

Building Healthy Futures: Integrating Non-Communicable Disease Prevention into School Education through Teacher Training and Curriculum Reform for Behaviour Change

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1. Policy Ask

The Government of Rajasthan through Department of School Education and Ministry of Health and Family Welfare should integrate structured Non-Communicable Disease (NCD) prevention modules into school curricula and strengthen teacher training under the Ayushman Bharat School Health and Wellness Programme (AB-SHWP) to improve adolescent awareness, support behaviour change, and reduce future NCD burden.

2. Executive Summary

Non-communicable diseases (NCDs) are responsible for nearly 60% of deaths in India and are increasingly linked to behaviours established during adolescence [1]. Poor dietary habits, inadequate physical activity, tobacco exposure, and limited health literacy among adolescents increase the risk of future cardiovascular diseases, diabetes, obesity, and other chronic conditions [2].

Evidence from implementation research conducted among school-going adolescents, parents, teachers, and canteen staff in Rajasthan demonstrates substantial gaps in awareness and healthy lifestyle practices. More than half of students (~53%) had lack awareness regarding NCDs and their risk factors, while 70% were unaware of existing health programmes operating within schools. Rural students and those from less educated households were particularly vulnerable.

The studies further demonstrate that parental guidance, teacher engagement, school-based health education, and curriculum-linked learning significantly influence awareness and healthy behaviours.

To address these gaps, NCD prevention should become an integral component of school education through structured curriculum content and systematic teacher training under the Ayushman Bharat School Health and Wellness Programme.

3. Why This Matters for Rajasthan

Rajasthan is experiencing a rapid rise in NCDs, driven largely by modifiable behavioural risk factors established early in life.

Evidence from Jodhpur, Rajasthan indicate that:

- Approximately 41.3 % had not even heard of the term NCDs.
- More than 70% of students were unaware of health promotion programmes operating in schools.
- Around 65% lacked awareness regarding healthy dietary practices.
- Nearly 55% were unaware of recommended levels of daily physical activity.
- Around 44% rarely read food labels before consuming packaged foods.

- Knowledge of healthy diet, physical activity recommendations, food labels, and NCD risk factors was inadequate.
- Healthy behaviours such as regular breakfast consumption, physical activity participation, and healthy food choices remained inconsistent despite awareness.

Without early intervention, these behaviours are likely to persist into adulthood and contribute to the increasing rates of obesity, diabetes, hypertension, and cardiovascular diseases listed as NCDs.

4. Evidence from Jodhpur, Rajasthan

I. Awareness Gaps

From the qualitative and quantitative study as shown below, it was found that over half of adolescents had poor awareness of NCDs, particularly among students from rural schools and families with lower parental education.

Students were able to recognise tobacco as harmful but lacked understanding of:

- Communicable and Non-Communicable Disease and their causes - 41% students had never heard of the term NCD but 50% could not remember example of the any disease
- Recommended age appropriate physical activity levels - around 40% students do not understand physical activity and 55% are unaware of the recommended levels of daily physical activity.
- Healthy dietary practices - almost 65% students were not aware of healthy diet.
- Risks associated with excessive sugar, salt, and fat consumption - ~44% students had low level of understanding on the effect of consumption in excess amount.

II. Behaviour Change Gap

The studies revealed a persistent gap between knowledge and practice.

Students and teachers frequently reported:

- Preference for junk food despite awareness of health risks
- Irregular breakfast consumption - 15% students either do not eat or only sometimes take breakfast.
- Limited participation in physical activity - around 49% students mentioned of not taking part in school sports programs or no programme being organised.
- Low engagement with health promotion initiatives

These points suggest that information sessions alone are insufficient to produce sustained behaviour change among students.

III. Teachers as Change Agents

Students, parents, and teachers consistently identified schools as trusted settings for health education.

Teacher-led health promotion was associated with:

- Better awareness of physical activity benefits
- Increased understanding of healthy dietary practices
- Improved engagement with health information

Students who reported being taught about physical activity and healthy lifestyles in school demonstrated better awareness of NCD prevention.

IV. Role of Parents and Community

Parental guidance emerged as one of the strongest predictors of NCD awareness. Students being 6.3 times more aware of NCD who get almost daily parental guidance..

Students who received regular health-related guidance from parents were significantly more likely to demonstrate good awareness and healthier behaviours.

Both qualitative and quantitative studies highlighted the importance of family engagement, peer support, and community environments in sustaining behaviour change.

4. Current Policy Opportunity

The Ayushman Bharat School Health and Wellness Programme provides an existing nationwide platform through trained Health and Wellness Ambassadors (teachers) to deliver health promotion activities in schools.

However, implementation currently varies across schools, and NCD prevention content is not consistently integrated into routine classroom teaching.

A structured curriculum-linked approach with problem based learning (PBL) can transform existing awareness activities into sustained behaviour-change interventions.

5. Policy Recommendations

A: To integrate NCD Prevention into School Curriculum

Developed age-appropriate curriculum modules to be revised for Classes 6–10 that will cover the following:

- Healthy diet and nutrition
- Physical activity and sedentary behaviour
- Tobacco and substance use prevention
- Reading food labels
- Mental well-being
- Prevention of obesity, diabetes, hypertension, and cardiovascular diseases

The content should be embedded within existing health and life-skills education rather than introduced as a separate subject.

B: Strengthen Teacher Training under Ayushman Bharat - SHWP

Expand School Health and Wellness Ambassador training to include:

- Awareness of NCD risk factors and prevention
- Behaviour change communication
- Traditional or PBL teaching approaches
- Peer-led learning methods -to increase awareness and appreciate positive attitude/practice.
- Family engagement strategies - to elevate interactions and physical activity
- Monitoring of student health behaviours - through general checks and scores.

Annual refresher trainings should be institutionalised.

C: Revise and Develop Standardised Learning Resources, Specific to Rajasthan

To Revise :

- Teacher handbooks and Student activity books
- Classroom discussion guides
- Audio-visual resources in local languages

Revising each class module to explicitly map lessons to existing health and life-skills competencies and school periods.

Resources should align with NCERT and School Health and Wellness Programme frameworks.

D: Promote Whole-School Health Approaches

Schools should be asked for the following as the mandatory activity :

- Allocate at least 30 minutes daily for physical activity
- Have a ground or open access area to promote physical activity
- Conduct regular health promotion sessions
- Establish peer health clubs
- Implement healthy canteen and healthy tiffin initiatives
- Strengthen tobacco-free school policies

E: Strengthen Parent Engagement

Schools should integrate health promotion into routine parent-teacher meetings through:

- Healthy lifestyle counselling
- Nutrition awareness sessions
- Guidance on reducing screen time
- Promotion of physical activity at home

F: Monitor Health Promotion Outcomes

Key indicators to be monitored should include:

- Teacher training coverage
- Student awareness scores on NCDs
- Knowledge score on Healthy diet, nutrient rich foods and physical activity
- Physical activity participation
- Healthy dietary behaviours
- Student engagement rate with Parents/guardian
- School implementation of health promotion activities

These indicators can be incorporated within existing Ayushman Bharat monitoring systems.

6. Expected Outcomes

The short and long term aspects of implementation of these recommendations can lead to the following outcomes:

Short-Term (1–2 years)

- Enhanced awareness of NCDs and its risk factors among adolescents
- Improved awareness and enrolment in National Government/School NCD programmes
- Increased teacher/ambassador capacity for health promotion
- Greater participation in healthy school activities

Medium-Term (3–5 years)

- Improved dietary practices
- Increased physical activity levels
- Equal opportunity and behaviour of male and female students towards healthy lifestyle
- Reduced substance experimentation
- Stronger family engagement in health promotion

Long-Term (5+ years)

- Reduced prevalence of behavioural NCD risk factors
- Lower future burden of obesity, diabetes, hypertension, and cardiovascular diseases among adolescents and adults
- Healthier and more productive adult population

7. Conclusion

The evidence from this Jodhpur based study demonstrates that adolescents possess fragmented knowledge of NCDs and face multiple barriers to adopting healthy lifestyles. This problem requires a holistic approach with Teacher engagement, parental guidance, and curriculum-based health education emerge as powerful enablers of behaviour change [3]. By linking these insights directly to intervention module design, policy recommendations along with structured teacher training and integration of NCD prevention into the school curriculum - offers a practical, scalable, and sustainable strategy to improve adolescent health and reduce the future burden of non-communicable diseases in India by strengthening the Ayushman Bharat School Health and Wellness Programme.

8. References

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