



**NCD Watch Nepal**

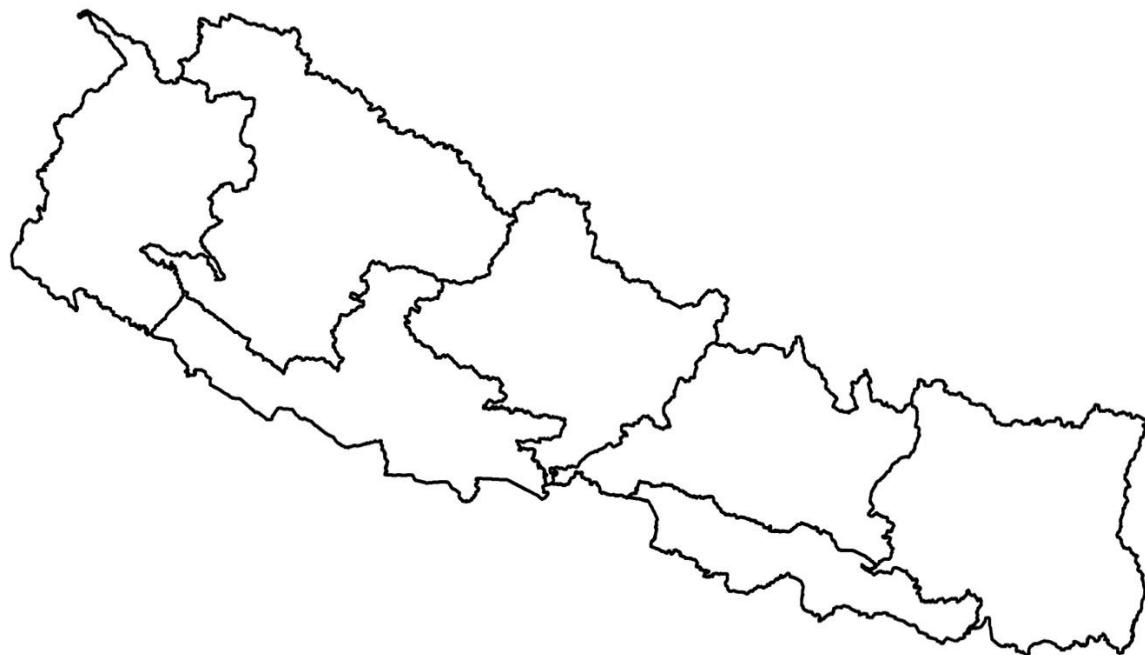
## Non-communicable Diseases in Nepal

**Research Roundup November 2022**

*Making non-communicable diseases a national priority*

# **Non-communicable Diseases in Nepal-Research Roundup**

**November 2022**



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## Roundup Summary

For the month of November 2022, our scoping on non-communicable diseases and mental in Nepal found 21 published articles. Most of the studies were cross sectional and covering the topic of cardiovascular diseases, hypertension, cancer, mental health, and diabetes.

### **Effects of adding exercise to usual care in patients with either hypertension, type 2 diabetes or cardiovascular disease: a systematic review with meta-analysis and trial sequential analysis**

**DOI:** <http://dx.doi.org/10.1136/bjsports-2022-106002>

**Context:** Exercise is one of the commonly recommended interventions/preventions for chronic conditions like hypertension, type 2 diabetes mellitus, and cardiovascular disease.

**Methodology:** This was a systematic review with meta-analysis and trial sequential analysis of randomized clinical trials assessing the effect of adding exercise to usual care. A total of 248 trials randomizing 21,633 participants were included.

**Key message:** This study concludes that a short duration of any type of exercise reduces the risk of all-cause mortality in patients with hypertension, type 2 diabetes, or cardiovascular diseases.

### **Antenatal depression and its associated factors among women of Godawari Municipality, Lalitpur, Nepal: a cross-sectional study**

**DOI:** <https://doi.org/10.1136/bmjopen-2022-063513>

**Context:** Depression during pregnancy and the postpartum period is a major public health concern that is often neglected in developing countries like Nepal.

**Methodology:** This community-based cross-sectional study was conducted among 250 randomly selected pregnant women of Godawari Municipality, Lalitpur, Nepal. The level of antenatal depression was assessed using Edinburgh Postnatal Depression Scale.

**Key message:** The prevalence of antenatal depression was 24.8%. Factors like multigravida, unintended pregnancy, male sex preference of child by family, and intimate partner violence were positive predictors of antenatal depression. The study recommends that screening for depression should be part of routine antenatal checkups for early detection and management of mental health concerns.

### **Psychometric properties of the Nepali language version of the Depression Anxiety Stress Scales (DASS-21)**

**DOI:** <https://doi.org/10.1002/nop2.959>

**Context:** While the DASS-21 has been widely evaluated across the globe in different languages, a Nepali version has not been validated in Nepal.

**Methodology:** This was a cross-sectional population-based survey conducted among 794 community-dwelling older adults in the Lumbini Province of Nepal with an aim to assess the psychometric properties of the Nepali language version of the Depression Anxiety Stress Scales (DASS-21).

**Key message:** The Nepali language version of the DASS-21 satisfied convergent validity with all subscales depicting significant negative correlations with quality of life demonstrating adequate psychometric properties.

### **Prevalence and clinical characteristics of headache among medical students of Nepal: A cross-sectional study**

**DOI:** <https://doi.org/10.1371/journal.pone.0277821>

**Context:** Headache is a common neurological disorder that could potentially affect medical students' academic performance and quality of life.

**Methodology:** A cross-sectional study was conducted among 242 undergraduate medical students in the Nepalese Army Institute of Health Sciences (NAIHS)-College of Medicine, Kathmandu, Nepal.

**Key message:** The prevalence of headache disorder was 26.86%, with tension headaches being the commonest one. Anxiety/stress (75.40%) was the most common precipitating factor. This problem stopped most of the students (63.09%) from doing daily activities so this problem should be properly looked into and addressed in time by the concerned authority.

### **Cigarette smoking and associated factors among men in five South Asian countries: A pooled analysis of nationally representative surveys**

**DOI:** <https://doi.org/10.1371/journal.pone.0277758>

**Context:** Smoking is the commonest form of tobacco smoking and one of the leading causes of premature deaths worldwide.

**Methodology:** This study is based on secondary data analysis using the Demographic and Health Survey (DHS) from 2015–2018.

**Key message:** In Nepal, around one in three men smoked cigarettes and Sudurpaschim province had the highest proportion of cigarette smoking among men (39.5%). Factors like socioeconomic position, age, and urban area were strongly associated with cigarette smoking in South Asian countries.

### **A clinical guideline-based management of type 2 diabetes by ayurvedic practitioners in Nepal: A feasibility cluster randomized controlled trial protocol**

**DOI:** <https://doi.org/10.1097/MD.00000000000031452>

**Context:** In Nepal, type 2 diabetes is a common disease for which people consult ayurvedic (traditional medical system) practitioners and use ayurvedic medicines.

**Methodology:** This is a 2-arm, feasibility cluster randomized controlled trial that will be conducted among T2DM adult patients across 12 public and private Ayurveda centers in and outside the Kathmandu Valley in Nepal.

**Key message:** At least 120 participants (60/group) will be recruited and followed up for 6 months. In the intervention group, ayurvedic practitioners will manage T2DM based on a clinical guideline developed by the study team.

## Utilization of Cervical Cancer Screening and Associated Factors among Women in Bhaktapur, Nepal

**DOI:** <http://www.kumj.com.np/issue/79/200-206.pdf>

**Context:** Cervical cancer is the most common cancer among women in Nepal causing the highest cancer mortality among women of reproductive age.

**Methodology:** A cross-sectional study was conducted among 360 women of age 30-60 years from five administrative wards of Bhaktapur municipality, Nepal.

**Key message:** Utilization of cervical cancer screening through Pap test or Visual Inspection with Acetic acid was found in 32.2% of women and 47.8% were aware of cervical cancer and its screening tests. Those who were aware of cervical cancer and had a high level of perception were more likely to perform the screening.

## Undiagnosed and Uncontrolled Hypertension and Access to Health Care among Residents of an Urban Area of Eastern Nepal: a Cross-sectional Study

**DOI:** <http://www.kumj.com.np/issue/79/143-149.pdf>

**Context:** The burden and complications of hypertension are increasing as most of the people living with hypertension are unaware of their condition.

**Methodology:** This was a cross-sectional study was conducted among 1161 participants in five wards of Itahari district, Nepal

**Key message:** Prevalence of hypertension was 26.5% including 11% undiagnosed cases. Among diagnosed (15.5%), 76.6% had uncontrolled blood pressure and 56.70% were taking anti-hypertensive medicine, and 7.8% were under Ayurvedic medicine. This study recommended a regular screening program for hypertension and an awareness program to disseminate knowledge of the availability of primary health centers.

## Anxiety and Depression and their Predictors among School Adolescents of Kathmandu, Nepal

**DOI:** <https://www.nepjol.info/index.php/JNPS/article/view/38310>

**Context:** Different physical, psychological and behavioral changes during adolescence contribute to mental health issues.

**Methodology:** A cross-sectional study was conducted among 482 students of Grades XI and XII in different higher secondary schools in Kathmandu, Nepal. Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI)-II were used to assess the levels of anxiety and depression.

**Key message:** The majority of the students (38.6%) had minimal anxiety and 11.6% had severe anxiety. Similarly, 16.4% had severe depression. Psychological counseling and support services should be available to vulnerable students.

### **Awareness and prevalence of diabetic retinopathy among diabetic patients attending Dailekh District Hospital, Karnali Province, Nepal**

**DOI:** <http://www.jgpeman.com/index.php/jgpeman/article/view/209>

**Context:** Diabetic retinopathy is the leading cause of blindness and awareness plays a crucial role in the management and prevention of this serious complication.

**Methodology:** A cross-sectional study was carried out among 236 diabetic patients visiting a district hospital in Dailekh, Nepal.

**Key message:** This study found that about 24% of respondents had a good awareness of diabetic retinopathy. All the respondents pointed to a lack of visual symptoms as the biggest factor for not getting an eye examination.

### **Prevalence of Prediabetes in Patients with Acute Coronary Syndrome: A Descriptive Cross-Sectional Study**

**DOI:** <https://www.nepjol.info/index.php/NHJ/article/view/48933>

**Context:** It is becoming increasingly clear that a pre-diabetic state is associated with adverse clinical outcomes including acute coronary syndrome.

**Methodology:** This was a single-center descriptive cross-sectional study conducted among 115 patients in the Department of Cardiology, B.P. Koirala Institute of Health Sciences, Dharan, Nepal.

**Key message:** In this study, 35 (30.4%) patients were newly diagnosed diabetic, 46 (40%) patients were prediabetic and 34(29.6%) were non-diabetic based on the definition of 2020 American Diabetic Association.

### **Consensus Statement of Cardiac Society of Nepal on Diagnosis, Management and Prevention of Acute Rheumatic Fever and Rheumatic Heart Disease in Nepal**

**DOI:** <https://www.nepjol.info/index.php/NHJ/article/view/48955>

**Context:** The prevalence of rheumatic heart disease is still significant in Nepal, especially in rural areas.

**Methodology:** This was a consensus document initiated by The Cardiac Society of Nepal to provide a reasonable and practical format for diagnosing and managing acute rheumatic fever and rheumatic heart disease.

**Key message:** This document expects to help in reducing the burden as well as address the current inequities in acute rheumatic fever and rheumatic heart disease care in Nepal.

## **Nutrition Status of Cancer Patients Attending Oncology Unit at Birat Medical College**

**DOI:** <https://www.nepjol.info/index.php/bjhs/article/view/49299>

**Context:** Malnutrition is a major problem in cancer patients.

**Methodology:** This was a descriptive cross-sectional observational study done among 70 cancer cases attending the oncology unit at Birat Medical College Teaching Hospital, Nepal. cancer patient's body mass index was calculated.

**Key message:** There were a total of 28 (40%) malnutrition cases out of which 22% were overweight, 17% were underweight and only 1% were obese. The study recommended comprehensive nutritional support to cancer patients.

## **Clinico-pathological Study of Solid Cancer patients receiving chemotherapy at Birat Medical College Teaching Hospital**

**DOI:** <https://www.nepjol.info/index.php/bjhs/article/view/49298>

**Context:** Patients with solid tumors are increasingly being admitted to the intensive care unit (ICU) for both oncologic and non-oncologic problems.

**Methodology:** This descriptive cross-sectional study was conducted among 73 cancer cases attending the oncology unit at Birat Medical College Teaching Hospital, Nepal.

**Key message:** This study found that 78% of cancer patients were in the advanced stage. Most of the cases were with clinical remission (30%) out of which the most common were breast and colorectal cancers.

## **Psychological distress and marital satisfaction among the spouses of patients with alcohol dependence syndrome attending Patan Hospital**

**DOI:** <https://jpahs.edu.np/index.php/jpahs/article/view/580>

**Context:** Alcohol dependence is considered an ongoing stressor especially for spouses because of the intimate nature of their relationship.

**Methodology:** This cross-sectional study was conducted at Patan Hospital, Nepal among a total of 92 spouses of patients with alcohol dependence syndrome.

**Key message:** Majority of respondents had anxiety 59(64.13%) followed by depression 52(56.52%) and 19(20.65%) perceived stress. There was a significant association between psychological distress and marital dissatisfaction in spouses.

### **Prevalence and Correlation of Hypertension, Obesity and Diabetes Among Adults Visiting Community-Based Screening Programs**

**DOI:** <https://www.nepjol.info/index.php/JCMSN/article/view/48700>

**Context:** Hypertension and obesity increase the risk of long-term vascular complications of type 2 diabetes mellitus.

**Methodology:** This was an analytical cross-sectional study conducted among 233 adults visiting the community-based screening programs in Chitwan, Nepal.

**Key message:** The prevalence of hypertension, obesity, and diabetes were 25.7%, 21.8%, and 36.5% respectively. This study stressed that the prevention and control of metabolic risk factors are to be addressed by an integrated approach of the healthcare delivery system.

### **Suicide Risk, Self-esteem and Family Support among Community School Going Adolescents of Kathmandu Valley, Nepal: A Cross-sectional Study**

**DOI:** <https://www.nepjol.info/index.php/jbpkihs/article/view/45424>

**Context:** Suicide, one of the major public health concerns, has often been neglected in adolescents.

**Methodology:** A cross-sectional study was conducted among 211 students of grades eight to ten at two community schools of Kathmandu valley. P4 Suicide screener, Nepali family support and difficulties scale, and Rosenberg self-esteem scale were used in the survey.

**Key message:** Among the participants, almost 28% were found to have suicide risk. The group of students who had no suicidal risk had significantly higher scores in family support and difficulty scale. Considering the high prevalence of suicide risk, it is crucial for parents, teachers, and all healthcare providers to be proactive and look for warning signs in all children and adolescents.

### **Cervical cancer in Nepal: Current screening strategies and challenges**

**DOI:** <https://doi.org/10.3389/fpubh.2022.980899>

**Context:** Despite no national cervical cancer control program, Nepal's Ministry of Health and Population has taken many initiatives with various international collaborations in screening, vaccination, and treating pre-invasive and invasive cancer.

**Methodology:** Review article

**Key message:** The screen-and-treat approach on the same day could potentially address treatment delays and follow-up loss after testing positive. Our narrative summary highlights

existing and innovative strategies, unmet needs, and collaborations required to achieve elimination across implementation contexts.

### **Effect of Educational Intervention Based on Theory of Planned Behaviour on Physical Activity Intention among Secondary School Teachers of Nepal**

**DOI:** [10.1155/2022/6953632](https://doi.org/10.1155/2022/6953632)

**Context:** Physical inactivity is one of the strongest risk factors for noncommunicable diseases (NCDs) and other conditions and is attributable to 6% of global premature death. However, data on the PA of teachers are unavailable in Nepal. They are considered one of the risk groups for NCDs because of the less active nature of their job.

**Methodology:** A quasi-experimental (pretest-posttest control group) study, recruiting 126 teachers from 6 schools. The intervention was an educational intervention based on the theory of planned behaviour on PA intention.

**Key message:** After the intervention, the net increase in PA intention score was 9.35% compared to the control group. Thus, the promotion package was effective in increasing PA intention. The findings of this study and educational package could be helpful in encouraging teachers to engage in PA in other schools.

### **Feasibility and Acceptability of a School-Based Emotion Regulation Prevention Intervention (READY-Nepal) for Secondary School Students in Post-Earthquake Nepal**

**DOI:** [10.3390/ijerph192114497](https://doi.org/10.3390/ijerph192114497)

**Context:** To advance the evidence base for adolescent mental health interventions in LMICs, authors evaluated the feasibility and acceptability of a school-based emotion regulation prevention intervention (READY-Nepal) for adolescents who had recent exposure to a humanitarian disaster.

**Methodology:** A mixed-method, non-randomized controlled trial was conducted with Nepali secondary school students in one heavily affected post-earthquake district. Students ( $N = 102$ ; aged 13 to 17 years) were enrolled in the intervention ( $n = 42$ ) and waitlist control ( $n = 60$ ) conditions. Preliminary efficacy was examined on primary outcome (emotion regulation) and secondary outcomes (anxiety symptoms, posttraumatic stress symptoms, functional impairment, resilience, coping skills).

**Key message:** Delivering the intervention was feasible and acceptable. Qualitative data suggested high uptake of anger regulation skills, but lower uptake of mindfulness skills. Despite this, there were no significant differences by condition on primary or secondary outcomes at the four-week follow-up.

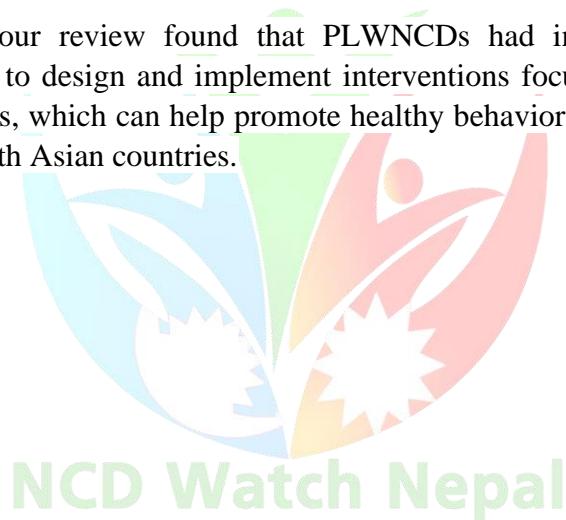
## Prevalence of and factors associated with health literacy among people with Noncommunicable diseases (NCDs) in South Asian countries: A systematic review

**DOI:** <https://doi.org/10.1016/j.cegh.2022.101174>

**Context:** Health literacy increases the ability of people living with non-communicable diseases to read and understand medical information, access health information and health services, and involvement in shared decision making required for improving health outcome and health behaviors.

**Methodology:** Based on PRISMA guidelines, a systematic review of primary studies published between 2010 and 2021 was carried out using four electronic databases and search engines, namely Medline (PubMed and EBSCOhost), CINAHL, Scopus, and Google search engines with various key search terms. Data were extracted, and the findings were narratively synthesized.

**Key message:** Overall, our review found that PLWNCDs had inadequate health literacy. Therefore, it is important to design and implement interventions focusing on improving health literacy among PLWNCDs, which can help promote healthy behaviors and improve the skills to self-manage NCDs in South Asian countries.



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 2022.

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([ncdwatchnepal@gmail.com](mailto:ncdwatchnepal@gmail.com))

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