

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

March 2023



Publications

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Roundup Summary

In the month of March 2023, our scoping exercise in Nepal pertaining to non-communicable diseases and mental health yielded a corpus of 22 published articles. The majority of these studies adopted a cross-sectional design and investigated the following topics: hypertension, mental health, cancer, diabetes, chronic liver diseases, and kidney diseases.

Arterial hypertension and its covariates among nomadic Raute hunter-gatherers of Western Nepal: a mixed-method study

DOI: <https://doi.org/10.1186/bmjopen-2022-067312>

Context: Hunter-gatherers' (HGs) health has not been extensively studied worldwide, and there is still a dearth of data on the impact of HG's lifestyle choices on their health, particularly their cardiovascular and metabolic health.

Methodology: This was a mixed-method study carried out at Raute temporary campsites in the Surkhet District of Karnali Province. A total of 81 nomadic Raute groups aged 15 years and above were included in the study. Similarly, 15 in-depth interviews and 4 key informant interviews were conducted among Raute participants.

Key message: Almost 31% of the participants were found to be hypertensive with the prevalence of males being higher (48.8) as compared with females (10.5%). Current alcohol and tobacco use were high, 91.4% and 70.4%, respectively, with high rates among youths. Males, older people, current drinkers, and current tobacco users were more likely to have hypertension. This study recommends culturally sensitive interventions to limit hypertension-related morbidities and mortalities in this endangered population.

Association of disrespectful care after childbirth and COVID-19 exposure with postpartum depression symptoms- a longitudinal cohort study in Nepal

DOI: <https://doi.org/10.1186/s12884-023-05457-0>

Context: COVID-19 pandemic has led to unprecedented mental stress to women after childbirth.

Methodology: A longitudinal cohort study was conducted in 9 hospitals in Nepal involving 898 women. The information on depressive symptoms at 7 and 45 days was collected using the validated Edinburg Postnatal Depression Scale (EPDS) tool.

Key message: In the study, 16.5% were exposed to COVID-19 before/during labour and 41.8% of them received disrespectful care after childbirth. At 7 and 45 days postpartum, 21.3% and 22.4% of women reported depressive symptoms respectively. Disrespectful care after childbirth was strongly associated with postpartum depression symptoms.

Does the place of residence influence your risk of being hypertensive? A study-based on Nepal Demographic and Health Survey

DOI: <https://doi.org/10.1038/s41440-023-01217-x>

Context: Understanding area-level influence independently from individual factors is crucial for understanding population health. Though several studies have examined various risk factors for hypertension, residential influence is poorly explored.

Methodology: A total of 14,652 individuals aged 15 and above were selected from the 2016-Nepal Demographic and Health Survey. Individuals with blood pressure $\geq 140/90$ mmHg or a history of hypertension or under antihypertensive medication were defined as hypertensive.

Key message: This study found that area deprivation had a significant inverse association with the risk of hypertension. Individuals from the least deprived areas had higher odds of hypertension compared to highly deprived areas 1.59 (95% CI 1.30, 1.89). Additionally, the association between literacy a proxy of socioeconomic status, and hypertension varied with a place of residence.

Clinicodemographic profile of chronic liver disease patients at a tertiary care hospital: a retrospective analysis

DOI: <https://doi.org/10.1097/ms9.000000000000248>

Context: With alcohol intake being rooted in Nepalese culture, alcoholic liver disease (ALD) is the most common cause of chronic liver disease (CLD) in Nepal.

Methodology: This is a retrospective observational study among 469 patients in the inpatient ward of the Department of Gastroenterology at Tribhuvan University Teaching Hospital (TUTH), Nepal.

Key message: Alcoholic liver disease was the most common cause of CLD in admitted patients. Similarly, the majority of patients were admitted due to ascites, which was compounded by spontaneous bacterial peritonitis.

The relationship between the gendered norm of eating last and mental health of newly married women in Nepal: A longitudinal study

DOI: <https://doi.org/10.1111/mcn.13508>

Context: In patrilineal societies like Nepal, newly married women often occupy the lowest status in the household, and eating last is a reflection of their low status.

Methodology: This was a prospective study conducted between 2018 and 2019, among a longitudinal cohort of 200 newly married women in the Nawalparasi district, Nepal. Depressive symptom severity was measured using a 15-item Hopkins Symptom Checklist for Depression (HSCL-D).

Key message: Twenty-five percent of women reported eating last always. The prevalence of probable depression using the established cutoff was 5.5%. It was found that women who eat last have greater odds of having probable depression ([AOR] = 4.05; 95% CI: 1.32–12.44). Study findings highlight that newly young married women in Nepal are a vulnerable group to mental health problems.

Stigma as a barrier and sex work as a protective factor for HIV testing among trans women in Nepal

DOI: <https://doi.org/10.1371/journal.pgph.0001098>

Context: Stigma towards trans women in Nepal creates individual and system-level risks for HIV.

Methodology: This study is based on a secondary analysis of data collected using respondent-driven sampling in 2019 on HIV risk among trans women in Nepal. A total of 173 participants who tested negative for HIV were analyzed.

Key message: In this study, trans women who did sex work were more likely to be HIV tested while those who were more socially connected to peers were less likely to have recently been tested for HIV. HIV stigma may result in fear of social rejection from peers if one tests positive. Interventions that focus on addressing stigma within trans women's social networks and strategies to mitigate HIV stigma in society may result in increased frequency of HIV testing among trans women in Nepal.

Prevalence of Left Ventricular Diastolic Dysfunction in Patients with Essential Hypertension

Link: <https://pubmed.ncbi.nlm.nih.gov/36974853/>

Context: Left Ventricular Diastolic Dysfunction is considered a critical link between hypertension and heart failure.

Methodology: This was a hospital-based cross-sectional study done among 68 newly diagnosed and known hypertensive patients visiting the outpatient department at Bir Hospital, Kathmandu, Nepal.

Key message: The prevalence of left ventricular diastolic dysfunction in essential hypertensive patients was 33.8%. Age, body mass index, dyslipidemia, and duration of hypertension were found to be statistically significant with diastolic dysfunction.

Functional Impairment and Depressive Symptoms among Older Adults of Rural Nepal: The Moderating Role of Three Sources of Social Support

DOI: <https://doi.org/10.1080/07317115.2023.2187732>

Context: Family support is important to alleviate depressive symptoms among functionally impaired older adults.

Methodology: This study was conducted among 147 women and 153 men aged 60 years and older who lived in the rural mid-hills of Nepal. Karnofsky Performance Status Scale, the Multidimensional Scale of Perceived Social Support, and the Geriatric Depression Scale-Short Form were used for data collection.

Key message: Only 6.3% of participants experienced some degree of functional impairment and almost half (44.3%) of participants had depressive symptoms. Social support from family and friends moderated the relationship between functional impairment and depressive symptoms. This study concluded that interventions aimed at increasing social support from family among Nepali older adults living in rural hilly areas may reduce depressive symptoms.

Initial Results of a Direct Aspiration First-Pass Technique to Treat Acute Ischemic Stroke Patients in Nepal

DOI: <https://doi.org/10.1055/s-0043-1761233>

Context: Endovascular therapy has become the mainstay of treatment of acute ischemic stroke (AIS) due to large vessel occlusion.

Methodology: This was a retrospective study conducted among 68 patients treated for AIS with a direct aspiration first-pass technique (ADAPT) from March 2019 through January 2021 at two hospitals in Nepal.

Key message: This study concluded that a direct aspiration first-pass technique appears to be a fast, simple, safe, and effective method for the management of AIS in the Nepali patient population.

Knowledge and practice regarding myocardial infarction prevention among the visitors of Manmohan Cardio-Thoracic Vascular and Transplant Center, Kathmandu, Nepal

DOI: <https://www.nepjol.info/index.php/nmcj/article/view/53368>

Context: Myocardial infarction the most common form of coronary heart disease is a growing health issue in developing countries.

Methodology: A descriptive cross-sectional study was conducted among 278 patient visitors attending Manmohan Cardio-Thoracic Vascular and Transplant Centre, Kathmandu from June 2021-August 2021.

Key message: Among the participants, 24.2% showed good knowledge of myocardial infarction. The practice of blood pressure measurement, blood sugar, and blood cholesterol measurement was

reported by 76.1%, 59.1%, and 31.4% respectively. Participants' sex, religion, occupation, and literacy status were significantly associated with knowledge of myocardial infarction.

Occupational Stress And Individual Well Being Of Nepal Police Officials

DOI: <https://www.nepjol.info/index.php/kjour/article/view/53289>

Context: Policing is considered a very stressful occupation and has an adverse effect on job performance and the well-being of employees.

Methodology: This survey was conducted among different categories and levels of police personnel (n=229) working in Kathmandu Valley, Nepal. Occupational stress was assessed through Organizational Police Stress Questionnaire (PSQ-Org), and Operational Police Stress Questionnaire (PSQ-Op).

Key message: This study found a significant influence of perceived occupational stress on the individual well-being of police officials. The findings suggest that organizations, management, and employees should emphasize stress management approaches.

Spectrum of congenital heart disease in Nepal from 2002–2022: A systematic review and meta-analysis

DOI: <https://doi.org/10.1002/hsr2.1147>

Context: Congenital heart diseases are recognized as public health concern worldwide and Nepal is no exception.

Methodology: Systematic review and meta-analysis

Key message: The prevalence of congenital heart disease in Nepal was 0.7% and the frequency of male patients was higher. Respiratory tract infection was frequently seen at presentation and the most commonly associated noncardiac anomaly was the cleft palate.

Health facility readiness to provide antenatal care (ANC) and non-communicable disease (NCD) services in Nepal and Bangladesh: Analysis of facility-based surveys

DOI: <https://doi.org/10.1371/journal.pone.0281357>

Context: Antenatal care (ANC) visits provide an important opportunity for diagnostic, preventive, and curative services for non-communicable diseases (NCDs) during pregnancy.

Methodology: This study used data from national health facility surveys.

Key message: The study reported that 71% of health facilities in Nepal offer both ANC and NCD services. The proportion of facilities that showed readiness for providing ANC and NCD services

was 24% in Nepal. Gaps in readiness were observed in the availability of trained staff, guidelines, basic equipment, diagnostics, and medicines.

How Did People with Prediabetes Who Attended the Diabetes Prevention Education Program (DiPEP) Experience Making Lifestyle Changes? A Qualitative Study in Nepal

DOI: <https://www.mdpi.com/1660-4601/20/6/5054>

Context: Diabetes can be prevented through lifestyle modification in the prediabetic phase.

Methodology: This was a qualitative study, with semi-structured interviews of 20 participants, conducted 4–7 months following the ‘Diabetes Prevention Education Program’ (DiPEP) intervention.

Key message: The results included four themes, understanding that diabetes could be prevented, lifestyle changes made, hurdles to overcome, and experiencing benefits leading to sustained change. Study shows that understanding that diabetes can be prevented can be a key motivator for implementing lifestyle changes among persons with prediabetes in low-resource countries. Experiencing benefits such as weight loss and reduced blood sugar levels were reported to lead them to maintain the changes they had made. Similarly, the obstacles mentioned included a lack of motivation and a lack of family support to implement changes.

Recovery and Rehabilitation from Alcohol, Substance Use and Related Disorders in Nepal: Call for Paradigm Shift

DOI: <https://doi.org/10.1007/s40737-023-00337-4>

Context: Recent national surveys estimate more than a million Nepali citizens could benefit from effective, evidence-informed treatment for alcohol use disorders.

Methodology: Editorial

Key message: The authors recommended the following actions to inform a paradigm shift in recovery and rehabilitation from alcohol and substance use-related disorders in the Nepalese context: Building the evidence base for policy and practice reform, Understanding substance use, Decriminalization, Inter-ministerial Action plan, Prioritizing vulnerable populations, etc.

Cost Analysis of Diagnosis and Treatment of Tobacco-Related Cancer

DOI: <https://europepmc.org/article/med/36974863>

Context: Tobacco use is the leading cause of cancer and the treatment of cancer is very costly.

Methodology: A descriptive cross-sectional study was conducted among 103 cancer patients from public and private hospitals in Nepal.

Key message: The total cost of tobacco-related cancer was NPR 9,81,370 per patient in 2019 and the patient's average direct medical cost was NPR 5,88,740 (60%). Approximately one-sixth of the patients sold their property for the treatment of cancer. The study recommends that enrolling clients in health insurance and increasing the government subsidy by raising the tax on tobacco products can be a long-term source of health financing to protect patients from sliding into poverty.

Risk Stratification on Systemic Target Organ Involvement Associated with Hypertensive Retinopathy

DOI: <https://europepmc.org/article/med/36974841>

Context: Hypertensive retinopathy is a common complication among people with hypertension.

Methodology: This was a hospital-based cross-sectional study conducted at a tertiary referral eye institute in Nepal, including 312 people (≥ 31 years) with essential hypertension.

Key message: Hypertensive retinopathy was detected in 83.7% (n=261) of people and 63.5% (n=198) had grade 1 hypertensive retinopathy. The severity of hypertensive retinopathy and concurrent hyperlipidemia were associated with target organ involvement.

Pregnancy Induced Hypertensive Disorders among Patients Admitted to the Department of Obstetric and Gynecology in a Tertiary Care Centre: A Descriptive Cross-sectional Study

DOI: <https://jnma.com.np/jnma/index.php/jnma/article/view/8060/4585>

Context: Hypertensive disorder of pregnancy is among the leading causes of maternal and perinatal mortality in developing countries.

Methodology: A descriptive cross-sectional study was conducted among 4303 women who delivered in the Department of Obstetrics and Gynaecology of a tertiary care center in Nepal.

Key message: Hypertensive disorder in pregnancy was seen among 110 (2.5%) of the women and preeclampsia was seen among 69 (62.7%) of them.

Chronic Liver Disease among Patients Admitted in the Department of Internal Medicine of a Tertiary Care Centre: A Descriptive Cross-sectional Study

DOI: <https://jnma.com.np/jnma/index.php/jnma/article/view/8092/4521>

Context: Chronic liver disease with cirrhosis is a significant cause of morbidity and mortality worldwide.

Methodology: A descriptive cross-sectional study was conducted among 447 patients admitted to the Department of Internal Medicine of the Kathmandu Medical College and Teaching Hospital, Kathmandu, Nepal.

Key message: Among the study participants 93 (20.8%) were found to have chronic liver disease.

Depression among Medical Students of a Medical College: A Descriptive Cross-sectional Study

DOI: <https://jnma.com.np/jnma/index.php/jnma/article/view/7869/4531>

Context: Medical students encounter multiple psychological changes in the transformation from young insecure students to efficient physicians.

Methodology: A descriptive cross-sectional study was conducted among 302 medical students of B.P. Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal. Depression, Anxiety, and Stress Scale (DASS-42) was used for data collection.

Key message: Among the study participants, 86 (28.47%) had depression. A total of 31 (36.04%) had mild, 31 (36.04%) had moderate, 12 (13.95%) had severe and 12 (13.95%) had extremely severe depression.

Depression, Anxiety and Stress among School-going Adolescents of a Secondary School: A Descriptive Cross-sectional Study

DOI: <https://jnma.com.np/jnma/index.php/jnma/article/view/8067/4532>

Context: Mental health of adolescents can affect growth and development, decrease school performance, and impair social relationships with peers and families.

Methodology: A descriptive cross-sectional study was done among 95 school-going adolescents of a school in Kathmandu valley, Nepal. Data was collected using Depression, Anxiety and Stress Scale 21 (DASS-21).

Key message: Among 95 patients, the depression was found in 31 (32.6%), anxiety in 36 (37.9%), and stress in 3 (3.2%). Study suggests that family members, teachers and the concerned authorities should give emphasis to the psychological well-being of the adolescents.

Antihypertensive Medications Use among Chronic Hemodialysis Patients Visiting the Outpatient Department of Nephrology of a Tertiary Care Centre: A Descriptive Cross-sectional Study

DOI: <https://jnma.com.np/jnma/index.php/jnma/article/view/8095/4550>

Context: Anti-hypertensive medications are leading cause of mortality in chronic hemodialysis patients.

Methodology: A descriptive cross-sectional study was conducted among 105 chronic hemodialysis patients visiting the Department of Nephrology at Nepal Medical College and Teaching Hospital (NMCTH), Kathmandu, Nepal.

Key message: Among the patients, 102 (97.1%) were using anti-hypertensive medications. The three common drugs prescribed for hypertensive patients were amlodipine 79 (77.4%), torsemide 59 (57.8%), and prazosin 48 (47.1%).



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 March 2023.

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

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

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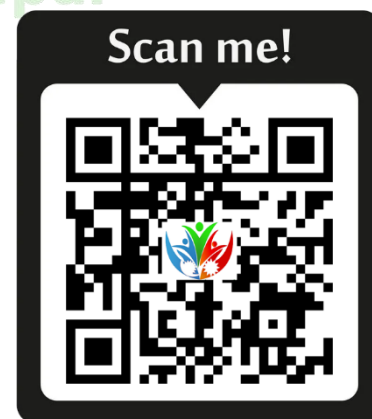
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Publications



NCD Watch Nepal



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