

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 2024



Publications

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Roundup Summary

In July 2024, our search on non-communicable diseases and mental health-related literature in Nepal yielded 22 published articles. Most of the studies covered mental health, followed by cancer, cardiovascular diseases, and diabetes.

Adherence to antihypertensive medication and its associated factors among patients with hypertension attending a tertiary hospital in Kathmandu, Nepal

DOI: <https://doi.org/10.1371/journal.pone.0305941>

Context: Hypertension is often poorly managed and identifying factors associated with adherence to antihypertensive medications is crucial for improving blood pressure control.

Methodology: This was an analytical cross-sectional study among 308 hypertension patients on antihypertensive medication that assessed adherence using the Morisky Medication Adherence Scale (MMAS-8).

Key message: Evidence-based strategies such as reminder systems, cost reduction, and counseling are needed to increase the medication adherence.

Impact of Pharmacist-Led Intervention on Adherence to Inhalers, Inhalation Technique, and Disease Control Among Asthma/COPD Patients in a Resource Limited Center: An Interventional Study

DOI: <https://doi.org/10.2147/PPA.S460810>

Context: Adherence to prescribed inhaler therapy and correct inhalation technique are essential for effective management of Asthma and COPD.

Methodology: A pre-post interventional study at Dhulikhel Hospital in Nepal examined the effects of pharmacist-led interventions on inhaler adherence, inhalation techniques, and disease control in asthma and COPD patients.

Key message: The pharmacist-led intervention significantly increased adherence to inhalers, evidenced by a notable rise in the proportion of patients with good adherence.

Effect of a Mobile Health Intervention on Self-Monitoring and Management of Glucose and Blood Pressure Among Women With Gestational Diabetes

DOI: <https://doi.org/10.1016/j.cdnut.2024.103116>

Context: Mobile health applications have the potential to increase compliance with self-monitoring of glucose and BP.

Methodology: In this study, 95 women newly diagnosed with Gestational Diabetes (GDM) from Dhulikhel Hospital in Dhulikhel, Nepal, and randomized them to either GDM-DH app + standard care, or standard care alone.

Key message: In this study, compared to the control group, the intervention group showed higher level of compliance to self-monitoring of glucose (93.9 vs. 50.8) and BP (81.0 vs. 26.0).

The impact of widowhood on mental health: anxiety, depression, and stress among widowed women in Nepal

DOI: <https://doi.org/10.3389/fgwh.2024.1256484>

Context: Strong patriarchal norms stigmatize widowhood intensifying the impact of grief and partner loss particularly in the context of South Asia.

Methodology: This was a cross-sectional study that surveyed 588 Nepalese widows from six districts. Participants completed the Anxiety, Depression, and Stress Scale (ADSS).

Key message: Emotional distress was seen among widowed women in Nepal, revealing connections between this distress and factors such as poverty, homemaker status, and age highlighting the needs of widows even more.

Intergenerational mental health effects of traumatic victimization in Nepal: A 3-D theory study

DOI: <https://doi.org/10.1016/j.socscimed.2024.117020>

Context: Research increasingly suggests intergenerational effects of psychological trauma on mental health, even when children in generation two have not been exposed to trauma.

Methodology: The study involved a nationally representative, random, multi-stage cluster sample of 1,089 Nepali mothers and their 15–17 year old adolescent children.

Key message: One in four Nepali adolescents considered suicide, and over half had high depression scores and was linked to maternal trauma's invasiveness, exploitativeness, and severity. Maternal depression, Borderline Personality Disorder (BPD) symptoms, and severe physical abuse correlated with adolescent depression.

Dietary diversity among women with depressive and generalized anxiety symptoms in Nepal

DOI: <https://doi.org/10.1038/s41598-024-68346-2>

Context: There is a crucial role of diet in mental health as the modifiable lifestyle factors can help reduce depression and anxiety.

Methodology: This was a national cross-sectional survey among 7,442 women in Nepal that assessed depression, anxiety and dietary diversity using the PHQ-9, GAD-7, and 24-hour food recall, respectively.

Key message: Greater dietary diversity was linked to lower major depressive disorder (MDD) and generalized anxiety disorder (GAD) symptoms, though reverse causality is possible. Consuming a variety of foods, especially fruits, vegetables, and pulses, may help reduce these symptoms.

A longitudinal multi-centric cohort study assessing infant neurodevelopment delay among women with persistent postpartum depression in Nepal

DOI: <https://doi.org/10.1186/s12916-024-03501-0>

Context: Infant neurodevelopment in the early years is influenced by factors such as parental care and maternal mental well-being.

Methodology: In this longitudinal cohort study, 1253 mother-infant pairs were assessed at 7, 45, and 90 days for postpartum depressive symptoms using the Edinburgh Postnatal Depression Scale (EPDS), and infants were evaluated at 6 months with the WHO's Infant and Young Child Development (IYCD) tool.

Key message: Preventive interventions are needed to mitigate the impact of maternal postpartum depression since six-month-old infants are found to be at increased risk for neurodevelopmental delays if their mothers report persistent depression from 7 to 90 days postpartum.

Tobacco use and its associated factors among students of medical college at tertiary care center of Eastern Nepal

DOI: <https://doi.org/10.1371/journal.pone.0296592>

Context: South Asian nations like Nepal face a rising burden of tobacco consumption with higher prevalence among youths.

Methodology: This was a cross-sectional study done among 427 medical, dental, and nursing students in BPKIHS, Nepal. Data were collected via online questionnaires distributed through email and social media.

Key message: In this study, 14.1% were current smokers, while 5.4% reported a history of smoking (ex-smokers). Significant associations of smoking were found with age, year of study, parental smoking history, and having friends who smoke.

Anxiety and depression among hypertensive patients during the COVID-19 pandemic: A cross-sectional study from Kathmandu Metropolitan, Nepal

DOI: <https://doi.org/10.1371/journal.pone.0308048>

Context: COVID-19 pandemic has underscored the mental health crisis, with increased anxiety and depression, particularly in low-income settings like Nepal.

Methodology: This was a quantitative cross-sectional study involving 374 participants from selected wards of Kathmandu Metropolitan, using convenience sampling which deployed face-to-face interviews. Generalized Anxiety Disorder (GAD-7) and Patient Health Questionnaire (PHQ-9) were used to measure anxiety and depression.

Key message: The prevalence of anxiety and depression among hypertensive patients during the COVID-19 pandemic was 27.8% and 24.3% respectively. Smoking/tobacco consumption, staying in quarantine, positive COVID-19 test result, history of COVID-19 positive in the family, History of death due to COVID-19 in the family, etc. were influencing factors for both anxiety and depression. This study highlighted the need for early intervention and coping strategies during such crises.

NCD Watch Nepal

May Measurement Month 2021: an analysis of blood pressure screening results from Nepal

DOI: <https://doi.org/10.1093/eurheartjsupp/suae054>

Context: Most adults in Nepal are unaware of their high blood pressure and remain untreated despite knowing the importance of hypertension prevention and early treatment.

Methodology: A cross-sectional survey was conducted in 15 districts among 5172 participants aged 18 and older from September to December 2021.

Key message: Almost 21% participants were identified as hypertensive. Hypertension awareness, treatment, and control were low in Nepal warranting the need to expand community-based hypertension programs.

Adherence to Periodic Dilated Eye Examinations (DEE) and Its Determinants Among Nepalese Patients With Diagnosed Diabetes: A Single-Center Hospital-Based Analysis Using Health Belief Model

DOI: <https://doi.org/10.1155/2024/3231341>

Context: Diabetes mellitus is one of the leading causes of avoidable blindness among the working-age adult population.

Methodology: This cross-sectional study involved 165 participants with diagnosed diabetes (Type 1/2) to explore individual-level perceptions of barriers and facilitators to DEEs using a framework adapted from the health belief model (HBM).

Key message: The rate of adherence to DEE was 62%. Those under treatment for diabetes mellitus (DM), those with diabetic retinopathy (DR) in them or their family members, and those with DM duration of 1 year or less were significantly likely to adhere to DEE ($p < 0.005$).

Does mistreatment during institutional childbirth increase the likelihood of experiencing postpartum depressive symptoms? A prospective cohort study in Nepal

DOI: <https://doi.org/10.1080/16549716.2024.2381312>

Context: Postpartum depression is connected to low socioeconomic status, stressful births, and poor maternal care, raising global concerns.

Methodology: This was a prospective cohort study from 2022 that assessed 1222 women who gave birth in a Nepal hospital for mistreatment during childbirth and postpartum depressive symptoms using the Edinburgh Postnatal Depression Scale.

Key message: The prevalence of postpartum depressive symptoms was 4.4%. Women exposed to mistreatment during childbirth were almost fifty percent more likely to have postpartum depressive symptoms. Similarly, adolescent mothers exposed to mistreatment during childbirth had a seventy percent increased risk of depressive symptoms. This study highlighted the importance of implementing respectful care and depression screening.

Knowledge Regarding Breast Self-Examination Among Reproductive Age Women

DOI: <https://nepjol.info/index.php/njc/article/view/68243>

Context: Breast self-examination (BSE) plays an important role in the early detection of breast cancer.

Methodology: This was a descriptive cross-sectional study among 100 reproductive-age women of Khairahani Municipality, Chitwan.

Key message: Participants had good knowledge on purposes and observation of breast self examination (BSE) procedure but had poor level of knowledge on appropriate timing and technique of BSE.

Quality of Life of Cancer Patients In A Cancer Hospital of Chitwan

DOI: <https://doi.org/10.3126/njc.v8i1.68229>

Context: Quality of Life (QoL) is one of the most important patient-reported outcomes in cancer therapy.

Methodology: A descriptive cross-sectional research design was used to assess the quality of life of 384 cancer patients in B.P. Koirala Memorial Cancer Hospital, Nepal.

Key message: The finding of this study showed that more than half (63.3%) of the respondents had high quality of life. The average quality of life score for three different scales were 59.8 (global health status scale), 82.0 (functional scale) and 25.8 (symptom scale). Education, annual family income, ECOG performance status and site of cancer were found to be significantly associated with the three different quality of life scales.

An evaluation of effectiveness of Mh-GAP training among paramedical professionals in Koshi Province of Nepal

DOI: <https://nepjol.info/index.php/JPAN/article/view/68182>

Context: The World Health Organization's (WHO) Mental Health Gap Action Programme (mhGAP) aims to bridge this gap by training non-specialist healthcare providers.

Methodology: A pre-test and post-test study design was employed over six months involving 204 paramedical professionals who had not previously received mhGAP training.

Key message: The mhGAP training program significantly enhances the capacity of paramedical professionals to deliver mental health care in Koshi Province. By improving knowledge, attitudes, and practices, mhGAP training can play a crucial role in bridging the mental health treatment gap in resource-limited settings.

Prevalence and factors associated with depression and anxiety among patients recovered from COVID-19: a cross-sectional study in a tertiary care hospital in Nepal

DOI: <https://doi.org/10.1136/bmjph-2024-001112>

Context: COVID-19 has immensely affected the mental health of all people with prominent effects among the COVID-19 survivors who underwent hospitalisation.

Methodology: An analytical cross-sectional study was conducted from May to August 2021 among 269 COVID-19 recovered patients admitted to Dhulikhel Hospital during the first wave, and second wave of the COVID-19 pandemic in Nepal. Anxiety and depression of the participants were assessed using the Hospital Anxiety and Depression Scale.

Key message: The prevalence of anxiety and depression were 38.66%, and 30.48%, respectively. Participants who received COVID-19 related information from the radio reported higher levels of anxiety and depression symptoms. Similarly, stigma, and being a health worker were significantly associated with a higher level of anxiety and depression symptoms, respectively.

Distribution and determinants of healthcare costs for self-care behaviours among patients with type 2 diabetes across low-resource communities in Nepal

DOI: <https://link.springer.com/article/10.1007/s44250-024-00117-2>

Context: Type 2 diabetes mellitus (T2DM) is a global public health problem, imposing a significant financial burden on its management and care.

Methodology: This was a cross-sectional study, collecting data from 481 patients with T2DM across low-resource communities in the Kavrepalanchok and Nuwakot districts of Nepal.

Key message: The average healthcare cost for managing T2DM is US \$22.87 per patient for 6 months. Footcare was the most expensive and least practised component of self-care behaviour for managing T2DM, followed by glucose monitoring and physical activity, underscoring the significance of making these behaviours affordable and accessible in diabetes management.

Knowledge, attitudes and associated factors regarding cervical cancer and its screening practice among women of central Nepal

DOI: <https://doi.org/10.1016/j.heliyon.2024.e34886>

Context: Although it is a highly preventable disease, cervical cancer is the leading cause of mortality among Nepalese women.

Methodology: A community-based cross-sectional study was conducted among a total of 426 married women aged 18–49 in Kathmandu, Nepal.

Key message: About half of the women had knowledge and a favorable attitude towards cervical cancer, despite the fact that still there is a gap to transform it into practice.

Food insecurity and women's mental health in the Chitwan Valley of Nepal

DOI: <https://doi.org/10.1016/j.ssmmh.2024.100337>

Context: Food insecurity is associated with myriad negative health consequences including mental health disorders.

Methodology: This study utilized the mental health and demographic data from the Chitwan Valley Family Study (CVFS) from Nepal.

Key message: This study found that women have a higher prevalence of major depressive disorder, generalized anxiety disorder, and panic attacks than men, especially if they are experiencing food insecurity.

Cancer Risk in Nepal: An Analysis from Population-Based Cancer Registry of Urban, Suburban, and Rural Regions

DOI: <https://doi.org/10.1155/2024/4687221>

Context: The low and middle-income countries (LMICs) cover a major share of the global cancer burden; however, most of the LMICs including Nepal still lack national cancer control and prevention strategies.

Methodology: This study analyzed the data collected by population-based cancer registry (PBCR) Nepal operated by Nepal Health Research Council (NHRC) in 9 out of 77 districts in Nepal.

Key message: Age-adjusted incidence and mortality rates of cancer in Nepal were 65.6 and 29 per 100,000 people, respectively. The highest risk was found for lung cancer (1 in 80) followed by stomach and mouth among men, and in women, breast cancer (1 in 76) was the commonest among all followed by lung and cervix.

Social media use and anxiety levels among school adolescents: a cross-sectional study in Kathmandu, Nepal

DOI: <https://doi.org/10.1136/bmjph-2023-000615>

Context: While social media platforms facilitate connection and entertainment, their overuse can negatively impact adolescents' mental well-being.

Methodology: A cross-sectional descriptive study was conducted among 401 school-age adolescents (14–17 years) in grades 9 and 10 in selected schools located within Kathmandu, Nepal. Beck Anxiety Inventory (BAI) scale was used to measure anxiety symptoms.

Key message: The study reported high social media usage among school adolescents (43.6% spent 4–8 hours daily). Involvement of adolescents in SM is associated with their anxiety levels, with factors like gender, usage patterns, and behaviours on these platforms playing important roles.

Awareness Regarding Stroke among the Adult Population of Gokarneshwor Municipality

DOI: <https://doi.org/10.3126/nmcj.v26i2.67197>

Context: Awareness of the risk factors and early recognition of the symptoms can help the prevention and management of stroke.

Methodology: A descriptive cross-sectional study was conducted among 195 adult populations in Gokarneshwor municipality, Kathmandu, Nepal.

Key message: Almost three fourth of the participants had heard about stroke. Top three stated risk factors were hypertension, alcohol consumption, and smoking. This study concluded that providing informal education and conducting awareness programs on stroke would be helpful to promote awareness regarding this condition.

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 2024.

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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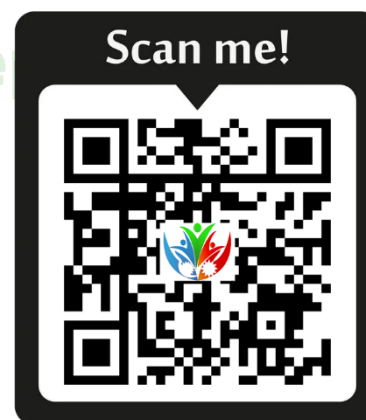
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Publications



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