

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

November 2024



Publications

NCD Watch Nepal

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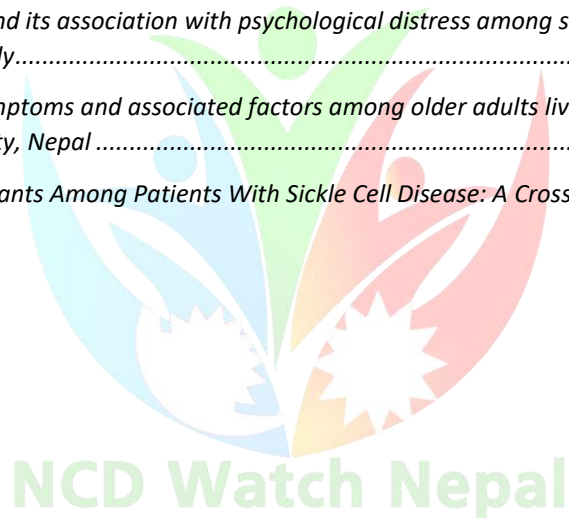


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Roundup Summary

In November 2024, our search on non-communicable diseases and mental health-related literature in Nepal yielded nine published articles. Most of the studies covered mental health, cancer, diabetes, respiratory diseases, and tobacco intake.

Smokeless tobacco use and its associated factors among secondary school students of Rangeli Municipality of Morang district, Nepal

DOI: <https://doi.org/10.1371/journal.pone.0313288>

Context: Tobacco use is a major global health issue, particularly affecting adolescents who are highly vulnerable to nicotine addiction and smokeless tobacco (SLT) use. Early initiation of tobacco increases the likelihood of developing non-communicable diseases.

Methodology: This cross-sectional study was conducted among 355 secondary school students of grades 11 and 12 in Rangeli Municipality, Nepal using a self-administered questionnaire.

Key message: The study found that 29.5% of students were current smokeless tobacco users, with males, younger adolescents, and private school students being at higher risk. Awareness campaigns and educational programs are needed to inform students about the health risks of tobacco, while stakeholders must strengthen tobacco control measures.

Assessment of respiratory symptoms and pulmonary functions in rickshaw drivers in Biratnagar, Nepal

DOI: <https://doi.org/10.61814/jkahs.v7i2.856>

Context: Air pollution is a major contributor to chronic respiratory diseases and the cities face poor air quality levels. Rickshaw drivers, due to prolonged exposure to pollutants, are particularly vulnerable to respiratory health issues.

Methodology: This cross-sectional study was carried out among 348 rickshaw drivers from January 2022 to January 2023 in Biratnagar. Data on respiratory symptoms and demography were collected using a structured questionnaire, while lung function was measured with a portable EasyOne Air spirometer.

Key message: Rickshaw drivers in Biratnagar commonly experience respiratory symptoms like phlegm, cough, and breathing difficulties, with over half showing impaired lung function. Longer work duration increases the risk of lung damage, highlighting the need for preventive education and regular lung health screenings.

Assessing the knowledge, attitude and practice of electronic cigarettes and their associated factors among undergraduate students of Institute of Medicine, Nepal: a cross-sectional study

DOI: <https://doi.org/10.1186/s12889-024-20583-w>

Context: E-cigarette use is increasing among young people in Nepal due to easy availability, attractive marketing, and misconceptions about its safety compared to traditional cigarettes.

Methodology: This was a cross-sectional study conducted among 302 undergraduate students using a self-administered questionnaire to assess their knowledge, attitudes, and practices regarding e-cigarettes.

Key message: Many students are aware of e-cigarettes but hold supportive attitudes, which increases their likelihood of use, especially among males and those with peers who smoke. Targeted awareness campaigns are essential to educate on the health risks of e-cigarettes and reduce their growing acceptance.

Predictors of anxiety among women of reproductive age in Nepal: a comprehensive nationwide analysis

DOI: <https://doi.org/10.1007/s00127-024-02791-2>

Context: Anxiety is a major mental health issue for women of reproductive age, with limited research on its prevalence and causes, especially in Nepal.

Methodology: This study utilized data from the Nepal Demographic and Health Survey 2022 and assessed anxiety using the GAD-7 scale.

Key message: Nearly 22% of reproductive-aged women in Nepal experience moderate to severe anxiety, with depression being the strongest predictor. Other factors like self-reported health, emotional violence, and pregnancy termination also contribute to anxiety. Targeted interventions can help improve the mental well-being of women in this group.

Outcome of Triple Negative Breast Cancer(TNBC) as compared to other breast cancers in Bir Hospital, National Academy of Medical Sciences

DOI: <https://doi.org/10.3126/jssn.v27i1.71278>

Context: Breast cancer is a major health issue in Nepal, with Triple-negative breast cancer (TNBC) being particularly concerning due to its poor prognosis. TNBC lacks key receptors such as estrogen, progesterone, and HER2, making it more difficult to treat.

Methodology: This cross-sectional study was conducted at Bir Hospital, National Academy of Medical Sciences, from July 2021 to June 2024. Data on demographic, clinical, radiological, pathological, surgical, and treatment outcomes of breast cancer patients were collected from the Departments of Surgery and Oncology.

Key message: Nearly 14% of the patients had TNBC who had good surgical outcomes, with low recurrence and survival rates after surgery and treatment. While a small percentage of TNBC patients experienced complications, overall, the outcomes were positive with appropriate treatment.

(CSCI-RTHI) Blood Glucose Level Prediction in Type 1 Diabetes Using Machine Learning

DOI: [10.13140/RG.2.2.16496.06400](https://doi.org/10.13140/RG.2.2.16496.06400)

Context: Type 1 Diabetes is a chronic condition where the body loses its ability to produce insulin, leading to high blood sugar levels and potential health complications. Managing the disease requires regular insulin intake, and continuous glucose monitoring plays a crucial role in tracking blood sugar levels for effective insulin control.

Methodology: This study used 15 machine learning techniques, including deep neural networks and deep reinforcement learning, to predict blood glucose levels in individuals with Type 1 Diabetes.

Key message: The models were most effective in different glycemic conditions, with some excelling in hyperglycemia and others in normoglycemia or hypoglycemia. Future work will focus on improving model accuracy by including more data and expanding the prediction range.

Menstruation experiences and its association with psychological distress among school-going adolescent girls of Nepal: A cross-sectional study

DOI: <https://doi.org/10.1111/bjdp.12531>

Context: Menstruation can have a significant impact on the mental well-being of adolescent girls. The connection between menstrual health and mental distress in this age group should be studied.

Methodology: This was a cross-sectional study conducted in Rangeli Municipality, Nepal, among 270 adolescent girls using a self-administered questionnaire.

Key message: About 29% of adolescent girls in the study experienced anxiety, 14% had stress, and 32% suffered from depression. Factors such as low family and friend support during menstruation, as well as severe menstrual pain, were strongly linked to higher rates of anxiety,

stress, and depression. It is crucial to address menstrual pain and improve social support to help reduce psychological distress in adolescent girls.

Prevalence of depressive symptoms and associated factors among older adults living in aged care homes of Kathmandu Metropolitan City, Nepal

DOI: <https://doi.org/10.1371/journal.pgph.0003359>

Context: Depressive symptoms are a growing global concern, particularly among older adults. There is limited research on the mental health of the elderly, especially those living in aged care homes in Nepal.

Methodology: This was a cross-sectional study conducted among 142 older adults aged 60 and above, selected through simple random sampling from six aged care homes. Depressive symptoms were assessed using the 15-item Geriatric Depression Scale (GDS).

Key message: Over half of the older adults in aged care homes in Kathmandu experience depressive symptoms, with significant factors including age, gender, family background, chronic health issues, and loneliness. There is an urgent need for targeted mental health programs and interventions to improve their well-being.

Depression and Its Determinants Among Patients With Sickle Cell Disease: A Cross-Sectional Study

DOI: <https://doi.org/10.1002/puh2.70010>

Context: Depression is a significant concern for patients with sickle cell disease (SCD), but it is often overlooked and not adequately treated.

Methodology: This cross-sectional study was conducted in Bardiya district, Nepal, involving 358 participants with sickle cell disease aged over 13 years. Depression was assessed using the Nepalese version of the Beck Depression Inventory.

Key message: Depression is common among patients with sickle cell disease with a prevalence of 36.31%, with several factors such as age, education, and sociodemographic status influencing its prevalence. Early diagnosis and treatment of depression are crucial for better managing the 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 November 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

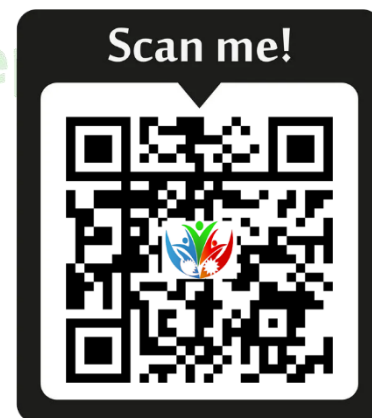
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