



# Non-communicable Diseases in Nepal-Research Roundup

October 2023



Publications

NCD Watch Nepal

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## Roundup Summary

In October 2023, a scoping review of the literature on non-communicable diseases and mental health in Nepal yielded 17 articles. Most of the studies explored mental health, diabetes management, hypertension, chronic kidney diseases, and so on.

### Facilitators and barriers to hypertension management in urban Nepal: findings from a qualitative study

**DOI:** <https://doi.org/10.1136/openhrt-2023-002394>

**Context:** Despite the provision of comprehensive hypertension services through the primary healthcare system, huge gaps in the treatment and control of hypertension exist.

**Methodology:** Qualitative study. In-depth interviews with hypertension patients, healthcare providers, and municipal officials were also conducted.

**Key message:** This study found that inadequate knowledge about hypertension and harmful cultural beliefs hindered the effective treatment of hypertension. Interrupted medical supply and distrust in primary healthcare providers affected the poor's access to hypertension services. Similarly, poor communication between family members and gender norms affected the adaptation of treatment measures.

### Two-decade trends and factors associated with overweight and obesity among young adults in Nepal

**DOI:** <https://doi.org/10.1371/journal.pgph.0002522>

**Context:** Studies conducted in Nepal have shown a high prevalence of obesity among young adults. This is alarming for a low-income country such as Nepal, where the problem of undernutrition has not yet been resolved.

**Methodology:** This study is a secondary analysis of Demographic and Health Surveys (DHSs) and WHO STEPwise approach to surveillance (STEPS) surveys.

**Key message:** This study showed significant upward trends in both overweight and obesity for women with average annual percent changes (AAPCs) of 10.5 (95% CI 6.4–14.7) and 15.8 (95% CI 10.9–20.8) respectively. Older age and female sex, being married and urban residence were significantly associated with overweight and obesity.

## Quality of Life of Patients With Chronic Kidney Disease Under Maintenance Hemodialysis and Their Caregivers: A Cross-Sectional Study

**DOI:** <https://doi.org/10.7759/cureus.46651>

**Context:** Maintenance hemodialysis (MHD) prolongs the life of patients with end-stage chronic kidney disease (CKD), but this process can change their lifestyle, affecting their quality of life (QoL).

**Methodology:** This is a cross-sectional, comparative study in the Hemodialysis Unit of Patan Academy of Health Sciences (PAHS), Lalitpur, Nepal. A total of 176 patients (88 CKD patients and 88 caregivers) participated in the study.

**Key message:** Overall, the physical and mental QoL of the caregiver was better than CKD patients under MHD.

## Estimation of 10-year cardiovascular risk among adult population in western Nepal using nonlaboratory-based WHO/ISH chart, 2023: A cross-sectional study

**DOI:** <https://doi.org/10.1002/hsr2.1614>

**Context:** Estimating the risk of cardiovascular diseases helps eliminate the risk factors and prevent the development of cardiovascular diseases in the future.

**Methodology:** A hospital-based cross-sectional study was conducted among 314 adults aged 40–74 years visiting the outpatient departments of Shishuwa Hospital in western Nepal.

**Key message:** In this study, high cardiovascular risk (20%–30%) was seen in 6.1% of total participants, and moderate cardiovascular risk (10%–20%) was found in 29% of participants. The 10-year cardiovascular risk score and risk factors were significantly higher among males than females.

## Perinatal depression among teenage mothers in a tertiary care teaching hospital of Nepal: A cross-sectional study

**DOI:** <https://doi.org/10.1016/j.ajp.2023.103810>

**Context:** Teenage pregnancies are associated with many adverse health (including mental health) and social outcomes.

**Methodology:** A cross-sectional study was carried out among 239 women in the Obstetrics and Gynecology department of a tertiary care teaching hospital in Nepal. Depression was assessed using the Mental health continuum short form (MHC-SF).



**Key message:** The proportion of adolescent mothers receiving perinatal care at a tertiary care teaching hospital in Nepal was substantial. A high proportion of depression and poor mental health suggest that screening and supportive care should be provided for teenage mothers.

### Social determinants of health and glycemic control in persons with type 2 diabetes mellitus attending a tertiary hospital in Nepal: A cross-sectional study

**DOI:** <https://doi.org/10.33546/bnj.2753>

**Context:** Social determinants of health (SDOH) play a major role in glycemic control among persons with type 2 DM (T2DM).

**Methodology:** This cross-sectional study was conducted at a tertiary hospital in Kathmandu, Nepal, among 135 Nepalese diagnosed with T2DM.

**Key message:** Approximately 64.4% of the participants showed suboptimal glycemic control indicated by glycated hemoglobin (HbA1c)  $\geq 7\%$ . Glycemic control was associated with household income, literacy, health insurance, and food availability.

### Prevalence and associated factors of diabetic retinopathy among people with diabetes screened using fundus photography at a community diabetic retinopathy screening program in Nepal

**DOI:** <https://doi.org/10.1186/s12886-023-03173-z>

**Context:** More than 80% of blindness from diabetic retinopathy (DR) has been reported in developing countries.

**Methodology:** This is a retrospective case-series study conducted among 25,198 people with diabetes at the diabetic retinopathy screening program (DRP) under the Tilganga Institute of Ophthalmology (TIO).

**Key message:** DR prevalence was 19.3%. This study found an association between DR and vision-threatening DR with the duration of diabetes, diabetic foot, diabetic neuropathy, agriculture occupation, those under oral hypoglycaemic agents or insulin, or both as compared to those under diet only and presenting visual acuity  $> 0.3\text{LogMAR}$ .

### Depressive Symptoms among People Living with HIV Attending ART Centers of Lumbini Province, Nepal: A Cross-Sectional Study

**DOI:** <https://doi.org/10.1155/2023/3526208>

**Context:** Depressive symptoms among people living with HIV can be a significant barrier to ART initiation and thus lead to poor ART adherence.

**Methodology:** A cross-sectional study was carried out among 406 people living with HIV attending ART centers in Lumbini province, Nepal. Depressive symptoms were measured using the 21-item Beck Depression Inventory tool.

**Key message:** The study found that 26.8% of the respondents had depressive symptoms. Routine screening for depressive symptoms should be integrated into national HIV prevention and control programs for people living with HIV. Also, an enabling environment should be created to facilitate the rapid enrollment of individuals newly diagnosed with HIV in ART services.

### Exploring the role of nutrition in mental health: A narrative review

**DOI:** <https://nepjol.info/index.php/JPAN/article/view/59429>

**Context:** Nutrition has been implicated in behaviour, mood and in the pathology and treatment of mental illness.

**Methodology:** This was a narrative review.

**Key message:** There is little translatable evidence and little understanding of how mental health and nutrition effects arise due to a lack of methodologically rigorous research.

### Burnout and mental health problems among health care workers during second wave of Covid-19 pandemic: A hospital-based cross-sectional study

**DOI:** <https://nepjol.info/index.php/JPAN/article/view/59426>

**Context:** A large number of healthcare workers exposed to COVID-19 might be at increased risk of developing mental and psychological disorders.

**Methodology:** This was a hospital-based cross-sectional study among 96 healthcare workers in Dadeldhura Hospital, Nepal. Depression Anxiety Stress Scale (DASS-21) and Copenhagen Burnout Inventory (CBI) were used to measure study variables.

**Key message:** The symptoms of depression, anxiety, and stress were found to be 31.3%, 40.6 %, and 14.6 % respectively. Doctors were 5.2 and 6-fold more likely to experience anxiety and depression respectively. Early identification of mental health disorders and awareness intervention could increase the efficiency and quality of care.

### Mental health problems, perceived stress, and internet addiction among undergraduate college students of Kathmandu, Nepal

**DOI:** <https://nepjol.info/index.php/JPAN/article/view/59422>

**Context:** One of the vulnerable groups with mental health problems is college-going youths.

**Methodology:** This was a cross-sectional study among 139 undergraduate students of a management college in Kathmandu Valley, Nepal. The Mental Health Screening Questionnaire (MHS), Young's Internet Addiction Test (YIAT), and Perceived Stress Scale (PSS) were used for mental health problems, internet addiction, and stress respectively.

**Key message:** This study found a mild internet addiction among 45.3% and moderate internet addiction among 18.7%. There was a significant positive correlation between the MHS score (indicative of a number of mental health problems) with Young's internet addiction test score and perceived stress scale scores.

### Prevalence of smoking among psychiatric patients in outpatient department of tertiary care centre: A descriptive cross-sectional study

**DOI:** <https://nepjol.info/index.php/JPAN/article/view/59419>

**Context:** Even though psychiatric illness is a risk factor for smoking tobacco; only a few studies have been conducted to estimate the prevalence of smoking among that patient group in Nepal.

**Methodology:** A descriptive cross-sectional study was conducted among 398 psychiatric patients in the psychiatric outpatient department of a tertiary care center in Nepal.

**Key message:** The prevalence of current smokers and past smokers was 104 (26.1%) and 48 (12.1%), respectively. Nicotine dependence was present in 75 (72.12%) of the current smokers and 40 (83.33%) among past smokers.

### Effectiveness of group cognitive behavioral intervention in reducing test anxiety among psychology undergraduates in Kathmandu, Nepal

**DOI:** <https://nepjol.info/index.php/JPAN/article/view/59418>

**Context:** High test anxiety negatively impacts students, affecting academic performance, well-being, focus, and retention rates.

**Methodology:** This experimental, independent two-group design enrolled 80 test-anxious participants, randomly assigning them to a control or intervention group (40 participants each).

**Key message:** The intervention group demonstrated a 16% reduction in test anxiety scores from their baseline, while the control group showed only a 5.5% reduction from their baseline. A larger-scale randomized controlled trial is needed to evaluate the effectiveness of group cognitive behavioral therapy in a larger population.



## Living with bronchial asthma: A qualitative study among patients in a hill village in Nepal

**DOI:** <https://doi.org/10.1371/journal.pone.0291265>

**Context:** Bronchial asthma continues to be a problem in the Himalayan country of Nepal.

**Methodology:** This was an explorative qualitative study conducted among asthma patients living in a hill district of Nepal. Semi-structured interviews were conducted face-to-face with the respondents at their homes using an interview guide.

**Key message:** The themes that emerged were the number and seasonal variation in attacks, the perceived effect of asthma on their lives and social interactions, the knowledge of the interviewee about the disease, the impact of asthma on their socioeconomic status, and treatment and self-care behaviors. Residing in a hill village required them to walk up and down several times a day and the disease seriously impacted their lives.

## Dyslipidemia among Patients with Type 2 Diabetes Mellitus Visiting a Tertiary Care Centre

**DOI:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10579777/>

**Context:** Dyslipidemia is one of the major risk factors for cardiovascular diseases in diabetes mellitus which is a leading cause of morbidity and mortality worldwide.

**Methodology:** A descriptive cross-sectional study was conducted among 390 patients with type 2 diabetes attending a tertiary care center in Nepal.

**Key message:** Dyslipidemia was found among 87.9% of the participants. This study recommended regular testing of blood glucose and blood lipid levels for early detection of dyslipidemia and putting them under medical supervision to reduce the unwanted complications of cardiovascular diseases.

## Portal Hypertension among Patients with Chronic Liver Disease Admitted to the Department of Internal Medicine of a Tertiary Care Centre

**DOI:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10579770/>

**Context:** Patients with chronic kidney disease have hypertension almost universally and uncontrolled hypertension accelerates the decline in kidney function.

**Methodology:** A descriptive cross-sectional study was conducted among patients with chronic liver disease in the Department of Internal Medicine of a tertiary care center.

**Key message:** Among 247 patients with chronic liver disease, the prevalence of portal hypertension was 38 (15.38%).

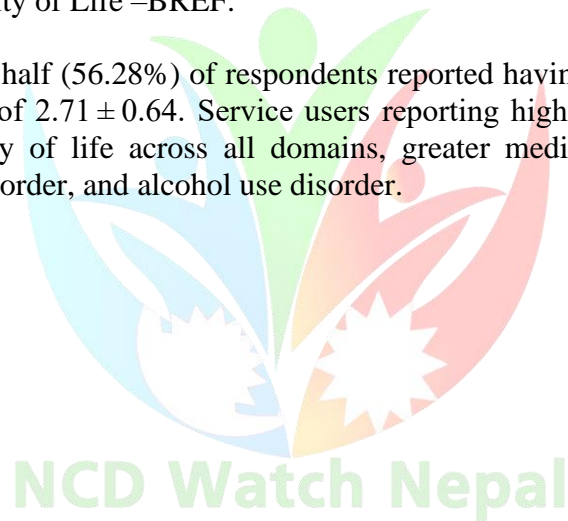
## Internalized Stigma and its Correlates Among Opioid Agonist Treatment Service Users in Nepal

**DOI:** <https://link.springer.com/article/10.1007/s40737-023-00353-4>

**Context:** Opioid use disorder is associated with high levels of stigma and discrimination, which impact treatment seeking and compliance.

**Methodology:** A cross-sectional study was conducted among 231 Opioid Agonist Treatment (OAT) service users. The survey instrument included the Mini-International Neuropsychiatric Interview for DSM-5, the Internalized Stigma of Mental Illness Inventory (ISMI), and the World Health Organization Quality of Life –BREF.

**Key message:** More than half (56.28%) of respondents reported having high internalized stigma with a mean ISMI score of  $2.71 \pm 0.64$ . Service users reporting higher internalized stigma had significantly lower quality of life across all domains, greater medical co-morbidity, lifetime anxiety and depressive disorder, and alcohol use disorder.



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 October 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:

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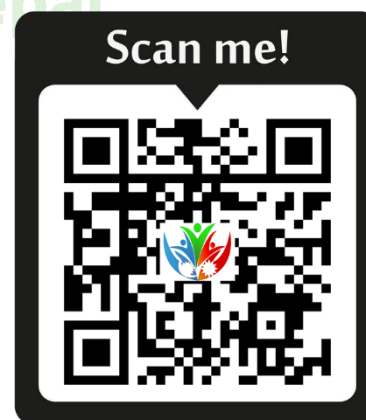
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#### Publications



#### NCD Watch Nepal



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