

# Prevalence and associated factors of needle stick and sharps injuries among healthcare workers in northwestern Ethiopia

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Overall prevalence of NSSIs among HCWs in northwestern Ethiopia was **29.5%** during the 12 months prior to the survey. occupation as a **nurse**, disposal of sharp materials in **places other than in safety boxes**, **recapping** of needles, and **feeling sleepy** at work were factors significantly associated with NSSIs.

## BACKGROUND

Needle stick and sharp injuries (NSSIs) are a common problem among healthcare workers (HCWs). Although the factors related to NSSIs for HCWs are well documented by several studies in Ethiopia, no evidence has been reported about the magnitude of and factors related to NSSIs in hospitals in northwestern Ethiopia.

## METHODS

An institution-based cross-sectional study was carried out from January to March 2019 among 318 HCWs in three randomly-selected hospitals of the eight hospitals found in South Gondar Zone. Sample sizes were proportionally allocated to professional categories. Study participants were selected by systematic random sampling methods using the monthly salary payroll for each profession as the sampling frame. Data were collected using a self-administered questionnaire. The outcome of this study was the presence (injured) or absence of NSSIs during the 12 months prior to data collection. A binary logistic regression model with 95% confidence interval (CI) was used for data analysis. Variables from the bivariable analysis with a p-value  $\leq 0.25$  were retained into the multivariable analysis. From the multivariable analysis, variables with a p-value less than 0.05 was declared as factors significantly associated with NSSIs.

## RESULTS

The **prevalence of NSSIs was 29.5%** (95% CI: 24.2–35.5%) during the 12 months prior to the survey. Of these, 46.0% reported that their injuries were moderate, superficial (33.3%) or severe (20.7%). About 41.4% of the injuries were caused by a **suture needle**. Factors significantly associated with NSSIs were occupation as a nurse (adjusted odds ratio (AOR) = 2.65, 95% CI: 1.18–4.26), disposal of sharp materials in places other than in safety boxes (AOR = 3.93, 95% CI: 2.10–5.35), recapping of needles (AOR = 2.27, 95% CI: 1.13–4.56), and feeling sleepy at work (AOR = 2.24, 95% CI: 1.14–4.41).

## CONCLUSIONS

This study showed that almost one-third of HCWs had sustained NSSIs, a proportion that is high. Factors significantly associated with NSSIs were occupation as a nurse, habit of needle recapping, disposal of sharp materials in places other than in safety boxes and feeling sleepy at work. Observing proper and regular universal precautions for nurses during daily clinical activities and providing safety boxes for the disposal of sharp materials, practicing mechanical needle recapping and preventing sleepiness by reducing work overload among HCWs may reduce the incidence of NSSIs.

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## MORE INFORMATION / REFERENCES

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