

## HIGHLIGHT OF THIS ISSUE

### Community-based Promotion of Physical Activity in Nepal: Study Protocol for a Cluster-Randomized Controlled Trial

#### **Introduction:**

Nearly half of adults in semi-urban Nepal are physically inactive. Female Community Health Volunteers (FCHVs) could be key to promoting healthier lifestyles at the grassroots.

#### **Key Message:**

This cluster-randomized trial will test whether a 3-month, FCHV-led intervention can boost daily moderate to vigorous physical activity (MVPA) among adults in Pokhara.

#### **Methodology:**

A cluster-randomized trial in Pokhara tests if FCHV-led education boosts physical activity among 264 adults. MVPA, motivation, sleep, and health markers are measured.

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*Making non-communicable diseases a national priority*

# **NCD - RESEARCH ROUNDUP**

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## Roundup Summary

In May 2025, our search on non-communicable diseases and mental health-related literature in Nepal yielded seventeen published articles. Most of the studies covered non-communicable diseases, mental health, cancer, COPD, Health health, Sleep health, and physical activity.

### A multi-level qualitative exploration of factors influencing breast and cervical cancer screening uptake in Nepal

**DOI:** [https://doi.org/10.1200/JCO.2025.43.16\\_suppl.e13858](https://doi.org/10.1200/JCO.2025.43.16_suppl.e13858)

**Context:** Breast and cervical cancer are the leading causes of cancer deaths among women in Nepal.

**Methodology:** This qualitative study involved in-depth interviews with 28 participants across four municipalities in central Nepal. Interviews were guided by the Consolidated Framework for Implementation Research (CFIR).

**Key message:** The study found that awareness by FCHVs, government support, and peer networks encouraged screening, while barriers like limited resources, stigma, and cultural norms hindered it. Addressing these issues through community-based, culturally sensitive approaches is essential to improve cancer screening.

### Exploring barriers to access of mental health services for adolescents with depression in urban Nepal: from mental healthcare providers' perspectives

**DOI:** <https://doi.org/10.1136/archdischild-2025-rcpch.330>

**Context:** Adolescents across Nepal face rising mental health challenges, especially depression, but their access to care is hindered by social stigma, lack of knowledge, and limited resources.

**Methodology:** Semi-structured interviews were conducted with nine mental health professionals in Pokhara, selected through purposive sampling. Interviews were recorded in May 2023.

**Key message:** Improving adolescent mental healthcare requires tackling low awareness, stigma, and lack of services through school education, social media outreach, and better-trained providers. A combined effort is essential to overcome these challenges.

## Psychological Counselling Need among Nepalese Adolescents: A Cross-Cultural Study

**DOI:** [10.56011/mind-mri-141-20253](https://doi.org/10.56011/mind-mri-141-20253)

**Context:** Adolescence is a critical period for identity development and emotional well-being, yet many face psychological challenges.

**Methodology:** This survey was conducted among 344 students from Koshi and Karnali Provinces using the Psychological Counseling Need Scale (PCNS) using purposive sampling.

**Key message:** The study found that 39.2% of adolescents surveyed required psychological counseling. Age, education level, and religion were linked to counseling needs. These findings highlight the importance of expanding access to adolescent counseling services tailored to socio-demographic factors.

## Community-based promotion of physical activity in Nepal: study protocol for a cluster-randomized controlled trial

**DOI:** <https://doi.org/10.1186/s13063-025-08885-9>

**Context:** Physical inactivity is a leading global health risk. In Nepal's semi-urban areas, nearly half of the population is insufficiently active. Female Community Health Volunteers (FCHVs), known for their grassroots health work, could play a role in promoting physical activity.

**Methodology:** This open-label cluster-randomized controlled trial will recruit 264 adults from Pokhara to evaluate a three-month, FCHV-led educational intervention. Physical activity will be measured using accelerometers and the GPAQ before and after a six-month period.

**Key message:** The study aims to assess whether FCHVs can effectively increase daily moderate to vigorous physical activity (MVPA) among adults. Secondary outcomes include changes in motivation, mental health, cardiometabolic indicators, and sleep. Findings will provide crucial evidence for scaling community-based physical activity promotion in Nepal.

## Occupational stress among the nurses working in a Medical College Hospital in Nepal

**DOI:** [10.4103/ijp.ipj\\_20\\_25](https://doi.org/10.4103/ijp.ipj_20_25)

**Context:** Nursing is a demanding profession that poses risks to physical and mental health, which can negatively affect the quality of care and increase medical errors.

**Methodology:** This was a descriptive cross-sectional study conducted among 311 nurses in a medical college hospital using a self-designed questionnaire with the Expanded Nursing Stress Scale (ENSS).

**Key message:** The study found that 41.2% of nurses experienced occupational stress, with the highest stress related to issues with supervisors, workload, and uncertainty about treatment. Stress was notably higher among nurses working in intensive care units. There is a need for institutional strategies to reduce work-related stress and support nurses' well-being.

## Status of Hypertension and Its Associated Factors Among Undergraduate Medical Students of a Private Medical College in Lalitpur District

**DOI:** <http://www.kumj.com.np/issue/89/85-90.pdf>

**Context:** Hypertension is a growing health concern, even among younger populations like medical students, who often experience high stress, unhealthy diets, and lack of exercise—all contributing risk factors

**Methodology:** This was a cross-sectional study conducted from August to November 2023 among 500 undergraduate medical students and interns. Total enumeration sampling was used, and the American Heart Association's 2023 guidelines were applied.

**Key message:** Nearly half (46.8%) of the students were hypertensive, with a much higher prevalence among males. Obesity also significantly increased the risk of hypertension. These results point toward a silent but serious health issue in student populations and call for regular screening and promotion of healthy lifestyles within medical colleges.

## Awareness, Practice, and Barriers Regarding Cervical Cancer Screening Among Women of Kageshwori Manohara Municipality, Nepal

**DOI:** <https://doi.org/10.1155/ogi/5325540>

**Context:** Cervical cancer remains the most common cancer among Nepalese women, despite being preventable. Awareness and access to screening are crucial, yet many women remain uninformed or face barriers.

**Methodology:** This community-based cross-sectional study included 249 women aged 30–60 from Kageshwori Manohara Municipality. Systematic random sampling and face-to-face interviews were used to gather data.

**Key message:** Only 10.4% of women had adequate awareness of cervical cancer screening, and 38.6% had ever been screened. Key barriers included the absence of symptoms, lack of knowledge, and embarrassment. Awareness was significantly linked to age, education, and number of children. The study recommends community campaigns and screening camps to improve knowledge and practice.

### **Social determinants and risk factors associated with non-communicable diseases among urban population in Nepal: A comparative study of poor, middle and rich wealth categories of urban population using STEPS survey**

**DOI:**<https://doi.org/10.1371/journal.pone.0307622>

**Context:** Urban populations in Nepal are facing a rising burden of non-communicable diseases (NCDs) such as hypertension, diabetes, and obesity, influenced by disparities in lifestyle, education, and income.

**Methodology:** Data from the 2019 STEPS survey were analyzed, involving 3,460 urban individuals aged 15–69. Bivariate and multivariate analyses were used to assess associations between social determinants and NCD outcomes across different wealth categories.

**Key message:** Obesity and high cholesterol were strongly associated with hypertension and diabetes, especially in certain regions and among men. The study highlights the need for targeted, equitable health interventions based on region and socioeconomic status.

### **Effectiveness of a Self-Instructional Module on Knowledge Regarding Self-Care Management among Patients with Chronic Kidney Disease in Nepal**

**DOI:**<https://doi.org/10.3126/amrj.v4i1.78681>

**Context:** Chronic Kidney Disease (CKD) is a growing public health problem in Nepal, with rising prevalence in urban areas.

**Methodology:** A pre-experimental one-group pretest-posttest study was conducted among 160 CKD patients at Bheri Hospital. A structured questionnaire measured knowledge before and six weeks after exposure to a self-instructional module (SIM).

**Key message:** The SIM led to a significant improvement in knowledge, with mean scores rising from 51.8 to 62. After the intervention, over two-thirds of participants achieved good knowledge levels. The findings support the use of structured educational tools like SIMs in improving patient understanding and encouraging better self-care in CKD management.

## Sleep Quality And Obesity: A Community Based Cross-Sectional Study

**DOI:**<https://doi.org/10.3126/jucms.v13i01.78039>

**Context:** Obesity and poor sleep quality are growing global health concerns, yet limited research has examined their relationship in local community settings.

**Methodology:** This was a community-based cross-sectional study that was carried out in Ranigaun-2, Bhairahawa, between April and August 2023. A total of 76 participants were surveyed via door-to-door visits. Sleep quality assessed using the Pittsburgh Sleep Quality Index (PSQI).

**Key message:** While poor sleep quality was prevalent among participants, affecting around 60%, no significant association was found between obesity indicators (BMI, WHR) and sleep parameters. However, increasing age was linked to longer sleep latency, poorer sleep scores, and lower sleep efficiency. The findings suggest that age, rather than obesity, may be a more important determinant of sleep quality in this community.

## Sex Differences on Behavioural Risk Factors of Hypertension among Rural Community Dwellers, Nepal: A Cross-Sectional Survey

**DOI:**<https://doi.org/10.3126/nhj.v22i1.77572>

**Context:** Hypertension is on the rise in developing countries due to lifestyle factors such as alcohol use, tobacco, inactivity, and poor diets.

**Methodology:** A cross-sectional survey was conducted in Parsauni Rural Municipality using the WHO STEPs questionnaire. A total of 596 adult respondents were selected using a probability proportionate to size (PPS) sampling method. In-person interviews were conducted alongside anthropometric measurement.

**Key message:** The study revealed gendered patterns in risk behaviors: more men currently used tobacco, while more women were past smokers. Notably, women had higher odds of diagnosed hypertension. These findings highlight the need for inclusive health programs that address risky behaviors in both men and women.

## Noncommunicable disease risk factors and predictors of hypertension among Gurkha veterans in Nepal: a community-based cross-sectional study

**DOI:**<https://doi.org/10.1186/s12889-025-22919-6>

**Context:** Retired Gurkha veterans in Nepal represent a unique group with distinct occupational and lifestyle experiences, yet they are often excluded from non-communicable disease (NCD) research.

**Methodology:** This was a community-based cross-sectional study conducted in Palpa district, Lumbini Province, Nepal, in 2019 using multistage sampling technique among 189 Gurkha veterans.

**Key message:** Nearly half of the veterans were hypertensive, and significant predictors included daily alcohol consumption, physical inactivity, and being overweight or obese. These findings underscore the urgent need for targeted community-level interventions to manage and prevent hypertension among ex-soldiers, accounting for their unique health profiles and lifestyle challenges.

## Junk Food Consumption Pattern among Undergraduate Students in Urban Regions of Nepal

**DOI:**<https://doi.org/10.3126/barunj.v2i01.78311>

**Context:** Junk food consumption is a growing public health issue among Nepal's urban youth, with implications for both individual health and broader food security.

**Methodology:** A cross-sectional survey was conducted in two private colleges in Kathmandu using stratified random sampling to select 205 undergraduate students. The Theory of Planned Behavior (TPB) framework guided the analysis. Ordinal logistic regression was used to determine factors influencing junk food consumption frequency.

**Key message:** The study found that convenience-related factors and religion significantly influenced junk food consumption, whereas age, sex, and academic background did not. These results validate the TPB framework by showing that behavior is shaped more by beliefs and accessibility than demographics and calls for multi-level interventions that regulate availability and promote healthier food choices.

## Evaluating the Role of Community Awareness and Screening Programs in Reducing the Breast Cancer Mortality Rates in Nepal

**DOI:**<https://doi.org/10.3126/barunj.v2i01.78306>

**Context:** Breast cancer remains a leading cause of cancer deaths among women in Nepal. Although early detection significantly reduces mortality, cultural, social, and economic barriers continue to limit participation in screening programs, particularly in underserved communities.

**Methodology:** This study reviewed community-based breast cancer awareness and screening initiatives across both urban and rural Nepal. It analyzed the reach and effectiveness of public health campaigns and mobile screening units, assessing awareness levels, access to services, and challenges faced during implementation.

**Key message:** Awareness and screening have improved in urban areas, but rural populations still face major barriers such as stigma, financial hardship, and poor infrastructure. The study underscores the need for culturally sensitive outreach, strengthened healthcare systems, and increased government support to improve early detection and outcomes, especially in rural regions.

## **Self-perceived stress and associated factors among preclinical science students in a medical college in Central Nepal**

**DOI:**<https://doi.org/10.1186/s12909-025-07182-y>

**Context:** University students, particularly those in medical fields, commonly experience high stress levels, which can impact their academic performance and well-being.

**Methodology:** An analytical cross-sectional study was conducted among 247 first- and second-year MBBS students at Kathmandu University. Stress levels were assessed using the Perceived Stress Scale, while a separate questionnaire identified major stressors. Statistical tests were used to explore associations between stress and demographic or academic variables.

**Key message:** High stress was prevalent, especially among second-semester students and those with a history of anxiety or depression. Academic workload was the main stressor, and female students were more likely to report high stress levels. These findings highlight the urgent need for mental health support and stress management programs tailored to medical students.

## **Physical activity, diet, medication adherence, blood glucose monitoring and foot care in people with type 2 diabetes in Nepal**

**DOI:**<https://doi.org/10.1016/j.ssmhs.2025.100083>

**Context:** As the prevalence of Type 2 Diabetes Mellitus (T2DM) rises in Nepal, effective self-care behaviors are essential for disease management.

**Methodology:** A cross-sectional survey was conducted among 481 adults with T2DM in Kavrepalanchowk and Nuwakot districts. Self-care practices were assessed through structured interviews. Data were analyzed using multiple logistic regression to identify significant predictors of self-care behaviors.

**Key message:** While physical activity was relatively common (80%), adherence to dietary changes, medication, glucose monitoring, and foot care remained low. Factors such as age, education, religion, tobacco and alcohol use, and comorbidities influenced these behaviors. The study emphasizes the need for culturally adapted diabetes education and self-management programs.

## Ensuring continuum of care to address the hidden epidemic of high blood pressure in rural eastern Nepal

**DOI:** [10.1097/OJH.0001116560.67600.c2](https://doi.org/10.1097/OJH.0001116560.67600.c2)

**Context:** The KHDC program in Nepal provides early detection and management of NCDs, including hypertension, in remote areas. Understanding factors that affect blood pressure control during follow-ups can guide program improvements and policy planning.

**Methodology:** In three wards of a remote municipality in Province Koshi, Female Community Health Volunteers (FCHVs) screened 3,251 individuals for NCD risks between April–July 2024. Those diagnosed with hypertension were referred to healthcare centers for follow-up, where blood pressure control was tracked and associated factors were analyzed.

**Key message:** Only a fraction of hypertensive patients achieved BP control during follow-ups, and many were lost to follow-up. Older age, high initial BP, and multiple NCD diagnoses were significant predictors of poor BP control. The study highlights the effectiveness of community screening but calls for integrated follow-up systems and stronger linkages between community and primary care to sustain treatment outcomes.



We thank you all for joining our initiative to promote evidence-informed policymaking and promote public awareness of the non-communicable disease (NCDs) and related issues in Nepal- we are committed to staying up to date with the latest NCD research in Nepal.

This issue covers a summary of scientific publications on NCDs in Nepal for the month of May 2025.

Should you have colleagues who'd like to receive these updates via email ([ncdwatchnepal@gmail.com](mailto:ncdwatchnepal@gmail.com))

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Publications



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