



**NCD Watch Nepal**

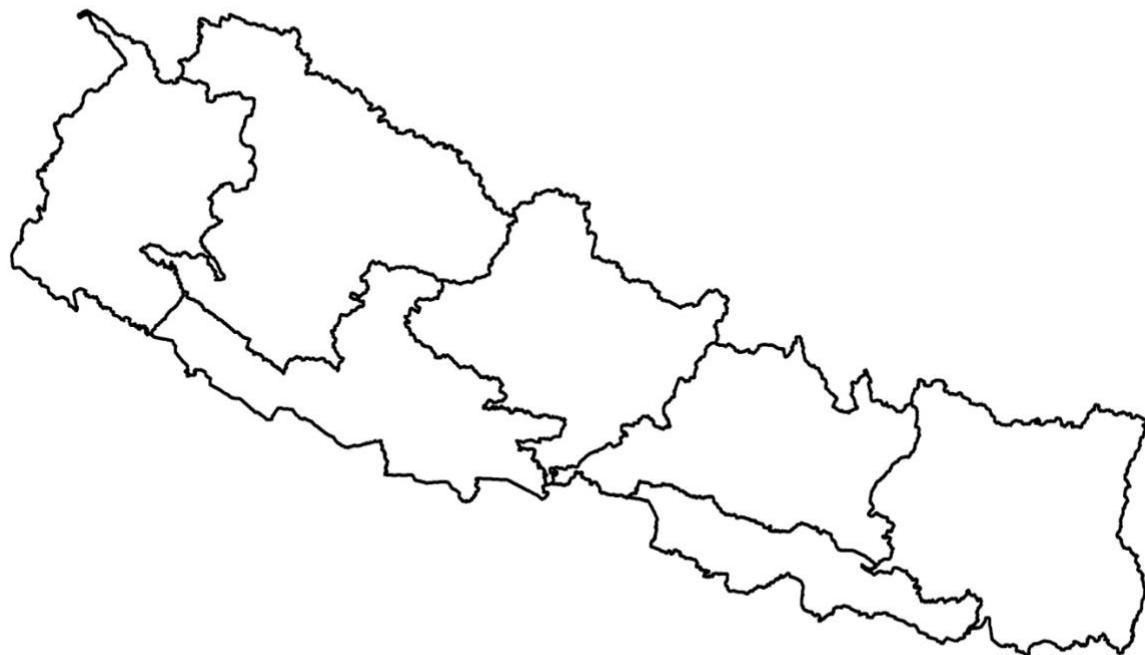
## Non-communicable Diseases in Nepal

**Research Roundup June 2022**

*Making non-communicable diseases a national priority*

# **Non-communicable Diseases in Nepal-Research Roundup**

**June 2022**



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## Roundup Summary

For the month of June 2022, our scoping on non-communicable diseases in Nepal found 15 published articles. Most of the studies were cross-sectional, covering mental health, hypertension, COPD, diabetes, and cardiovascular disease.

### **Prevalence and factors associated with symptoms of depression, anxiety and stress among traffic police officers in Kathmandu, Nepal: a cross-sectional survey**

**DOI:** <https://doi.org/10.1136/bmjopen-2022-061534>

**Context:** Despite the various health risks associated with the profession of the traffic police, one of the major aspects, that is, psychological well-being, remains unexplored.

**Methodology:** This cross-sectional study was conducted among 300 traffic police officers working under the different traffic units of Kathmandu Valley, Nepal.

**Key message:** Altogether, 124 (41.3%) traffic police officers had symptoms of depression, 141 (47%) had anxiety symptoms, and 132 (44%) had symptoms of stress. Smoking and longer working hours were associated with an increased likelihood of experiencing symptoms of depression, anxiety, and stress, and lack of physical exercise was associated with an increased chance of depressive symptoms.

### **Socioeconomic risk factors of hypertension and blood pressure among persons aged 15-49 in Nepal: a cross-sectional study**

**DOI:** <http://dx.doi.org/10.1136/bmjopen-2021-057383>

**Context:** Hypertension is a major risk factor for cardiovascular diseases (CVDs) and a significant contributor to the growing burden of non-communicable diseases (NCDs) in low-income and lower-middle-income countries (LMICs).

**Methodology:** This study analyzed the nationally representative data (9827 adults between the ages of 15 and 49 years) from the 2016 Nepal Demographic and Health Survey.

**Key message:** The prevalence of hypertension was found to be 36%. This study found substantial disparities in hypertension prevalence across ethnic groups, occupational status, and food security status. Janjatis (AOR):1.34, CI: 1.12-1.59), Other Terai castes (AOR: 1.38, CI: 1.03-1.84), Muslim and other ethnicities (AOR: 1.64, CI: 1.15-2.33), and Dalits (AOR: 1.26, CI: 1.00-1.58) had higher odds of hypertension.

## Diabetes Prevalence and Associated Risk Factors among Women in a Rural District of Nepal Using HbA1c as a Diagnostic Tool: A Population-Based Study

**DOI:** <https://doi.org/10.3390/ijerph19127011>

**Context:** Low-income countries like Nepal are facing a rapid shift from communicable to non-communicable diseases (NCDs); type 2 diabetes (T2D) is one of the fastest-growing NCDs.

**Methodology:** A cross-sectional survey was conducted in 2012–2013 among 1162 non-pregnant, married women in Kavre, a rural district of Nepal. HbA1c  $\geq 6.5\%$  (48 mmol/mol) was used as diagnostic criterion for diabetes.

**Key message:** The prevalence of diabetes and prediabetes was 13.5% and 38.5%, respectively. Aging, instant noodles and milk intake, and vegetarian food (ns) were associated with increased risk for diabetes.

## Adolescent perspectives on depression as a disease of loneliness: a qualitative study with youth and other stakeholders in urban Nepal

**DOI:** <https://doi.org/10.1186/s13034-022-00481-y>

**Context:** Adolescence represents a time of increased vulnerability for developing depression. The incidence of depression peaks during this period and can continue as a lifelong burden if left unaddressed.

**Methodology:** This was a qualitative study conducted in Nepal. Key-informant interviews (KII) and focus group discussions (FGD) with adolescents, parents, educators, health workers, social workers, and policymakers were conducted.

**Key message:** Loneliness was a core element of the adolescent experience of depression. This study identified perceived causes of depression as (1) Family issues: neglectful or absent parents, relationship problems, and family discord; (2) Peer relationships: romantic problems, bullying, and friendship problems; and (3) Social media: social comparison, popularity metrics, cyberbullying, and leaking of personal information.

## **Implementation strategy in collaboration with people with lived experience of mental illness to reduce stigma among primary care providers in Nepal (RESHAPE): protocol for a type 3 hybrid implementation effectiveness cluster randomized controlled trial**

**DOI:** <https://doi.org/10.1186/s13012-022-01202-x>

**Context:** There are increasing efforts to integrate mental health services into primary care settings in low- and middle-income countries. However, commonly used approaches to train primary care providers (PCPs) may not achieve the expected outcomes for improved service delivery.

**Methodology:** A type 3 hybrid implementation-effectiveness cluster randomized controlled trial will evaluate the implementation-as-usual training for PCPs compared to an alternative implementation strategy to train PCPs, entitled Reducing Stigma among Healthcare Providers (RESHAPE).

**Key message:** This study will advance the knowledge of stigma reduction for training PCPs in partnership with people with lived experience of mental illness (PWLE). This collaborative approach to training has the potential to improve diagnostic competencies.

## **Psychological Distress and Coping among Pregnant Women during the COVID 19 Pandemic**

**Link:** <http://www.jnhrc.com.np/index.php/jnhrc/article/view/4063>

**Context:** Mental health of pregnant individuals has been profoundly affected by the COVID-19 pandemic.

**Methodology:** A descriptive cross-sectional study was conducted from May 2020 to July 2020 among 115 pregnant women attending the obstetric units of a tertiary care center. Covid-19 Peritraumatic Distress Index and Brief COPE inventory were used to collect the data.

**Key message:** Psychological distress was found in 2.6% of the participants. Psychological distress was significantly associated with occupation, fear of ANC visits, a visit to the hospital for other health problems, and fear of being alone or without help around delivery. Emotion-focused coping was the most commonly used coping strategy among pregnant women.

## Psychosocial Well-Being of People Living with HIV/AIDS in Chitwan District, Nepal: a Mixed Method Study

**Link:** <http://jnhrc.com.np/index.php/jnhrc/article/view/3993>

**Context:** Along with many physical issues associated with HIV/AIDS, there are socio-psychological ill effects, including depression, anxiety, and stress.

**Methodology:** This was a mixed method study conducted among 288 patients undergoing antiretroviral therapy at Bharatpur Hospital, Nepal.

**Key message:** Among the participants, about 43% had some level of depression, and 98% had a very low level of anxiety. Emotional disturbances and fear of vulnerability, stigmatization, and dealing with difficulties were the major problems in these groups. Clinicians and health and AIDS professionals should routinely screen for depression to promote psychological health in HIV/AIDS-positive individuals.

## Self-care management and its associated factors among patients with hypertension in Nepal

**Link:** <https://jcmc.com.np/jcmc/index.php/jcmc/article/view/637>

**Context:** Self-care practice is essential for blood pressure control and reduction of hypertension complications of cardiovascular and renal diseases.

**Methodology:** The cross-sectional study was conducted among 386 participants diagnosed with hypertension at Kathmandu University Hospital, Dhulikhel, Nepal. Hypertension Self-Care Profile (HTN-SCP) and Multidimensional Scale of Perceived Social Support (MSPSS) were used to assess self-care management and perceived social support.

**Key message:** It was found that almost 53 % of the participants had poor self-care practices. Religion, educational level, area of residence, income, and perceived social support were significantly associated with the level of self-care.

## **Awareness and Knowledge of Oral Cancer in Patients Visiting Nobel Medical College Teaching Hospital**

**Link:** <https://www.nepjol.info/index.php/JoNMC/article/view/45957>

**Context:** Lack of awareness about risk factors plays a vital role in increasing the incidence of oral cancer.

**Methodology:** This is a descriptive cross-sectional study conducted among 300 patients in Nobel Medical College Teaching Hospital, Biratnagar, Nepal.

**Key message:** Among the respondents, 65% had heard about oral cancer. Also, 70.3% and 62.6%, respectively patients were able to identify tobacco and smokeless tobacco as a risk factor correctly, and 64% and 53.5%, respectively, were able to correctly identify white patch and red patch as signs and symptoms of oral cancer.

## **Medication adherence among chronic obstructive pulmonary disease patients: an interventional study in a tertiary care hospital of Nepal**

**Link:** <https://www.nepjol.info/index.php/nmcj/article/view/46021>

**Context:** Low medication adherence is common in patients with COPD.

**Methodology:** This was an interventional study; 114 patients were divided randomly into two groups: the intervention group (patients who received an educational intervention) and the control group (patients who received no educational intervention).

**Key message:** There was a significant improvement in the medication adherence scale score in the intervention group compared to the control group, and the level of adherence was found to be high in the intervention group after one-month follow-up. The major reasons for medication non-adherence were financial problems and symptomatic relief in both groups.

## Perceived Barriers to Management of Gestational Diabetes Mellitus (GDM) and Recommendations for Developing a Mobile App for GDM

**DOI:** <https://doi.org/10.1093/cdn/nzac061.007>

**Context:** Mobile technology is increasingly used to augment the management and treatment of gestational diabetes mellitus (GDM). However, its use is limited in low and middle-income countries like Nepal.

**Methodology:** This was a qualitative study. A total of 12 women with GDM diagnosis were recruited from a tertiary level hospital in Nepal.

**Key message:** This study identified facilitators to GDM management at different levels: individual level (e.g., concern for baby's health), family level (e.g., accompaniment to hospital visits, emotional support), and health system level (e.g., universal GDM screening, team approach to management). Notable barriers included inadequate time for diet/lifestyle counseling during hospital visits, abrupt change in diet/lifestyle from pre- to post-GDM diagnosis, misconceptions around diet and physical activity, as well as social/cultural barriers, including food-centered traditions and festivities, and lack of decision-making power in the household.

## Reliability and Validity of a Global Physical Activity Questionnaire Adapted for Use Among Pregnant Women in Nepal

**DOI:** <https://doi.org/10.1093/cdn/nzac061.001>

**Methodology:** This study evaluated the reliability and validity of an adapted version of the Global Physical Activity Questionnaire (GPAQ) among a total of 101 pregnant women in Dhulikhel, Nepal. Intra-class correlation coefficients (ICC) and Spearman's rho were used to assess the reliability and validity of the GPAQ.

**Key message:** On average, total moderate to vigorous physical activity (MVPA) was higher by 50 minutes/week in the 2nd trimester as compared to the 3rd trimester. Based on the World Health Organization (WHO) guidelines, almost all participants were classified as having a low or moderate level of PA. This study concluded that the modified GPAQ appears to be a reliable and valid tool for assessing moderate PA, but not SB, among pregnant women in Nepal.

## Applying a User-Centric Design Approach to Develop a Mobile Application for Management and Treatment of Gestational Diabetes in Nepal

**DOI:** <https://doi.org/10.1093/cdn/nzac061.097>

**Context:** Mobile apps can aid with the management of Gestational Diabetes Mellitus (GDM) by providing patient education and reinforcing daily glucose monitoring and diet/lifestyle modification.

**Methodology:** A multidisciplinary team including experts in GDM, mHealth, and behavior and implementation sciences, as well as health providers and patients at Dhulikhel Hospital, contributed to the development of the GDM-DH app.

**Key message:** The GDM-DH app supports GDM self-management by providing health education and allowing patients to record and self-monitor blood glucose levels, carbohydrate intake, physical activity, and gestational weight gain.

## Antibiotics Use among Patients with Acute Exacerbation of Chronic Obstructive Pulmonary Disease in the Department of Internal Medicine of a Tertiary Care Centre: A Descriptive Cross-sectional Study

**Link:** <https://www.jnma.com.np/jnma/index.php/jnma/article/view/7512>

**Context:** Antibiotics used in Acute exacerbation of chronic obstructive pulmonary disease prevent severe deterioration and treatment failure.

**Methodology:** A descriptive cross-sectional study was conducted among 108 patients with acute exacerbation of Chronic Obstructive Pulmonary Disease admitted to the Department of Internal Medicine of a tertiary care center in Nepal.

**Key message:** The prevalence of antibiotic use among study participants was 98.15%. Penicillin was the most used antibiotic group.

## Role of PET-CT in the evaluation of different types of cancer: A retrospective study of cancer patients at a diagnostic center in Nepal

**Link:** <https://jcmc.com.np/jcmc/index.php/jcmc/article/view/1099>

**Context:** Fluorodeoxyglucose (FDG) PET (Positron Emission Tomography) has the advantage of revealing biochemical and physiological variations in tumors.

**Methodology:** A retrospective cross-sectional study involving 545 patients with different cancers from all over Nepal was performed at Kundalini Diagnostic Center, Nepal, from July 2019 to March 2020.

**Key message:** This study concluded that a PET-CT scan is a valuable tool for assessing the characteristics of different types of cancer. However, differentiation of primary or a second primary or metastasis may not be possible.



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 summary of scientific publications on NCDs in Nepal for the month of June 2022.

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

Individual summary of round-up is also available on our social media outlets:

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**Let's unite to beat NCDs.**  
*#actOnNCDs #beatNCDs*