Non-communicable Diseases in Nepal
Research Roundup March 2021

Making non-communicable diseases a national priority
Welcome to NCD Watch Nepal Research Roundup

We thank you all for joining our initiative to promote evidence-informed policymaking and promote public awareness on 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 summary of scientific publications on NCDs in Nepal for the month of March 2021.

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

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

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

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NCDs in Nepal Research Roundup-March 2021

Summary

For the month of March 2021, our scoping on non-communicable diseases research in Nepal found 13 published articles. Majority of the studies were cross sectional studies and, covering the topic of cancer, diabetes, stroke, cardiovascular diseases and mental health.

Added socioeconomic burden of non-communicable disease on HIV/AIDS affected households in the Asia Pacific region: A systematic review

DOI: https://doi.org/10.1016/j.lanwpc.2021.100111

Context: HIV/AIDS causes a significant socioeconomic burden to affected households and individuals, which is exacerbated by non-communicable diseases (NCDs).

Methodology: Systematic review in Asia Pacific Region (including Nepal).

Key message: The study found households with HIV (HIV-HHs) had a significantly higher socioeconomic burden compared to Non-HIV households. HIV-HHs experienced more absenteeism, lower wages, higher unemployment, and higher food insecurity.

Prevalence of Stroke and Stroke Risk Factors in a South-Western Community of Nepal

DOI: https://doi.org/10.1016/j.jstrokecerebrovasdis.2021.105716

Context: The global prevalence of stroke is rising. Stroke prevalence and risk factors in Nepal are solely hospital-based and mainly based on its capital city.

Methodology: A cross-sectional study among 549 randomly selected participants from diverse ethnicity, aged ≥15 years. Stroke was identified by enumerators using the Balance-Eyes-Face-Arms-Speech-Time (BEFAST) scale.

Key message: The prevalence of stroke in the community of the South-Western part of Nepal is relatively higher than that estimated in the South-Asia and global context. Suggesting an urgent community intervention, particularly with healthy lifestyle changes for future stroke prevention in the high-risk group.
A funfair without the candy floss: engaging communities to prevent diabetes in Nepal

DOI: https://doi.org/10.1016/j.puhe.2021.01.012

Context: Diabetes prevalence has been rising more rapidly in low- and middle-income countries than in high-income countries and there is a need for innovative approaches to engage with communities to prevent and control non-communicable diseases.

Methodology: This was a population-based community engagement approach with artists to create an environment for dialogue about diabetes and NCD risk between artists and the general public.

Key message: Innovative, asset-based community engagement about diabetes and other NCDs at scale is possible through locating, building on, and strengthening community resources to address local health issues.

Sex Differences in the Association between Internet Usage and Overweight/Obesity: Evidence from a Nationally Representative Survey in Nepal

DOI: https://doi.org/10.3390/sexes2010011

Context: Overweight/obesity, a major risk factor for non-communicable disease (NCD), premature deaths, and disability, is increasing exponentially worldwide, especially among people in low and middle-income countries (LMICs).

Methodology: The study analyzed the nationally representative Nepal Demographic and Health Survey (NDHS) 2016 data.

Key message: The prevalence of overweight/obesity by internet use was 38% for males and 44.1% for females. The likelihood of overweight/obesity was significantly higher (aOR: 1.55; 95% CI: 1.40, 1.73; p < 0.001) among those participants who used the internet compared to the participants who did not use the internet in the last 12 months.

Physical activity status among health science students of Chitwan, Nepal


Context: Evidence suggests that nearly one-fifth of the overall risk for coronary heart disease, type 2 diabetes, breast cancer, colon cancer is due to physical inactivity.

Methodology: A cross-sectional study was conducted among health science students of Chitwan District using a non-probability sampling technique. Used self-reported Global GPAQ – 16 items.

Key message: More than two-thirds of students reported their status as low active. Nearly 7% were physically inactive.
Effects of a health worker-led 3-month yoga intervention on blood pressure of hypertensive patients: a randomized controlled multicentre trial in the primary care setting

DOI: https://doi.org/10.1186/s12889-021-10528-y

Context: Together with the growing burden of hypertension, the prevalence of untreated and uncontrolled hypertension is also very high, particularly in low and middle-income countries (LMICs).

Methodology: A multicentric, two-arm, randomized trial conducted among hypertensive patients in seven Ayurveda Health Centres in Nepal between March 2017 and June 2018.

Key message: The difference in systolic blood pressure between the intervention group and the control group was -7.66 mmHg (95% CI: -10.4, -4.93). For diastolic blood pressure, the difference was -3.86 mmHg (95% CI: -6.65, -1.06). The study found a yoga program for hypertensive patients consisting of five-day training in health centers and 90 days of practice at home is effective for reducing blood pressure.

The impact of COVID-19 on mental health outcomes among hospital fever clinic attendants across Nepal: A cross-sectional study

DOI: https://doi.org/10.1371/journal.pone.0248684

Context: The COVID-19 pandemic has been creating panic and distressing situations among the entire population globally including Nepal.

Methodology: A cross-sectional survey was conducted between May - June 2020 with a sample of 645 participants aged 18 and above in 26 hospitals across Nepal. Depression, Anxiety, and Stress (DASS-21) scale was used.

Key message: The prevalence of anxiety, depression, and stress were 14%, 7%, and 5% respectively. The study found women were more at risk of anxiety (OR 3.41, 95% CI 1.83–6.36) than men. Similarly, people currently living in rented houses reported more stress and those living far from family reported higher rates of depressive symptoms.
Anxiety and Depression Among Health Sciences Students in Home Quarantine During the COVID-19 Pandemic in Selected Provinces of Nepal

DOI: https://doi.org/10.3389/fpubh.2021.580561

Context: The COVID-19 pandemic brought not only the risk of death from infection but also unbearable psychological pressure.

Methodology: A web-based cross-sectional study was conducted among 409 health science students at the graduate and post-graduate levels in selected universities.

Key message: The prevalence of anxiety and depression was 15.7 and 10.7%, respectively. Internet use for education, and postponement of exams were found to be correlated with anxiety and depression among students.

Prevalence of diabetes in tuberculosis patients in Kathmandu Valley, Nepal

DOI: https://doi.org/10.7883/yoken.JJID.2019.375

Context: SDG and the End TB strategy aim to end the global TB epidemic, however, the fall in TB incidence is too slow to achieve global targets. At the same time, the prevalence of diabetes has nearly doubled, with an even faster increase in developing countries.

Methodology: Cross-sectional study was done among TB patients (18-65 years) from urban DOTS centers of Kathmandu valley.

Key message: The comorbidity of DM and TB was higher in the 35 and above years age group and was found in 24.2% of previously treated TB cases (PTTB) and in 23.1% of new TB cases.

Psychological Distress among Caregivers of Children with Neurodevelopmental Disorders in Nepal

DOI: https://doi.org/10.3390/ijerph18052460

Context: Parenting a child with a neurodevelopmental disorder (NDD) is related to a higher rate of anxiety and depression, increased stress, and reduced quality of life.

Methodology: 63 caregivers were visited from rural areas of four districts in Nepal and interviewed by experienced mental health professionals. General Health Questionnaire-12 (GHQ-12) was used.

Key message: Caregivers who were illiterate had higher psychological distress compared with those who were literate. A significant association was found between GHQ-12 and degree of
disability and feeding problems. Those who received help from health workers had significantly lower scores on the GHQ-12.

**Mental health integration in primary health services after the earthquake in Nepal: a mixed-methods program evaluation**

**DOI:** [https://doi.org/10.1017/gmh.2021.8](https://doi.org/10.1017/gmh.2021.8)

**Context:** Mental health and psychosocial support Services (MHPSS) was implemented in three severely affected districts: Dhading, Gorkha, and Sindhuli in the aftermath of the devastating 2015 earthquakes in Nepal.

**Methodology:** The mixed-methods evaluation used routine program data, quantitative data from pre-and post-tests conducted with trainees and service users, and qualitative data from stakeholder interviews and focus group discussions.

**Key message:** Participants demonstrated significant improvements in skills, knowledge, and self-rated perceived competency. The most commonly identified presenting problems were epilepsy (29%) and depression (26%).

**Epidemiologic Pattern of Cancer in Kathmandu Valley, Nepal: Findings of Population-Based Cancer Registry, 2018**


**Context:** Cancer is one of the major public health issues globally and in Nepal. In Nepal, cancer control has not been a priority public health agenda until recently.

**Methodology:** Data collected through the Population-Based Cancer Registry (PBCR) from health facilities and communities were analyzed.

**Key message:** The age-adjusted mortality rate for males was 36.3 and for females 27.0 per 100,000 population. The study found that the commonest cancers in males were lung and stomach, whereas, in females, they were breast and lung cancer. Gallbladder cancer was among the top five common cancers in both sexes.
Non-carcinogenic and Carcinogenic Risk Assessment of Heavy Metals Exposure to Indoor Dust in Kathmandu, Nepal

DOI: https://www.nepjol.info/index.php/JNCS/article/view/35324

Context: In Kathmandu, the rapid growth in urbanization and industrialization has increased the risk of pollution due to dust particles in the indoor environment across different land use zones.

Methodology: 93 indoor household dust samples were collected from four different types of land use zones viz. commercial, heavy traffic, residential, and control (undisturbed area) in Kathmandu using flame atomic absorption spectrophotometer (FAAS).

Key message: Study findings showed a high pollution load in the monitored locations, indicating an alarming condition and the urgent need for immediate remedial actions.

Let’s unite to beat NCDs. #beatNCD