

# Non-communicable Diseases in Nepal Research Roundup

*Making non-communicable diseases a national priority*

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# Non-communicable Diseases in Nepal-Research Roundup

**July 2023**



**Publications** **NCD Watch Nepal** **NCD Watch Nepal**



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## Roundup Summary

In July 2023, a scoping review of the literature on non-communicable diseases and mental health in Nepal yielded 18 articles. Most of the studies were focused on the topics of diabetes, diseases, mental health, chronic obstructive diseases and chronic diseases..

### **Burden of chronic kidney disease in Nepal: An analysis of the burden of disease from 1990 to 2019**

**DOI:** <https://doi.org/10.1371/journal.pgph.0001727>

**Context:** Chronic kidney disease (CKD) has emerged as one of the major public health concerns. CKD increases the prevalence of its correlates such as obesity, diabetes, and hypertension.

**Methodology:** An analysis on prevalence, mortality, years lived with disability, years of life lost, and disability adjusted life years was done by using the Global Burden of Disease (GBD) study 2019.

**Key message:** In 2019, there were 1,895,080 prevalent cases of CKD with 5,108 deaths, and a total of 168,900 DALYs were attributable to CKD. Age-standardized prevalence rate of CKD increased from 5,979.1 cases per 100,000 population (95% UI: 5539.7, 6400.4) in 1990 to 7,634.1 cases per 100,000 population (95% UI: 7138.8, 8119.4) in 2019 with higher prevalence in males.

### **Spectrum of thyroid disorders in patients with type-2 diabetes mellitus**

**DOI:** <https://pubmed.ncbi.nlm.nih.gov/37489678/>

**Context:** Diabetes mellitus and thyroid disorders are the two most common endocrine disorders and they mutually affect each other.

**Methodology:** This was a cross-sectional study conducted among 204 type-2 diabetes mellitus patients visiting the internal medicine department of a tertiary center located in Kathmandu, Nepal.

**Key message:** The prevalence of thyroid disorders in patients with type-2 diabetes mellitus was 27.94%. Subclinical hypothyroidism, which occurred in 14.71% of patients, was the most common thyroid disorder.

### **Suicidal Ideation Among Medical and Nursing Students**

**DOI:** <https://pubmed.ncbi.nlm.nih.gov/37489667/>

**Context:** Suicidal ideation is a major predictor of suicide attempts.

**Methodology:** An online survey was carried out among a cohort of medical and nursing students of Lumbini Medical College.

**Key message:** Lifetime suicidal ideation was present in 20.6%(n=62) medical and 13.95%(n=42) nursing students. Periodic motivational speeches and counselling sessions during all the semesters of professional schooling would help decrease suicidal ideation.

### **Sustainability of a 12-month lifestyle intervention delivered by community health workers in reducing blood pressure in Nepal: 5-year follow-up of the COBIN open-label, cluster randomized trial**

**DOI:** [https://doi.org/10.1016/S2214-109X\(23\)00214-0](https://doi.org/10.1016/S2214-109X(23)00214-0)

**Context:** The sustainability and scalability of limited-duration interventions in low-income and middle-income countries remain unclear.

**Methodology:** The Community-Based Intervention for Control of Hypertension in Nepal (COBIN) trial was a non-blinded, cluster-randomized trial done in Kaski, Nepal.

**Key message:** Lifestyle counseling and blood pressure monitoring by community health workers is effective in substantially reducing blood pressure while adults are being monitored in a trial but, following cessation of the intervention, this benefit is not maintained in the long term, with potential for harm.

### **Alcohol use and internal migration in Nepal: a cross-sectional study**

**DOI:** <https://doi.org/10.1136/jech-2022-220030>

**Context:** Alcohol use is a leading cause of disease in low- and middle-income countries (LMICs). LMICs are also experiencing unprecedented levels of internal migration, potentially increasing mental stress, changing social restrictions on drinking, and increasing alcohol availability.

**Methodology:** A representative sample of 7435 individuals, aged 15–59 from Nepal were interviewed in 2016–2018 (93% response rate) with clinically validated measures of alcohol use and disorders and life history calendar measures of lifetime migration experiences.

**Key message:** Internal migrants are at increased risk to transition into alcohol use and disorders. Support services for internal migrants could prevent problematic alcohol use among this underserved population.

## **Readiness of health facilities to provide services related to non-communicable diseases in Nepal: evidence from nationally representative Nepal Health Facility Survey 2021**

**DOI:** <https://doi.org/10.1136/bmjopen-2023-072673>

**Context:** Non communicable diseases (NCDs) services have been included in basic healthcare in Nepal although the service availability and preparedness remain very limited.

**Methodology:** We analyzed data from nationally representative Nepal Health Facility Survey 2021 to determine the readiness of HFs for cardiovascular diseases (CVDs), diabetes mellitus (DM), chronic respiratory diseases (CRDs) and mental health (MH)-related services using Service Availability and Readiness Assessment Manual of the WHO.

**Key message:** A total of 2.3%, 3.8%, 3.6% and 3.3% HFs were ready to deliver CRDs, CVDs, DM and MH-related services, respectively. HFs managed by local level were less likely to be ready to provide all NCD-related services compared with federal/provincial hospitals.

## **Maternal mental health and economic autonomy in lowland rural Nepal: Do parents-in-law provide constraint or support?**

**DOI:** <https://doi.org/10.1093/emph/eoad020>

**Context:** In patrilocal societies, married women typically co-reside with their parents-in-law, who may act in their son's reproductive interests. These relationships may shape maternal mental health and autonomy.

**Methodology:** We analysed data from 444 households in rural lowland Nepal. Maternal mental health was assessed by General Health Questionnaire.

**Key message:** Co-residence of parents-in-law and husbands was associated with contrasting patterns of maternal mental health and economic autonomy.

## **Community-based lifestyle intervention for diabetes (Co-LID study) management rural Nepal: study protocol for a clustered randomized controlled trial**

**DOI:** <https://doi.org/10.1186/s13063-023-07451-5>

**Context:** Type 2 diabetes mellitus (T2DM) has increased globally; with a disproportionate burden in South and Southeast Asian countries, including Nepal.

**Methodology:** We will conduct a cluster randomized control trial to evaluate the effectiveness of community based culturally appropriate lifestyle intervention in improving T2DM outcomes. The trial will be conducted in 30 randomly selected healthcare facilities from two purposely selected districts (Kavrepalanchowk and Nuwakot districts) of Bagmati province, Nepal.

**Key message:** This study will provide tested approaches for culturally adapting T2DM interventions in the Nepalese context. The findings will also have practice and policy implications for T2DM prevention and management in Nepal.

## How effectively are social accountability mechanisms being applied in mental health services within the newly federalized health system of Nepal? A multi-stakeholder qualitative study

**DOI:** <https://doi.org/10.1186/s12913-023-09765-1>

**Context:** Strengthened citizen-driven social accountability (SA) is an effective strategy for building equitable health systems and providing quality healthcare services to all, yet SA in mental health is an under-researched area in Nepal.

**Methodology:** This case study research used a qualitative approach to data collection. We conducted Key Informant Interviews (KII), and Focus Group Discussions (FGDs) with local stakeholders including people with experience of mental health problems.

**Key message:** Mental health is insufficiently addressed by the health policies in Nepal, and SA mechanisms appeared to be rarely institutionalized to promote good governance and provide effective healthcare services to vulnerable populations.

## Depression and Its Determinants among Postpartum Mothers Attending at Universal College of Medical Sciences and Teaching Hospital, Bhairahawa, Rupandehi, Nepal

**DOI:** <https://doi.org/10.1155/2023/1331641>



**Context:** Postpartum depression is a serious mental health issue linked to maternal morbidity and negative effects for infant's normal growth, development, and well-being.

**Methodology:** A hospital-based cross-sectional study was conducted among 173 postpartum mothers (<6 weeks postdelivery) who were receiving care either at the postnatal ward or immunization clinic of Universal College of Medical Sciences and Teaching Hospital in Bhairahawa, Rupandehi district, Nepal.

**Key message:** The prevalence of postpartum depression was 20.2% among mothers attending a tertiary hospital in Nepal. Sex of newborn, mother's and spouse's education, intention of pregnancy, ANC visits, and pregnancy-induced health problems were found to be significantly associated with postpartum depression.

## Study of Adverse Drug Reaction of Anti-Depressants in Adult Patients: A Nepalese Perspective

**DOI:** <https://www.mdpi.com/2673-5318/4/3/22>

**Context:** Antidepressants are commonly used to manage depression as well as other related disorders, such as anxiety and somatoform disorders.

**Methodology:** This study was a retro-prospective, observational study consisting of 117 adult patients under antidepressant medication.

**Key message:** The most common conditions for which antidepressants were prescribed were depression (49.5%), anxiety disorder (31.6%), and somatoform disorder (13.6%). Amitriptyline was the most commonly used medication in monotherapy (64.1%), followed by escitalopram and sertraline.

## Assessment of quality of life and dietary practices of Type2 Diabetes patients in Bharatpur Metropolitan City, Chitwan

**DOI:** <https://ijphap.com/index.php/home/article/view/29>

**Context:** Diabetes is associated with changes in lifestyle and resulting in less physical activity and increased obesity.

**Methodology:** A cross-sectional study was conducted among the type2 diabetes patients. Consecutive sampling technique was used for the selection of participants.

**Key message:** The higher population of diabetes was observed among age group 50-59 and majority of participants were female. More than half of the participants had good quality of life and nearly half of the participants had good dietary practices.

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was the most commonly used medication in monotherapy (64.1%), followed by escitalopram and sertraline.

### **Rheumatic heart disease in school-attending Nepalese children: A descriptive analysis of the national heart screening database**

**DOI:** <https://doi.org/10.1016/j.ijh.2023.07.003>

**Context:** Rheumatic Heart Disease (RHD) remains a significant public health problem with high morbidity and mortality in children and young adults from lower-middle income countries like Nepal.

**Methodology:** We performed a cross-sectional descriptive analysis of a nationally representative database of Nepal Heart Foundation (NHF) national RHD screening programme which included school-attending Nepalese children between five and sixteen years of age.

**Key message:** The overall prevalence of RHD was 2.22 cases per 1000 school-attending children. Among the provinces, *Karnali* had the highest prevalence of RHD (3.45 per 1000). Among the districts screened, Kalikot had the highest RHD prevalence (5.47 per 1000).

### **Prevalence of Diabetes and Dyslipidemia Patterns amongst Hypertensive Patients in a Tertiary Cardiac Centre in Kathmandu, Nepal**

**DOI:** <https://doi.org/10.4236/wjcd.2023.137038>

**Context:** Dyslipidemia and hypertension are independent cardiovascular risk factors that are linked by insulin resistance and they require follow-up and more aggressive therapeutic strategies.

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**Methodology:** A cross-sectional observational study was done on patients with hypertension for duration of one year.

**Key message:** The prevalence of diabetes was 29.06% and 35.5% of patients in the prediabetic stage. The most frequent dyslipidaemic form was reduced HDL, seen in 96.1% and 94% of new and old respectively; followed by elevated LDL, 86% and 48.2% in new and old respectively.

### **Correlation of Body Mass Index and Oxygen Saturation in Chronic Obstructive Pulmonary Disease Patients at a Tertiary Care Center in Nepal: A Cross-Sectional Study**

**DOI:** <https://www.tandfonline.com/doi/full/10.2147/COPD.S412118>

**Context:** COPD is associated with clinically relevant pulmonary and extrapulmonary manifestations, including hypoxemia and weight loss. The correlation of body mass index (BMI) and oxygen saturation (SpO<sub>2</sub>) with COPD grades may provide a useful additional marker for understanding and managing the disease.

**Methodology:** A descriptive cross-sectional study was conducted among 145 COPD patients visiting the Department of Medicine in Shree Birendra Hospital, Nepal.

**Key message:** Our study shows that BMI and oxygen saturation have an inverse association with COPD severity. The correlation of BMI and oxygen saturation with COPD grade could provide a supplementary marker of disease severity.

### **Assessing Prevalence of Post- Traumatic Stress Disorder Symptoms Following the 2015 Earthquake in Langtang ,Nepal**

**DOI:** <https://doi.org/10.1192/bjo.2023.237>

**Context:** Nepal has been categorized as a region prone to natural disasters including earthquakes and avalanches. However, mental health implications of such disasters have been rarely explored in Nepal especially in remote regions like Langtang.

**Methodology:** A Cross sectional quantitative observational study was carried out in 2022. Study population included the residents of Langtang who are the survivors of 2015 earthquake.

**Key message:** PTSD was prevalent even 7 years after the incident in the Langtang community.

### **Knowledge, Attitude, and Practice regarding Cervical Cancer Screening among Female Health Professionals of a Tertiary Care Hospital in Kathmandu District**

**DOI:** <https://doi.org/10.3126/nmcj.v25i2.56079>

**Context:** Cervical cancer is the cancer that forms in the tissue of the cervix. It is usually slow growing cancer that may not have symptoms but can be found with regular Pap tests and proper screening.

**Methodology:** A cross sectional study was conducted among female health professionals of a tertiary care hospital in Kathmandu district.

**Key message:** There was a significant association between knowledge and those who underwent screening and there was significant association between attitude and profession.

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 July 2023.

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

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

- ⇒ Twitter: <https://twitter.com/NCDWatchNepal>
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**Publications**

**NCD Watch Nepal**



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