

Knowledge, Awareness and Lifestyle Practices Associated with Non-Communicable Diseases and their Risk Factors among Young Adults

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Abstract

Non-communicable diseases (NCDs) are increasingly relevant to young adults because everyday habits, including diet, physical activity and other lifestyle behaviours, can influence health over time. This cross-sectional study assessed knowledge, awareness and lifestyle practices associated with NCDs among young adults in Pune. A total of 271 participants aged 18–30 years were included through simple random sampling and completed a structured questionnaire through Google Forms. Data were compiled and analysed descriptively using IBM SPSS Statistics for Windows, version 26.0. The mean reported age was 22.78 ± 2.93 years. The response pattern showed that 79.70% selected response category 1 for having heard about NCDs, 73.43% for recognising that an unhealthy lifestyle increases NCD risk, and 83.03% for identifying NCD risk factors. Among participants with valid physical-activity-type responses ($n=266$), walking was the most frequently reported activity (73.68%). Response category 1 was also predominant for several prevention-related items, including the belief that a healthy lifestyle can prevent NCDs (91.51%) and willingness to modify lifestyle (82.66%). However, awareness of government or community NCD programmes was comparatively lower (46.13%). Dietary responses also showed frequent reporting of outside food, soft drinks and fast food in response category 1. Overall, the findings suggest a generally favourable awareness pattern but also a gap between knowing about NCD prevention and maintaining consistent healthy practices. Young-adult health education should therefore focus on practical, affordable and sustainable lifestyle changes rather than awareness alone.

Keywords: Non-communicable diseases; young adults; knowledge; awareness; lifestyle practices; physical activity; NCD prevention

1. Introduction

NCDs are long-term health conditions that are strongly influenced by a combination of biological, behavioural and environmental factors. Although many NCDs become clinically evident later in life, the habits that contribute to future risk often develop much earlier. Young adulthood is therefore an important period for encouraging healthy eating, regular physical activity, avoidance of harmful substances, and routine health checks.

The project report on which this manuscript is based describes the importance of assessing what young adults know about NCDs and whether their everyday practices reflect that knowledge. The study considered dietary habits, physical activity, smoking or drinking-related behaviour, preventive

awareness and participants' own view of their lifestyle. The intention was not simply to measure awareness, but to understand the practical lifestyle pattern that accompanies it.

In the present study, a structured questionnaire was used to collect information from young adults in Pune. The findings provide a descriptive picture of knowledge, awareness and lifestyle practices and can help identify areas where health education may need to become more practical and behaviour-focused.

2. Aim

To assess knowledge, awareness and lifestyle practices associated with non-communicable diseases and their risk factors among young adults.

3. Objectives

- To assess lifestyle practices related to risk factors for non-communicable diseases among young adults.
- To assess the level of knowledge and awareness regarding non-communicable disease risk factors among young adults.

4. Materials and Methods

4.1 Study design and setting

A cross-sectional observational study was conducted among young adults in Pune. The study duration was six months. The approved project used a structured questionnaire and descriptive analysis.

4.2 Participants and sampling

The planned sample comprised 271 young adults. Participants were selected using simple random sampling. The stated eligibility criterion was an age of 18–30 years, with inclusion of males and females who were willing to participate. The report excluded adults described as having a behavioural or physiological issue and those unwilling to participate.

4.3 Data collection procedure

Ethical clearance was obtained from the concerned college authority. The questionnaire was converted into a Google Form and distributed through WhatsApp and email. Responses were recorded in Google Forms/Google Sheets, compiled into a master dataset and prepared for descriptive analysis.

4.4 Statistical analysis

Data were analysed using IBM SPSS Statistics for Windows, version 26.0. The dataset was screened for completeness, duplicate records, missing observations and consistency of variable types. Continuous variables were summarised using mean, standard deviation, median, interquartile range and range. Categorical and ordinal variables were summarised using frequencies and valid percentages. Exact 95% binomial confidence intervals were reported where applicable. Because the approved objectives were descriptive, no inferential group comparisons, correlations or regression analyses were performed. Missing values were not imputed, and variable-specific valid denominators were retained.

4.5 Questionnaire

The questionnaire covered demographic characteristics, NCD knowledge, dietary practices, physical activity, smoking/drinking-related behaviour, awareness of prevention and community programmes, willingness to modify lifestyle, and self-assessment of current lifestyle and need for guidance.

5. Results

A total of 271 responses were retained for analysis. The mean reported age was 22.78 ± 2.93 years, with a median of 23 years, an interquartile range of 3.5 years and a reported range of 15–30 years. The study eligibility criterion was 18–30 years; therefore, the reported minimum age of 15 years should be checked against the raw dataset before journal submission.

Table 1. Participant characteristics

Characteristic	n	%
Female	177	65.56
Male	93	34.44
Missing gender	1	—
Urban	182	67.16
Rural	89	32.84
Undergraduate	213	78.60
Postgraduate	42	15.50
Other education	16	5.90

Note: Gender percentages are based on 270 valid gender responses; other percentages use N=271.

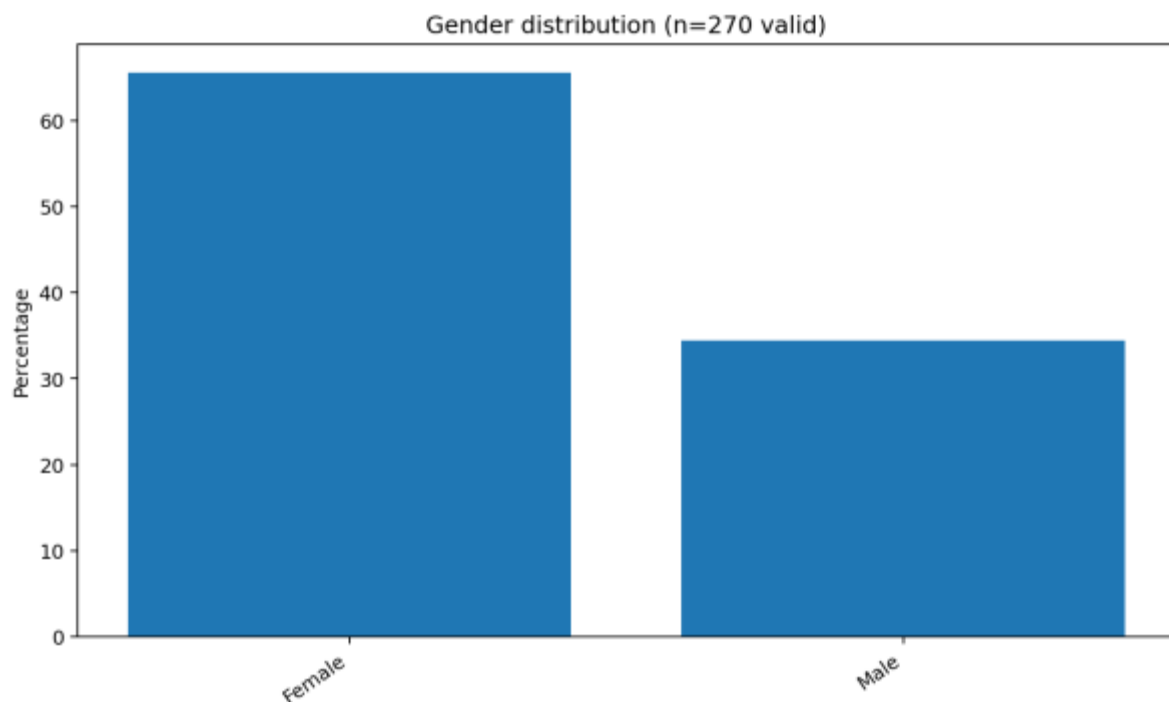


Figure 1. Gender distribution among participants.

5.1 Knowledge regarding NCDs

Table 2. Knowledge-related response pattern

Item	Response category 1 (%)
Heard about NCDs	79.7
Unhealthy lifestyle increases NCD risk	73.43

Identified NCD risk factors	83.03
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Note: Numerical response codes were retained from the project report because the verified code-to-response mapping was not available in the report. Therefore, category 1 is not labelled as Yes/No.

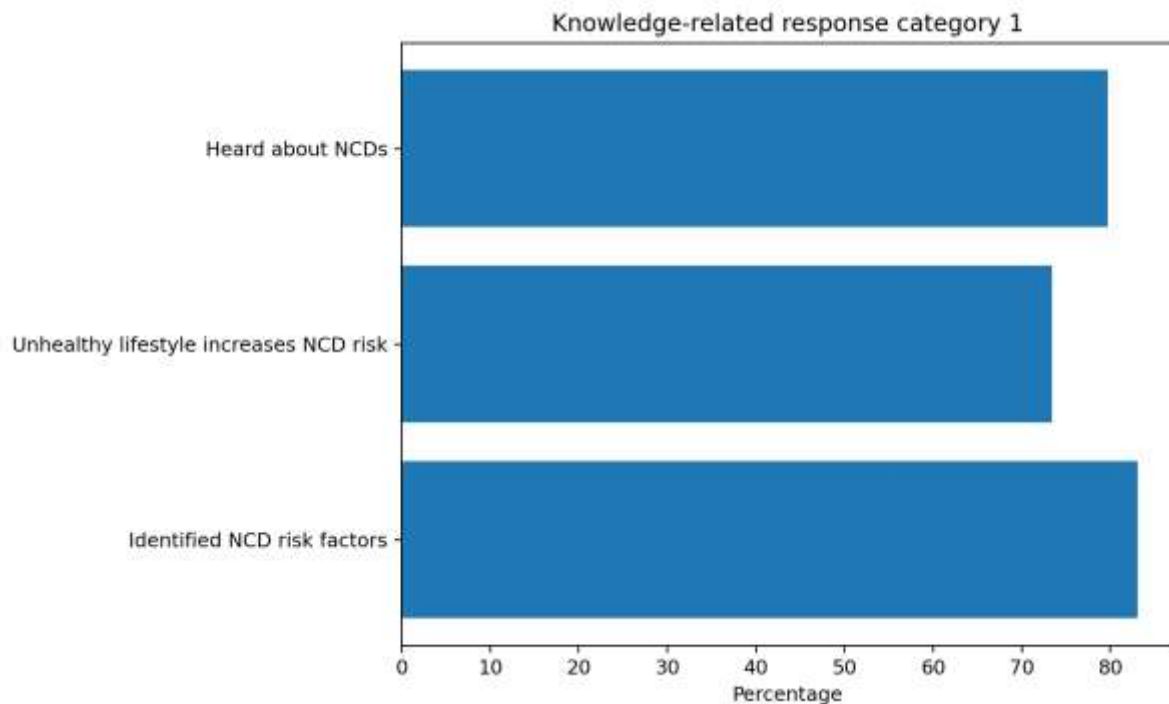


Figure 2. Knowledge-related response category 1.

5.2 Dietary practices

Table 3. Dietary practice response pattern

Dietary item	Response category 1 (%)
Breakfast daily	60.89
Regular meals	54.24
Vegetables daily	67.53
Fruits daily	26.57
Extra salt	23.25
Outside food	75.28
Soft drinks	73.43
Fast food	76.01

Note: Percentages are presented exactly as reported. Because the code mapping was not retained, category 1 is not interpreted as healthy or unhealthy.

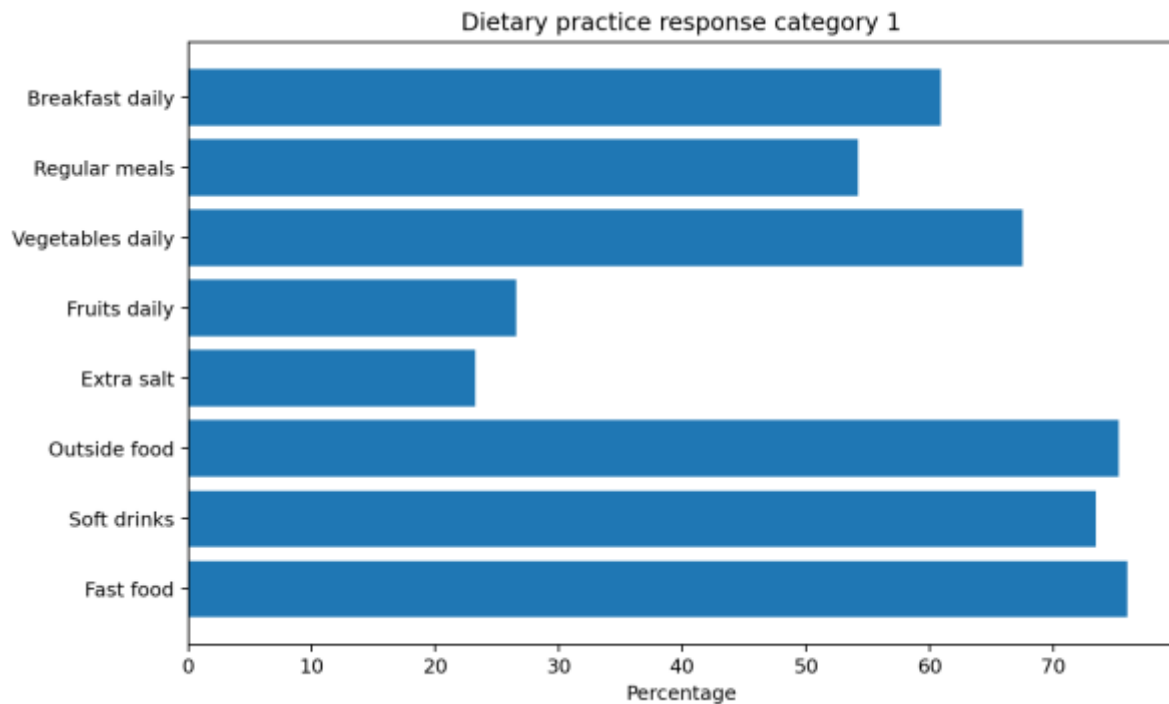


Figure 3. Dietary practice response category 1.

5.3 Physical activity

For the overall physical-activity item, response category 1 was selected by 217 participants (80.07%), while 54 (19.93%) selected category 0. For the activity-type question, 266 responses were valid and five were missing. Walking was the most frequently reported activity type, followed by outdoor activity and household work.

Table 4. Reported types of physical activity

Activity type	n (valid=266)	%
Walking	196	73.68
Running/Jogging	86	32.33
Household work	105	39.47
Bicycling	34	12.78
Gym	77	28.95
Outdoor activity	112	42.11
Gardening	20	7.52
Yoga	41	15.41
Dancing	63	23.68

Note: Multiple responses were permitted, so percentages do not total 100%.

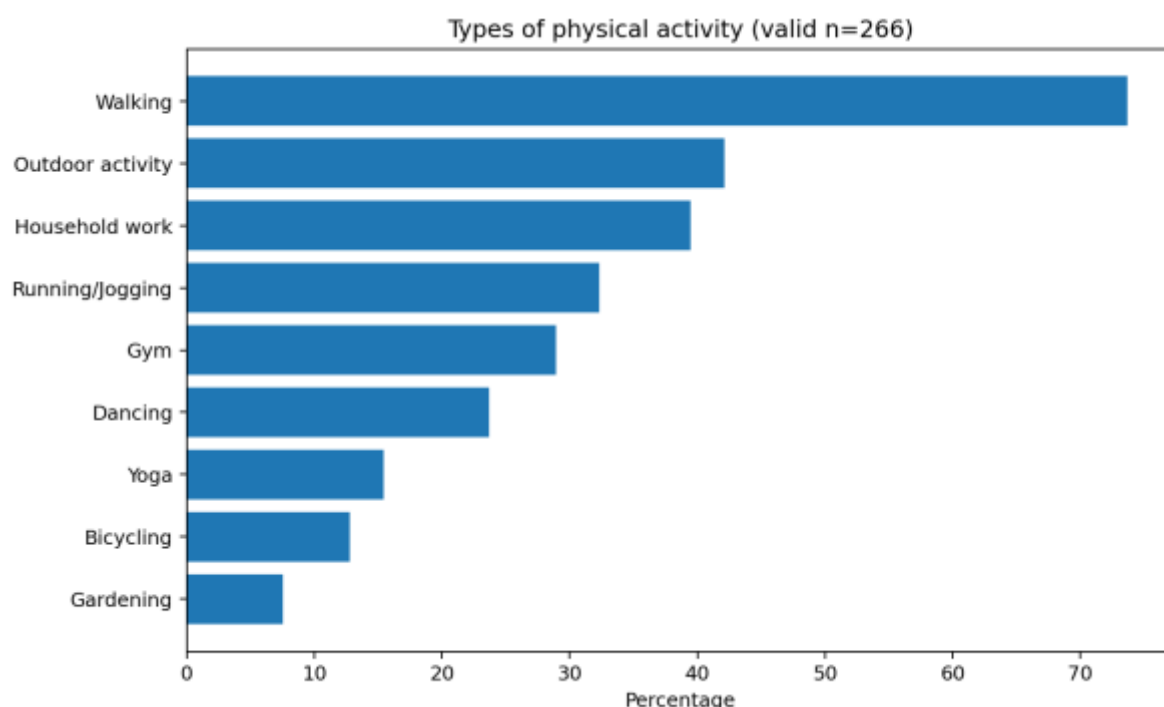


Figure 4. Types of physical activity among participants with valid responses.

5.4 Smoking/drinking-related behaviour

For the smoking/drinking-related item, 46 participants (16.97%) selected response category 0 and 225 (83.03%) selected response category 1. Frequency information was available for 80 participants: 8 (10.00%) reported daily frequency, 12 (15.00%) weekly frequency and 60 (75.00%) occasional frequency. The report did not retain the verified mapping between numerical codes and the questionnaire response labels; therefore, the 83.03% figure should not be interpreted as either the prevalence or absence of addiction without checking the original coded dataset.

Table 5. Frequency of smoking/drinking-related behaviour

Frequency among valid responses	n	%
Daily	8	10.00
Weekly	12	15.00
Occasionally	60	75.00

Note: Valid frequency responses n=80; 191 records had no frequency value recorded.

5.5 Awareness and prevention

Table 6. Awareness and prevention response pattern

Awareness/prevention item	Response category 1 (%)
Healthy lifestyle can prevent NCDs	91.51
Previously checked BP/blood sugar	76.38
Willing to modify lifestyle	82.66
Aware of government/community programs	46.13

Interested in health education	76.38
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Note: Numerical response codes are retained because the report does not provide a verified code-to-response mapping.

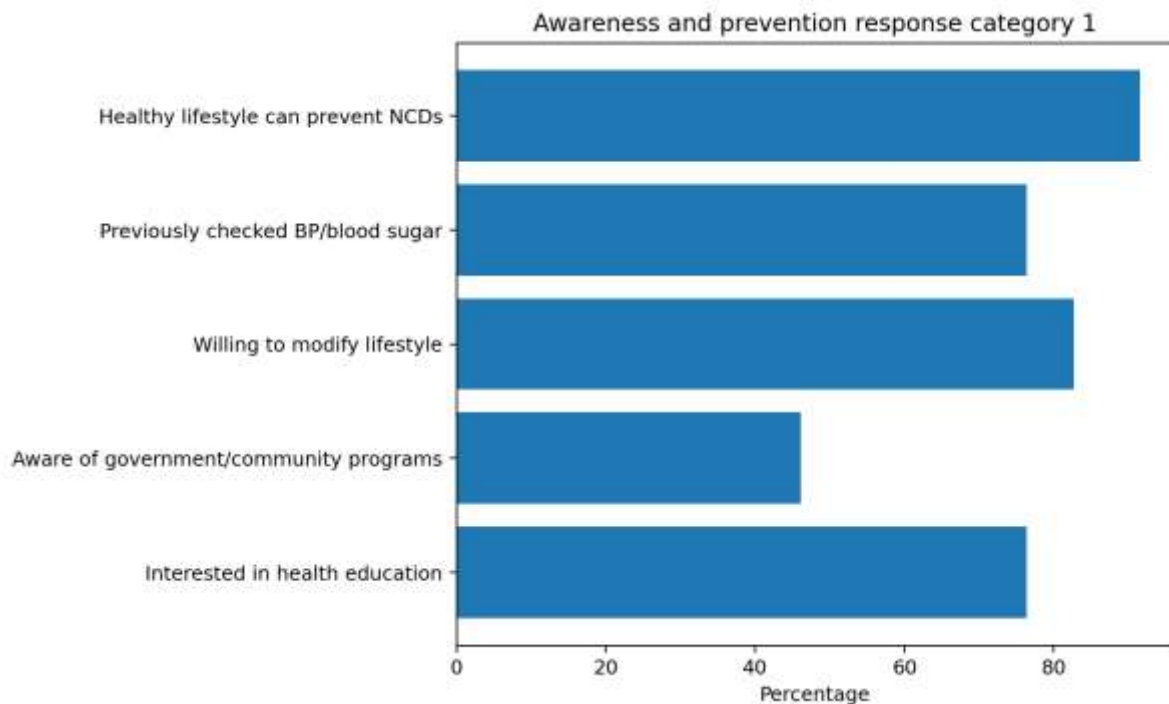


Figure 5. Awareness and prevention response category 1.

5.6 Self-assessment of lifestyle

Table 7. Self-assessment response pattern

Item	Response category	n	%
Current lifestyle regarding prevention NCD	0	30	11.07
Current lifestyle regarding prevention NCD	1	198	73.06
Current lifestyle regarding prevention NCD	2	43	15.87
Need guidance to improve lifestyle	0	62	22.88
Need guidance to improve lifestyle	1	209	77.12

Note: Category labels are preserved as numerical codes because the report does not retain the verified code-to-response mapping.

6. Discussion

The findings provide a useful snapshot of how young adults viewed NCDs and their own lifestyle. The knowledge-related items showed a high proportion of category 1 responses: 79.70% had category 1 for having heard about NCDs, 73.43% for recognising the relationship between an unhealthy lifestyle and NCD risk, and 83.03% for identifying NCD risk factors. Taken together, this pattern suggests that basic NCD awareness was relatively strong in the study group.

At the same time, the dietary findings indicate that awareness does not automatically translate into a consistent routine. Category 1 responses were common for outside food (75.28%), soft drinks (73.43%) and fast food (76.01%), while the response pattern for daily fruit intake was lower (26.57%). Because the numerical coding could not be verified from the report, these figures are best viewed as response distributions rather than as direct measures of healthy versus unhealthy behaviour.

Physical activity was another important part of the findings. Among 266 valid activity-type responses, walking was most common (73.68%), followed by outdoor activity (42.11%) and household work (39.47%). This suggests that activity in young adults may often be based on accessible, everyday forms of movement rather than only structured exercise such as gym-based activity.

Preventive awareness was generally favourable in the reported response pattern. The highest category 1 proportion was seen for the item asking whether a healthy lifestyle can prevent NCDs (91.51%). Willingness to modify lifestyle was also high (82.66%). In contrast, awareness of government or community programmes was lower (46.13%). This difference is important because knowledge about personal behaviour may be stronger than knowledge about available public-health resources.

Overall, the results support the central message of the project: young adults may know about NCDs and recognise the importance of prevention, but maintaining healthy behaviour consistently can still be challenging. Health education should therefore move beyond information delivery and include simple strategies that fit students' schedules, budgets and social environments.

7. Clinical Implications

For physiotherapists and other health professionals, the findings highlight the value of early preventive counselling during young adulthood. Routine health education can include brief discussion of physical activity, diet, sedentary behaviour, tobacco/alcohol-related risks and the value of periodic blood pressure and blood-sugar checks. Physiotherapists can also use simple activity counselling and goal setting to convert general awareness into realistic daily movement. Community and college-based NCD awareness programmes may be particularly useful because awareness of such programmes was comparatively lower in this sample.

8. Limitations

- The sample size was limited to 271 participants.
- The study was conducted in Pune, so the findings may not represent young adults from other geographical areas.
- The study focused on the 18–30-year age group.
- The cross-sectional design does not allow conclusions about change over time or cause-and-effect relationships.
- Most information was self-reported and may therefore be affected by recall or response bias.
- No long-term follow-up was performed.

- The report does not retain the verified numerical code-to-response mapping for several questionnaire items, which limits direct interpretation of category 0/1/2 as positive or negative responses.

9. Future Scope

- Future studies can include larger samples from multiple geographical areas.
- Urban and rural young adults can be compared using clearly defined sampling and coding procedures.
- Longitudinal studies can examine whether awareness and lifestyle practices change over time.
- Objective measures such as BMI, blood pressure and blood glucose can be incorporated.
- Structured lifestyle-modification programmes can be evaluated for their effect on knowledge and behaviour.
- College and community-based NCD prevention programmes can be developed and assessed among young adults.

10. Conclusion

This study found a generally favourable pattern of knowledge and preventive awareness regarding NCDs among the participating young adults. However, the lifestyle responses show that awareness alone may not be enough to ensure consistent healthy practices. Dietary choices, physical activity patterns and awareness of community programmes indicate areas where practical support may be valuable. Preventive health education for young adults should therefore be simple, accessible and focused on sustainable behaviour change.

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