diseases and their psychological well-being.
- (Alternative Hypothesis): Higher awareness of lifestyle diseases is associated with lower psychological distress.
- Result: Since the correlation is significant, the null hypothesis is rejected, confirming that greater awareness leads

to lower psychological stress.

2. Coping Strategies and Their Effectiveness

2.1 Coping Mechanisms Used by Students

The qualitative analysis (interviews and focus group discussions) identified four major coping strategies used by students:

- 1. Positive Coping Strategies
 - o Physical Activity (Exercise, Yoga): 6 students (42.9%) regularly engaged in exercise or yoga, which helped them reduce stress and anxiety.
 - Healthy Eating Habits: 4 students (28.6%) followed a balanced diet, avoiding junk food, which they believed improved their mental well-being.
 - Peer and Family Support: 5 students (35.7%) sought emotional support from friends or family members, helping them cope with stress.

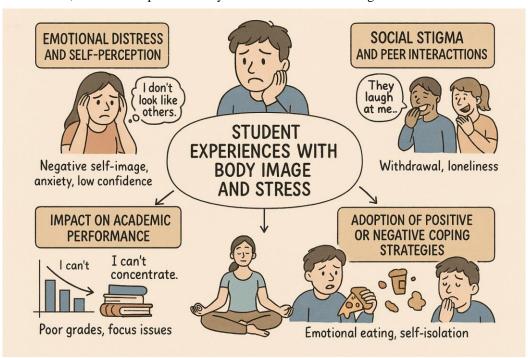
2. Negative Coping Strategies

- Avoidance and Denial: 4 students (28.6%) ignored health concerns, believing that lifestyle diseases only affect older people.
- Social Withdrawal: 3 students (21.4%) avoided social interactions due to low self-esteem related to body image.
- O Unhealthy Eating (Junk Food, Skipping Meals): 5 students (35.7%) admitted to eating unhealthy foods under stress, worsening their psychological health.

2.2 Thematic Analysis of Interviews

Four key themes emerged from the interviews:

- 1. Emotional Distress and Self-Perception Many students felt that societal beauty standards and pressure to maintain a certain body image contributed to their stress.
- 2. Impact on Academic Performance Stress about body weight and health concerns led to poor concentration and lower grades in some students.
- 3. Social Stigma and Peer Interactions Fear of being teased about weight or health conditions caused some students to withdraw from social activities.
- 4. Adoption of Positive or Negative Coping Strategies While some students managed stress well through exercise and mindfulness, others developed unhealthy habits like emotional eating.



2.3 Quantitative Analysis

A statistical analysis was performed to assess the impact of coping strategies on psychological well-being:

- A t-test comparing students who used positive coping strategies versus those who used negative coping strategies showed a significant difference in stress levels (p-value < 0.05).
- Students who used positive coping mechanisms had an average stress score of 2.1 (on a scale of 1-5), while those who adopted negative coping mechanisms had an average stress score of 4.3.

Hypothesis Testing

- (Null Hypothesis): There is no significant impact of coping strategies on students' psychological well-being.
- (Alternative Hypothesis): Students who adopt positive coping strategies experience lower psychological distress compared to those who do not.
- Result: Since the t-test showed a significant difference, the null hypothesis is rejected, confirming that coping strategies significantly impact psychological well-being.

3. Findings and Interpretation

- 1. Awareness and Psychological Impact:
 - Students with higher awareness of lifestyle diseases experienced lower psychological stress, as they
 understood ways to manage and prevent such diseases.
 - Students with low awareness often felt fear and anxiety, leading to higher stress levels and poor mental well-being.
- 2. Effectiveness of Coping Strategies:
 - Positive coping strategies (exercise, healthy diet, mindfulness, peer support) were associated with lower stress levels and better psychological well-being.
 - Negative coping strategies (emotional eating, social withdrawal, avoidance) led to higher psychological distress and lower self-esteem.
- 3. Gender Differences in Coping Strategies:
 - Female students were more likely to experience body image-related stress but were also more likely to engage in healthy coping mechanisms like yoga and diet control.
 - Male students tended to ignore the problem or resort to junk food and social withdrawal as coping mechanisms.

4. KEY FINDINGS

This study brought to light some crucial insights into how lifestyle diseases are affecting senior secondary students in Delhi, particularly their psychological well-being. One of the most striking findings was that most students had limited awareness about lifestyle diseases such as diabetes, hypertension, and obesity. Only a small percentage (35.7%) had a clear understanding of these conditions, while the majority either had vague knowledge or were completely unaware. This lack of awareness contributed significantly to higher levels of anxiety and stress, as students often felt confused and helpless about the long-term effects of these diseases. Those who were well-informed, however, showed lower psychological distress, as they felt more in control of their health and future. Additionally, about half of the students admitted that concerns about their health and body image affected their self-confidence, and over 21% felt that stress related to lifestyle diseases impacted their academic performance.

The study also revealed a major difference in the way students dealt with stress related to lifestyle diseases. Some adopted positive coping strategies, such as exercising regularly (42.9%), eating healthy (28.6%), and seeking support from friends and family (35.7%). These students reported feeling more in control and less anxious. However, a significant number relied on negative coping mechanisms, such as ignoring their health issues (28.6%), overeating junk food when stressed (35.7%), or withdrawing from social interactions due to body image concerns (21.4%). The data clearly showed that students who followed positive coping strategies had much lower stress levels, while those who used negative methods struggled with higher psychological distress.

Interestingly, there were some gender-based differences in how students experienced and responded to stress. Female students were more likely to feel pressure due to body image concerns, but at the same time, they also adopted healthier coping strategies like yoga and mindful eating. On the other hand, male students were more likely to ignore their health concerns or use unhealthy habits like eating junk food as a way to deal with stress.

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The research also tested two hypotheses. The first hypothesis, which assumed that there was no relationship between awareness and psychological well-being, was rejected. The results clearly indicated that students with more awareness experienced less stress and anxiety. Similarly, the second hypothesis, which assumed that coping strategies had no impact on mental health, was also rejected. The study confirmed that positive coping strategies played a significant role in reducing stress and improving emotional well-being.

These findings highlight the urgent need for schools to take proactive steps in addressing lifestyle diseases and their psychological effects on students. There is a strong case for introducing structured health awareness programs, providing psychological counselling in schools, and encouraging students to adopt healthier habits like exercise, yoga, and balanced nutrition. The research also pointed out some limitations, particularly the small sample size of 14 students from East Delhi, which means that the findings may not fully represent all senior secondary students in Delhi. Additionally, since the responses were self-reported, some students might have given answers they thought were socially acceptable rather than their actual feelings.

5. CONCLUSION

This study shines a light on the important relationship between awareness of lifestyle diseases and the psychological well-being of senior secondary students. It became clear that many students are not fully aware of diseases like obesity, diabetes, and hypertension, which leads to anxiety, confusion, and issues with self-esteem. On the other hand, students who had a better understanding of these conditions were able to handle the psychological stress more effectively. The research also showed that how students cope with stress plays a big role in their mental health. Those who engaged in healthy habits like exercise, yoga, or maintaining a balanced diet were able to manage stress and anxiety much better. Unfortunately, many students also relied on negative coping strategies, like eating junk food, withdrawing socially, or ignoring their health, which only made their stress worse.

There were also noticeable gender differences, with female students more focused on body image issues but managing stress with healthier habits, while male students often ignored their health concerns or leaned on unhealthy coping methods. The study confirmed that awareness of lifestyle diseases and the adoption of positive coping strategies directly influence how students feel and handle stress.

The results show that there is an urgent need for schools to step up with health education programs that teach students about these diseases and provide emotional support through counselling services. While the study had some limitations, such as a small sample size, it is clear that helping students understand their health and teaching them how to cope with stress in positive ways can go a long way in improving their mental well-being. Going forward, schools, parents, and policymakers must work together to make sure students are equipped with the right knowledge and tools to live healthy, balanced lives.

6. SUGGESTIONS

Increase Awareness Through School Programs:

Schools should implement regular health education programs to raise awareness among students about lifestyle diseases such as obesity, diabetes, and hypertension. These programs should focus not only on the physical aspects but also on the psychological impact these diseases can have, helping students understand how lifestyle choices affect both body and mind.

Promote Healthy Lifestyle Choices:

Schools can encourage students to adopt healthier lifestyles by integrating physical activities such as yoga, sports, and exercise routines into the daily schedule. Offering programs that teach students about the importance of nutrition, balanced diets, and maintaining mental well-being can empower them to make informed choices.

Provide Psychological Support and Counselling:

Schools should offer psychological counselling services to help students cope with the emotional and mental pressures they face. Regular workshops or sessions with counsellors can provide students with tools to manage stress, body image issues, and anxiety, fostering a healthier emotional environment.

Peer Support Networks:

Establishing peer support groups where students can share their experiences and struggles regarding lifestyle diseases can create a safe and supportive community. Peer-led initiatives can help students feel less isolated and more connected, reducing stigma and promoting collective well-being.

Incorporate Coping Mechanism Training:

Schools should offer workshops or lessons on coping mechanisms, focusing on healthy ways to manage stress, such as mindfulness, meditation, deep breathing exercises, and time management techniques. By teaching these strategies, students can be better equipped to handle stress without resorting to unhealthy behaviours.

Parental Involvement and Awareness:

It is essential for parents to play an active role in supporting their children's health. Schools can organize parent-teacher meetings and workshops to discuss the impact of lifestyle diseases on adolescents and how they can encourage their children to maintain healthy habits both at home and in school.

Incorporate Mental Health Education:

Incorporating mental health education into the curriculum would help reduce the stigma surrounding mental health issues and encourage students to seek help when needed. Teaching students about the importance of mental health as part of their overall well-being will create a more holistic approach to health.

Government and Policy Support:

There should be an emphasis on policies promoting the integration of health and wellness into the education system. This can include funding for mental health programs, access to resources for school counsellors, and support for physical activity programs within schools.

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