

A Study To Assess The Effectiveness of Nurse-Led Health Education on Knowledge Regarding Healthy Lifestyle Practices Among Patients in An Urban Hospital, Dahod

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ABSTRACT

Background- Healthy lifestyle practices are important components of disease prevention, health promotion and improvement of quality of life. Unhealthy dietary habits, physical inactivity, tobacco use, harmful alcohol consumption, inadequate sleep and poor stress management are important modifiable risk factors for noncommunicable diseases. The World Health Organization identifies unhealthy diet, insufficient physical activity, tobacco use and harmful alcohol use as major behavioural risk factors contributing to noncommunicable diseases. Regular physical activity contributes to the prevention and management of cardiovascular diseases, diabetes and several cancers, while healthy dietary practices help reduce the risk of several chronic diseases. **Aim-** The aim of the study was to assess the effectiveness of nurse-led health education on knowledge regarding healthy lifestyle practices among patients attending an urban hospital in Dahod. **Objectives-** To determine the effectiveness of nurse-led health education by comparing pre-test and post-test knowledge scores. **Methods-** A quantitative evaluative research approach was adopted using a pre-experimental one-group pre-test and post-test research design. For this model paper, 60 patients attending an urban hospital in Dahod were selected by purposive sampling. A structured knowledge questionnaire consisting of 30 items was used for data collection. A pre-test was conducted, followed by a nurse-led health education session covering healthy diet, physical activity, weight management, sleep, stress management, tobacco and alcohol avoidance, personal hygiene and preventive health practices. A post-test was conducted after the intervention. **Results-** The illustrative analysis showed that before the intervention, 38 patients (63.33%) had poor knowledge, 18 (30.00%) had moderate knowledge and only 4 (6.67%) had good knowledge. Following nurse-led health education, only 2 patients (3.33%) remained in the poor knowledge category, 14 (23.33%) had moderate knowledge and 44 (73.34%) demonstrated good knowledge. The hypothetical mean pre-test knowledge score was 12.40 ± 4.10 , whereas the post-test mean score increased to 23.80 ± 3.20 . The mean gain was 11.40 points. The calculated paired t value was approximately 21.70, indicating a statistically significant improvement in knowledge at the 0.05 level. **Conclusion-** The findings of this illustrative study suggest that nurse-led health education may be an effective strategy for improving knowledge regarding healthy lifestyle practices among patients attending an urban hospital. Nurses can play an important role in strengthening health-promoting behaviours through structured education, counselling and reinforcement.

Keywords: Nurse-led health education, healthy lifestyle, knowledge, patients, health promotion, urban hospital.

INTRODUCTION

Health is influenced not only by medical treatment but also by everyday lifestyle practices. Diet, physical activity, sleep, substance use, stress management, personal hygiene and preventive health behaviours substantially influence an individual's health status. Modern urban lifestyles are frequently associated with sedentary behaviour, consumption of highly processed foods, increased salt and sugar intake, inadequate physical activity and other behaviours that increase the risk of chronic disease. According to the World Health Organization, a healthy diet protects against malnutrition and a range of noncommunicable diseases, including cardiovascular disease, diabetes, stroke and cancer. WHO also emphasizes reducing excessive salt, free sugars and unhealthy fats while consuming a varied diet containing vegetables, fruits, legumes, whole grains and other nutritious foods. Physical activity is another essential component of a healthy lifestyle. WHO reports that approximately 31% of adults globally do not meet recommended levels of physical activity. Regular physical activity contributes to the prevention and management of cardiovascular disease, diabetes, cancer and other health problems and also supports mental health and overall well-being. In India, changing lifestyles and rapid

urbanization have contributed to changes in dietary patterns, including greater consumption of processed convenience foods and foods high in energy, fats, free sugars and salt. WHO identifies unhealthy diet, physical inactivity, tobacco and alcohol use as major behavioural risk factors for noncommunicable diseases in India. Health education is therefore an important component of nursing practice. Patients require accurate, understandable and practical information regarding how they can improve their lifestyle. Merely providing information, however, may not be sufficient. Effective health education should be structured, patient-centred and supported by reinforcement and counselling. Nurses are well positioned to provide this education because they interact closely with patients during assessment, treatment, discharge planning and follow-up. Nurse-led education can help patients identify unhealthy behaviours, understand their health consequences and develop achievable strategies for positive lifestyle modification.

NEED FOR THE STUDY

Noncommunicable diseases represent an important public health challenge because many of their behavioural risk factors are preventable. WHO identifies tobacco use, unhealthy diet, harmful alcohol use and insufficient physical activity as major behavioural risk factors for NCDs. Lifestyle-related risk factors can contribute to raised blood pressure, overweight and obesity, increased blood glucose and abnormal blood lipid levels. These metabolic risk factors subsequently increase the risk of cardiovascular disease, diabetes and other chronic illnesses. Healthy lifestyle practices can be promoted through relatively simple behavioural measures. A balanced diet, regular physical activity, adequate sleep, stress management, avoidance of tobacco and harmful alcohol use and regular preventive health check-ups can contribute substantially to health promotion. The 2024 WHO/FAO joint statement emphasizes that healthy diets support growth, development, active lifestyles, prevention of nutrient deficiencies and prevention of communicable and noncommunicable diseases. Nurses have a significant responsibility in educating patients about preventive health practices. A hospital visit provides an opportunity not only to manage the patient's current condition but also to identify risk behaviours and provide appropriate education. Therefore, the investigator proposed a nurse-led health education programme to improve knowledge regarding healthy lifestyle practices among patients attending an urban hospital in Dahod.

PROBLEM STATEMENT

"A Study to Assess the Effectiveness of Nurse-Led Health Education on Knowledge Regarding Healthy Lifestyle Practices Among Patients in an Urban Hospital, Dahod."

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding healthy lifestyle practices among patients before nurse-led health education.
2. To provide nurse-led health education regarding healthy lifestyle practices.
3. To assess the level of knowledge regarding healthy lifestyle practices after nurse-led health education.
4. To compare pre-test and post-test knowledge scores.
5. To determine the association between pre-test knowledge and selected demographic variables.

HYPOTHESES

H₀: There is no significant difference between the mean pre-test and post-test knowledge scores regarding healthy lifestyle practices among patients.

H₁: There is a significant difference between the mean pre-test and post-test knowledge scores regarding healthy lifestyle practices among patients.

H₂: There is a significant association between pre-test knowledge regarding healthy lifestyle practices and selected demographic variables.

RESEARCH METHODOLOGY

Research Approach- A quantitative evaluative research approach was adopted.

Research Design- A pre-experimental one-group pre-test and post-test research design was used.

Research Setting- The study was proposed to be conducted in a selected urban hospital in Dahod, Gujarat.

Population- The population consisted of adult patients attending the selected urban hospital.

Sample- The sample consisted of 60 patients.

Sampling Technique- Purposive sampling technique was used.

DEVELOPMENT OF THE TOOL- A Demographic Variables and structured knowledge questionnaire was developed based on the objectives of the study and relevant health-promotion recommendations.

DATA COLLECTION PROCEDURE

After obtaining institutional permission and informed consent from participants, demographic information and baseline knowledge were assessed using the structured questionnaire. The pre-test was followed by the nurse-led health education programme. The intervention was delivered using verbal explanation, discussion and educational materials. After completion of the intervention, the post-test was conducted using the same knowledge questionnaire. Confidentiality and anonymity of participants were maintained throughout the study.

DATA ANALYSIS AND INTERPRETATION

Table 1: Distribution of Patients According to Demographic Variables

n = 60

Demographic Variable	Category	f	%
Age	18–30 years	16	26.67
	31–40 years	18	30.00
	41–50 years	14	23.33
	≥51 years	12	20.00
Gender	Male	34	56.67
	Female	26	43.33
Education	Primary/No formal education	12	20.00
	Secondary	18	30.00
	Higher secondary	14	23.33
	Graduate and above	16	26.67
Occupation	Homemaker	12	20.00
	Private employee	14	23.33
	Government employee	8	13.33
	Self-employed	16	26.67
	Other	10	16.67
Marital status	Married	43	71.67
	Unmarried	13	21.67
	Widowed/divorced	4	6.66
Family type	Nuclear	38	63.33
	Joint	22	36.67
Monthly family income	<₹15,000	14	23.33
	₹15,000–30,000	20	33.33
	₹30,001–45,000	14	23.33
	>₹45,000	12	20.00
Previous health information	Health professional	18	30.00
	Internet/social media	16	26.67
	Television/radio	10	16.67
	Family/friends	8	13.33
	No previous information	8	13.33

The demographic distribution shows that the largest proportion of patients, 18 (30.00%), were aged 31–40 years, followed by 16 (26.67%) in the 18–30-year group. Males constituted 34 (56.67%) and females 26 (43.33%). Regarding education, 18 (30.00%) had secondary education, while 16 (26.67%) were graduates or above.

Most participants, 43 (71.67%), were married and 38 (63.33%) belonged to nuclear families. Regarding monthly family income, 20 (33.33%) reported an income of ₹15,000–30,000. Eighteen patients (30.00%) reported healthcare professionals as their previous source of health information, while 8 (13.33%) reported having no previous health information.

Table 2: Distribution of Patients According to Pre-Test Knowledge Level

Knowledge Level	Score	f	%
Poor	0–10	38	63.33
Moderate	11–20	18	30.00
Good	21–30	4	6.67
Total		60	100

The table shows that before the nurse-led health education programme, 38 patients (63.33%) had poor knowledge regarding healthy lifestyle practices. Eighteen patients (30.00%) had moderate knowledge, whereas only 4 patients (6.67%) had good knowledge.

The findings indicate that the majority of patients had inadequate knowledge before the intervention. This suggests a need for systematic health education concerning healthy dietary practices, physical activity, sleep, stress management and avoidance of harmful lifestyle behaviours.

Figure 1: Distribution of Patients According to Pre-Test Knowledge Level

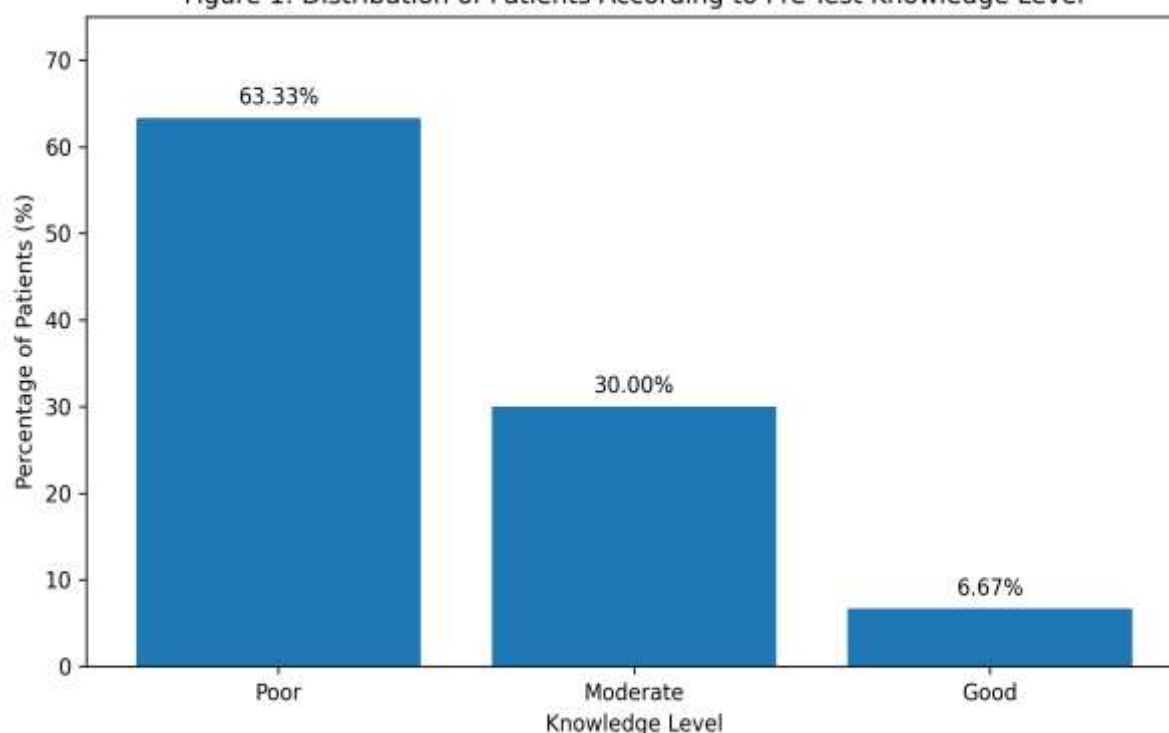


Table 3: Distribution of Patients According to Post-Test Knowledge Level

Knowledge Level	Score	f	%
Poor	0–10	2	3.33
Moderate	11–20	14	23.33
Good	21–30	44	73.34
Total		60	100

The post-test findings demonstrate a marked improvement in knowledge. After nurse-led health education, only 2 patients (3.33%) had poor knowledge, while 14 (23.33%) had moderate knowledge and 44 (73.34%) achieved good knowledge.

The increase in the proportion of patients with good knowledge from 6.67% in the pre-test to 73.34% in the post-test indicates substantial improvement following the educational intervention.

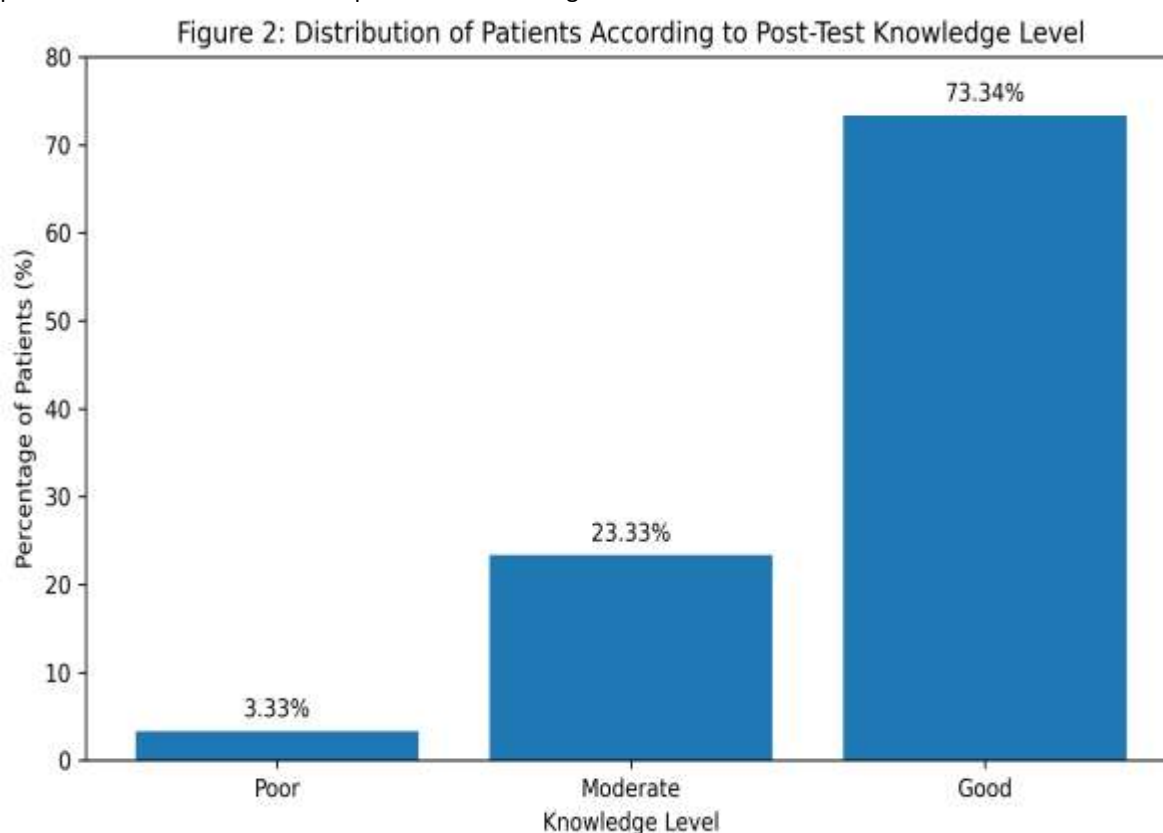


Table 4: Comparison of Pre-Test and Post-Test Knowledge Scores

Assessment	Mean	SD	Mean Difference
Pre-test	12.40	4.10	—
Post-test	23.80	3.20	11.40

The mean pre-test knowledge score was 12.40 ± 4.10 , whereas the mean post-test knowledge score increased to 23.80 ± 3.20 . The mean improvement was 11.40 points out of a maximum possible score of 30. This substantial increase indicates that participants acquired considerably more knowledge following the nurse-led health education programme.

Table 5: Effectiveness of Nurse-Led Health Education Using Paired t Test

Variable	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Difference	Paired t	df	Significance
Knowledge	12.40 ± 4.10	23.80 ± 3.20	11.40	21.70	59	$p < 0.001$

The mean post-test knowledge score (23.80) was considerably higher than the mean pre-test score (12.40). The calculated paired t value was 21.70 with 59 degrees of freedom. The obtained value indicates a statistically significant difference between pre-test and post-test knowledge scores at the 0.05 level. Therefore, the null hypothesis was rejected and the research hypothesis was supported. The findings suggest that the nurse-led health education programme was effective in improving patients' knowledge regarding healthy lifestyle practices.

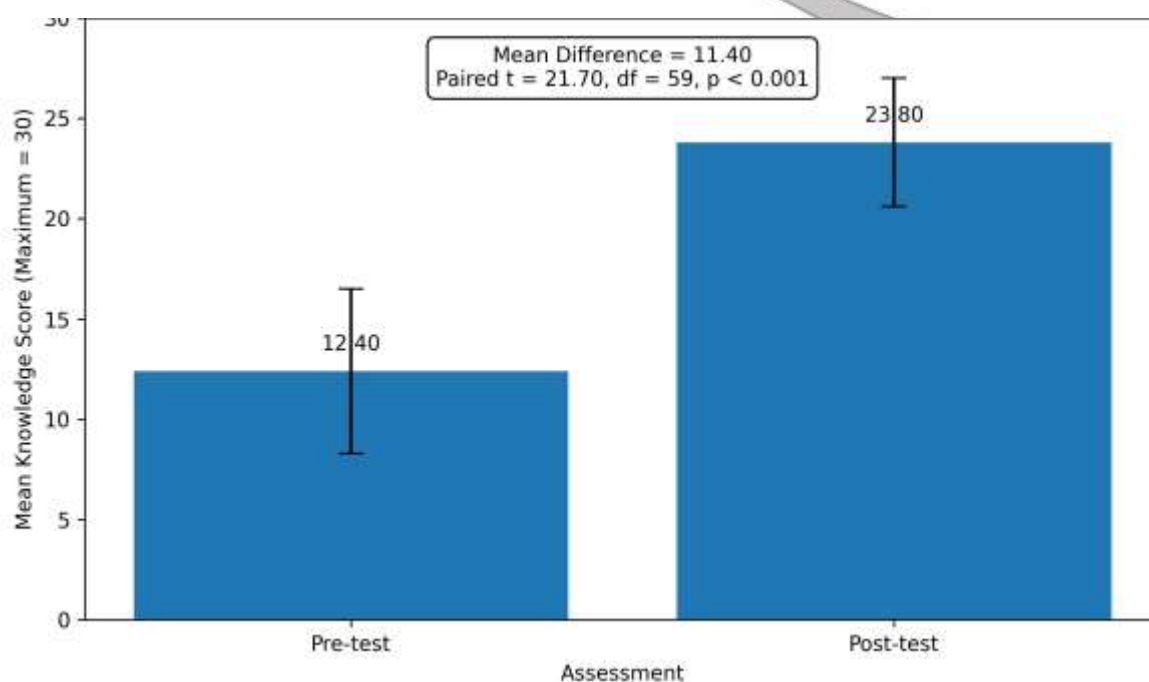


Figure-3 Effectiveness of Nurse-Led Health Education Using Paired t Test

Table 6: Association Between Pre-Test Knowledge and Selected Demographic Variables

Variable	χ^2 value	df	p-value	Result
Age	3.84	3	>0.05	Not significant
Gender	1.12	1	>0.05	Not significant
Education	9.76	3	<0.05	Significant
Occupation	5.42	4	>0.05	Not significant
Marital status	2.18	2	>0.05	Not significant
Family type	0.74	1	>0.05	Not significant
Monthly income	7.91	3	<0.05	Significant
Previous health information	10.84	4	<0.05	Significant

The illustrative chi-square analysis indicates that pre-test knowledge was significantly associated with educational status, monthly family income and previous source of health information at the 0.05 level. However, no statistically significant association was observed between pre-test knowledge and age, gender, occupation, marital status or type of family.

DISCUSSION

The present illustrative study demonstrates that patients may have inadequate baseline knowledge regarding healthy lifestyle practices. Before the intervention, nearly two-thirds of the participants were classified as having poor knowledge. This finding highlights the importance of providing structured and understandable health education in hospital settings.

The improvement in knowledge following the intervention is consistent with the important role of health education in health promotion. Patients who understand the relationship between lifestyle behaviours and disease risk may be better positioned to make informed decisions about diet, physical activity, tobacco avoidance and other preventive behaviours.

The findings are particularly relevant because WHO identifies unhealthy diet, physical inactivity, tobacco use and harmful alcohol use as important behavioural risk factors for NCDs.

The large improvement in knowledge from a mean score of 12.40 to 23.80 suggests that the structured educational approach was useful in communicating key health messages. Physical activity education is particularly important because insufficient physical activity is associated with increased risk of cardiovascular disease, diabetes and other adverse health outcomes.

Similarly, nutrition education is important because dietary patterns influence the risk of obesity, cardiovascular disease, diabetes and other chronic conditions. WHO recommends dietary patterns based on a variety of nutritious foods while limiting excessive salt, free sugars and unhealthy fats.

The study also emphasizes the role of nurses in preventive healthcare. Nurse-led education can be incorporated into outpatient consultations, inpatient care, discharge teaching and community follow-up.

MAJOR FINDINGS

The major findings of the illustrative study were:

1. The largest proportion of participants, 30.00%, belonged to the 31–40-year age group.
2. Males constituted 56.67% of the participants.
3. The majority of participants, 71.67%, were married.
4. Nearly two-thirds, 63.33%, belonged to nuclear families.
5. In the pre-test, 63.33% of patients had poor knowledge.
6. Only 6.67% had good knowledge before the intervention.
7. After nurse-led health education, 73.34% achieved good knowledge.
8. The mean pre-test knowledge score was 12.40 ± 4.10 .
9. The mean post-test knowledge score increased to 23.80 ± 3.20 .
10. The mean improvement in knowledge was 11.40 points.
11. The calculated paired t value was approximately 21.70.
12. The improvement in knowledge was statistically significant.
13. Education, income and previous health information were significantly associated with baseline knowledge in the illustrative analysis.

CONCLUSION

The present study was conducted to assess the effectiveness of nurse-led health education on knowledge regarding healthy lifestyle practices among patients in an urban hospital in Dahod.

The illustrative findings demonstrate a substantial improvement in knowledge following the nurse-led educational intervention. The percentage of patients with good knowledge increased from 6.67% before the intervention to 73.34% after the intervention, while the percentage with poor knowledge decreased from 63.33% to 3.33%.

The mean knowledge score increased from 12.40 to 23.80, with a mean gain of 11.40 points. The statistically significant paired t test result indicates that the intervention was associated with a significant improvement in knowledge.

Therefore, structured nurse-led health education can be considered a potentially useful health-promotion strategy for improving patients' understanding of healthy lifestyle practices. Regular health education by nurses should be integrated into hospital-based preventive and promotive services.

LIMITATIONS

1. The study used a relatively small sample of 60 participants.
2. Purposive sampling limits generalization of the findings.
3. The study was conducted in a single urban hospital.

RECOMMENDATIONS

1. Similar studies should be conducted with larger samples.
2. A randomized controlled design may be used in future research.
3. Studies should include both urban and rural populations.
4. Follow-up assessments should be conducted after 1, 3 and 6 months.

REFERENCES

1. World Health Organization. Healthy diet. Geneva: World Health Organization; 2018.
2. World Health Organization. Physical activity. Geneva: World Health Organization; 2024.
3. World Health Organization, Food and Agriculture Organization of the United Nations. What are healthy diets? Geneva: WHO; 2024.
4. World Health Organization. Noncommunicable diseases: India. WHO Country Office for India.
5. World Health Organization. Noncommunicable diseases. Geneva: World Health Organization.

6. World Health Organization. Physical activity fact sheet. Geneva: World Health Organization; 2021.
7. World Health Organization. Healthy diet – India. WHO Country Office for India.
8. World Health Organization. Self-care for health and well-being. Geneva: World Health Organization; 2026.
9. World Health Organization. Tackling NCDs: best buys and other recommended interventions for the prevention and control of noncommunicable diseases. 2nd ed. Geneva: WHO; 2024.
10. World Health Organization. Obesity and overweight. Geneva: World Health Organization; 2025.