Non-communicable Diseases in Nepal Research Roundup

Making non-communicable diseases a national priority

Non-communicable Diseases in Nepal-Research Roundup

August 2024

Publications

NCD Watch Nepal

TABLE OF CONTENTS

Roundup Summary

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

Prevalence, determinants and care-seeking behavior for anxiety and depression in Nepalese population: a secondary analysis of data from Nepal Demographic and Health Survey 2022

DOI: https://doi.org/10.1136/bmjopen-2023-078582

Context: Approximately 82% people with mental health disorders are estimated to be living in low- and middle-income countries (LMICs), where very limited studies have been conducted in a nationally representative sample population.

Methodology: This study was a secondary analysis of the 2022 Nepal Demographic and Health Survey data, which included 12,355 participants. The primary outcomes, depression and anxiety, were assessed using the Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder Assessment (GAD-7) tools.

Key message: The prevalence of depression and anxiety were 4.0% and 17.7% respectively. Divorced individuals and those with disabilities had higher odds of anxiety and depression. Only 32.9% of those with symptoms sought help, highlighting the need for targeted interventions for at-risk groups in Nepal.

Mental health literacy and associated factors among secondary school students in Bhaktapur, Nepal

DOI: https://doi.org/10.5281/zenodo.13362734

Context: Mental health problems, including depression and anxiety, are prevalent in Nepal, affecting 13.2% of adults and 11.2% of children, yet only 21% seek treatment.

Methodology: This study was a cross-sectional study conducted among 468 students of secondary school at Bhaktapur in December 2019 using a modified mental health literacy scale.

Key message: Secondary school students exhibited moderate mental health literacy (MHL) highlighting the need of school-based mental health programs and incorporation of MHL into the curriculum to guide future educational interventions.

Anxiety and Depression among reproductive aged women with Fertility problem and its associated factors: A hospital Based cross-sectional comparative study

DOI:

Context: Infertility is an emerging and often neglected public health problem. It is also linked with mental health issues like anxiety and depression.

Methodology: This was a cross-sectional comparative study conducted among 177 randomly selected women of reproductive-aged women in Kathmandu from November 2019 to July 2020. Hospital Anxiety and Depression Scale was used to assess the anxiety and depression of the respondents.

Key message: Anxiety and depression levels differed significantly between fertile and infertile women, with infertile women experiencing higher severe anxiety and depression.

Anxiety in Patients Diagnosed with COVID-19 in Tertiary Level Hospital, Kathmandu: A Cross-sectional study

DOI:

Context: Rising cases and mortality of COVID-19 induced stress, fear and anxiety among the infected population.

Methodology: This was a descriptive cross-sectional study of 159 COVID-19 patients at a tertiary hospital which used stratified sampling to select the study participants from general wards who were then interviewed using Generalised Anxiety Disorder-7 (GAD-7) scale.

Key message: Nearly half of the patients experienced varying degrees of anxiety, with a significant association found between anxiety levels and religion, education, and length of hospital stay. There is the need for enhanced mental health awareness and psychosocial support during the pandemic.

Behavioral Risk Factors for Non-Communicable Diseases (NCDs) among Adolescents in Mahalaxmi Municipality of Lalitpur District, Nepal: A School-Based Cross-Sectional Study

DOI:

Context: Non-communicable diseases (NCDs) are the leading global causes of mortality, with rising risk factors among adolescents.

Methodology: This cross-sectional descriptive study was conducted among 316 school adolescents in Mahalaxmi municipality, Lalitpur District, using stratified random sampling and the Global School-based Student Health Survey (GSHS) tools.

Key message: The prevalence of behavioral risk factors for non-communicable diseases was high among school adolescents, with unhealthy diets and insufficient physical activity being most common. There is a pressing need for comprehensive, evidence-based interventions in schools and communities to address these issues.

Anthropometric and Nutritional status of Chronic Obstructive Pulmonary Disease presenting in Acute Exacerbation in Tertiary care Hospital in Eastern Nepal

DOI: https://doi.org/10.3126/nrj.v3i1.76

Context: Chronic Obstructive Pulmonary Disease (COPD) is a progressive lung condition causing persistent airflow obstruction, with a high mortality rate in low- and middle-income countries. COPD is often accompanied by malnutrition and muscle loss.

Methodology: This was an observational study conducted among 154 COPD patients with acute exacerbation admitted in the B.P. Koirala Institute of Health Sciences, Dharan, Nepal from April 2023 to June 2023.

Key message: The mean BMI was 21.82 ± 3.92 kg/m^2 while 29% had BMI < 18.5 kg/m^2. Although malnutrition was prevalent among COPD patients with exacerbations, it came with significant discrepancies between BMI and nutritional assessment scores which means relying solely on BMI may even lead to underestimating malnutrition in these patients.

Knowledge about chronic obstructive pulmonary disease among physicians, nurses and students at a regional hospital in Nepal

DOI: https://doi.org/10.3126/nrj.v3i1.74

Context: Nepal has the highest global mortality from COPD, with rising prevalence, poor patient knowledge, and a need for improved management practices among healthcare personnel.

Methodology: This was a cross sectional study conducted among 56 healthcare workers and 208 students at Tansen of Palpa, Nepal using validated Chronic Obstructive Pulmonary Disease Knowledge Questionnaire (COPD-KQ COPD).

Key message: Healthcare personnel alongside students in Palpa demonstrated a strong overall knowledge of COPD, but significant gaps remain in key areas like pneumonia prevention and spirometry, emphasizing the need for targeted improvements in COPD care.

Dietary practices of type 2 diabetes mellitus patients concerning Pender's health Promotion Model in Lalitpur district, Nepal

DOI: https://doi.org/10.1016/j.hnm.2024.200288

Context: Type 2 Diabetes Mellitus (T2DM) is a prevalent non-communicable disease in Nepal, with nutrition being a key factor influencing its development and management.

Methodology: This was a quantitative, cross-sectional research conducted at two diabetes and thyroid care centers in Lalitpur, Nepal among 450 T2DM patients aged 40–65 through a questionnaire based on the Pender Health Promotion Model (PHPM).

Key message: Positive dietary practices among T2DM patients were significantly associated with joint family structure, literacy, non-smoking, no alcohol consumption, family support, availability of healthy food, and engagement in physical activity. Therefore, PHPM-based educational interventions targeting patients and their families are essential to improve lifestyle and dietary habits.

How Mental Health Knowledge Shapes Attitudes: A Study of APF Personnel's Willingness to Seek Professional Help

DOI: 10.25215/1203.126

Context: National security agencies like Armed Police Force Nepal (APF) faces significant stress due to the nature of their duties, with recent suicides highlighting the critical need to address mental health concerns and promote early recognition of symptoms.

Methodology: This was a study conducted among 145 male officers selected through purposive sampling using Mental Health Knowledge Questionnaire (MHKQ) and Attitude Towards Seeking Professional Psychological Help – Short Form (ATSPPH-SF).

Key message: Armed Police Force Nepal personnel with more knowledge about mental health are more likely to seek professional help highlighting the need and impact of awareness programs in reducing stigma and promoting mental health support.

Prevalence and associated factors of respiratory symptoms and illnesses among brick kiln workers in Nepal

DOI: https://doi.org/10.1539/eohp.2024-0003-OA

Context: Rapid expansion of the brick kiln industry in Nepal has led to significant health risks for workers, particularly due to exposure to respirable crystalline silica and other pollutants.

Methodology: A cross-sectional survey of 390 brick kiln workers was conducted employing a modified Nepali version of the American Thoracic Society Division of Lung Diseases (ATS-DLD) questionnaire to assess respiratory symptoms and illnesses.

Key message: Coal crushers, firemen, and red brick loaders experience higher rates of chronic respiratory issues compared to other kiln workers, with coal crushers particularly affected by chronic cough, phlegm, and bronchitis. It is crucial to address these issues through technology transfer and natural gas substitution.

Patterns and perception of complementary and alternative medicine use among people with non-communicable diseases in Eastern Nepal

DOI: https://doi.org/10.3126/jmcjms.v12i02.68414

Context: There is a growing global use of Complementary and Alternative Medicine (CAM) among patients with non-communicable diseases.

Methodology: This was a cross-sectional study conducted among 156 people with NCDs in Itahari sub-metropolitan city using the semi structured questionnaire through one-to-one interview.

Key message: Two fifth respondents were using Complementary and Alternative Medicine (CAM), primarily through dietary modifications and herbal intake, with a universal positive perception. The usage was associated with age and family type.

Attitudes towards mental health problems: A scoping review

DOI: https://doi.org/10.62065/bjhs523

Context: Attitudes play a crucial role in improving help-seeking behavior and overall mental health conditions in healthcare settings.

Methodology: A systematic review was conducted on global attitudes towards mental health, focusing on Nepal. Out of 77 articles screened, 15 met the inclusion criteria, involving 23,901 participants. Common themes and patterns in attitudes were identified through data synthesis.

Key message: Negative attitudes and stigma towards mental illness are widespread globally, including in Nepal, with significant barriers to seeking mental health services. Targeted interventions are needed to address these attitudes and improve mental health support.

A service evaluation of weight management for glycaemic control and remission of type 2 diabetes using traditional food in Nepal (Ho-DIRECT NEPAL): a single-arm trial

DOI: https://doi.org/10.1016/j.lansea.2024.100465

Context: Effective diet programs for remission of early type 2 diabetes (T2D) are often unaffordable in Southeast Asia where the prevalence is high.

Methodology: This study used a single-arm intervention design to evaluate an 8-week low-cost diet program with traditional Nepali foods for early type 2 diabetes. Participants aged 30–70 years with a BMI ≥ 23 kg/m² received weekly dietetic appointments and verbo-pictorial leaflets.

Key message: Traditional food-based weight management effectively improves glucose control and reduces medication needs in early type 2 diabetes, with notable remission rates; however,

addressing adherence barriers like hunger and travel inconvenience is essential for optimizing outcomes.

Intergenerational associations of maternal depression with daughters' family formation

DOI: https://doi.org/10.1111/jomf.13030

Context: Intergenerational ties and linked lives are crucial for children's development and transition to adulthood, yet the impact of mothers' Major Depressive Disorder (MDD) on young people's family formation behaviors remains underexplored.

Methodology: Discrete-time event-history models were applied to 1127 linked mother–father–daughter triads from the Chitwan Valley Family Study (CVFS) in Nepal to evaluate the impact of maternal MDD on daughters' entry into marital unions and parenthood.

Key message: Daughters exposed to maternal depression during early childhood showed an 80% increased likelihood of transitioning to parenthood earlier, with the timing of exposure being a crucial factor.

Impact of a community health worker led intervention for improved blood pressure control in urban Nepal: an open-label cluster randomised controlled trial

DOI: https://doi.org/10.1016/j.lansea.2024.100461

Context: Effective hypertension management is a challenging task for low and middle-income countries.

Methodology: This was a non-blinded, two-arm cluster randomized controlled trial with 1:1 allocation conducted in Budhanilkantha municipality of Kathmandu, Nepal. The study recruited 1252 hypertensive individuals from ten randomized public health facilities..

Key message: A comprehensive approach involving community health worker visits and routine healthcare follow-ups is effective in reducing blood pressure, increasing physical activity, and improving hypertension knowledge among participants in urban Nepal.

Stress and Coping Strategies Among Caregivers of Cancer Patients in a Tertiary Care Setting in Nepal

DOI: https://doi.org/10.3126/hprospect.v23i2.59962

Context: Cancer is the second leading cause of death worldwide and poses a significant burden on patients, families, and society.

Methodology: This was a cross sectional study conducted among purposively selected 138 caregivers of cancer patients at B.P. Koirala Memorial Cancer Hospital. The data was collected using Standardized Kingston caregiver stress scale and Brief COPE inventory.

Key message: A significant portion of caregivers of cancer patients experience mild to moderate stress, with education, income, and relationship to the patient significantly associated with stress levels. Coping strategies such as praying, meditation, and emotional support were commonly adopted, emphasizing the need for tailored interventions to reduce caregiver stress.

Comprehensive assessment of pain characteristics, quality of life, and pain management in cancer patients: a multi-center cross-sectional study

DOI: https://doi.org/10.1007/s11136-024-03725-w

Context: Pain is a prevalent issue among cancer patients, severely affecting their health-related quality of life (HRQOL), yet with limited evidence on its characteristics in low-resource settings.

Methodology: This was a cross sectional study conducted among purposively selected 138 caregivers of cancer patients at B.P. Koirala Memorial Cancer Hospital. The data was collected using Standardized Kingston caregiver stress scale and Brief COPE inventory.

Key message: A significant portion of caregivers of cancer patients experience mild to moderate stress, with education, income, and relationship to the patient significantly associated with stress levels. Coping strategies such as praying, meditation, and emotional support were commonly adopted, emphasizing the need for tailored interventions to reduce caregiver stress.

Angiographic Profile of Coronary Artery Disease in Patients of Heart Failure Attending in BPKIHS, Nepal

DOI: https://doi.org/10.3126/jaim.v13i1.68489

Context: Coronary angiography is a crucial diagnostic tool for heart failure. Coronary artery disease (CAD) accounts for 18% of heart failure cases yet few studies in Nepal have explored it.

Methodology: This was a single center hospital based cross-sectional study conducted at BPKIHS from October 2022 to October 2023 in heart failure patients who underwent Coronary Artery Angiography (CAG).

Key message: The study found a high prevalence of significant coronary artery disease in heart failure patients, with the highest rates in those with heart failure with preserved ejection fraction (73.7%).

A study on spectrum of conventional risk factors in acute coronary syndrome in NGMCTH, Nepal

DOI:

Context: Acute Coronary Syndrome (ACS) is a critical medical emergency driven by traditional risk factors such as age, smoking, hypertension, diabetes, dyslipidemia, gender, and family history of coronary artery disease (CAD).

Methodology: This was a single center hospital based prospective cross-sectional study at Nepalgunj Medical College Teaching Hospital which included 100 ACS patients from various departments over one year.

Key message: Hypertension was the most common risk factor, with STEMI being the most prevalent type of ACS. The majority of patients had at least one risk factor, and male gender was the second most common risk factor.

Factors Influencing Time From Diagnosis to Treatment of Breast Cancer and the Impact of Longer Waiting Time on Survival in Kathmandu Valley, Nepal: A Population-Based Study

DOI:

Context: Delays in breast cancer treatment initiation are associated with poorer survival, and this study examines factors affecting waiting times.

Methodology: This was a retrospective population-based study which analyzed breast cancer cases from the Kathmandu Valley Cancer Registry (2018-2019), using logistic regression and Kaplan-Meier and Cox regression.\

Key message: One-third of breast cancer patients waited over 4 weeks for treatment, with longer delays linked to lower education. Advanced-stage breast cancer was associated with significantly poorer survival, and longer waiting times may worsen outcomes for advanced-stage patients.

Development and Use of Suicide Registry for Recording Patient Profile with Self-harm Visiting Tertiary Hospital of Nepal: A Descriptive Cross-sectional Study

DOI:

Context: Suicide is a significant public health issue globally and in Nepal, necessitating baseline data on suicide attempts to inform prevention strategies.

Methodology: This descriptive cross-sectional study, conducted retrospectively utilized total sampling from a suicide registry database covering October 2017, to September 2023.

Key message: The majority of suicide attempts occurred at home, with poisoning being the most common method (36.29%). Impulsive intentions were reported in 73.79% of cases, and 30.24% of patients had a diagnosis of depression.

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 August 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:

⇒ Twitter: https://twitter.com/NCDWatchNepal
⇒ Facebook: https://www.facebook.com/NCDWatchNepal
⇒ LinkedIn: https://www.linkedin.com/company/ncd-watch-nepal

Please join us and share with relevant colleagues. As always, previous editions of the round-up are available in our archive here at
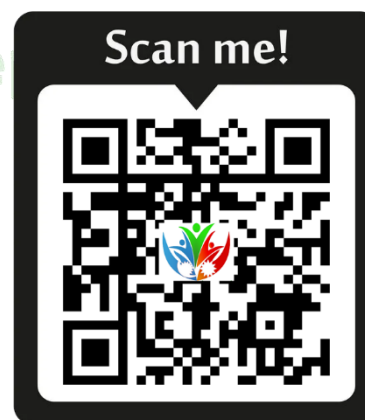https://ncdwatchnepal.wordpress.com/research-round-up/

https://nepalhealthfrontiers.org/publication_type/ncd-watch-nepal-research-roundup/

Publications	**NCD Watch Nepal**

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