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# Ethiopian women's breast cancer self-examination practices and associated factors. A systematic review and meta-analysis

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## Highlights

- The practice of breast cancer self-examination was studied in Ethiopia, but the findings revealed a high degree of variability (from 6.5% to 79.9%).
- This review refutes this variability and provides consolidated results in Ethiopian women's BCSE practice.
- Overall, 36% (95% CI: 28, 43) and 16 % (95 % CI: 28, 43) of Ethiopian women had ever and regular breast cancer self-examinations, respectively.
- Determine the elements that contribute to Ethiopia's low BCSE

practice.

## Abstract

### Background

Breast neoplasm is the most frequently diagnosed and the leading cause of cancer death in the vast majority of the countries. Breast cancer self-examination is a check-up of a woman does at home to look for changes or problems in the breast tissue. The benefit of early recognition is for early treatment that is more effective, higher long-term survival rates and better quality of life. The aim of this review was to determine the pooled prevalence of breast cancer self-examination practice and identify its associated factors among Ethiopian women.

### Methods

Google Scholar, PubMed, Science Direct, web of science, and Cochrane Library were used for search of articles. This review includes thirty four articles conducted in Ethiopia between 2011 and 2020. The review contains 14,908 women to determine the ever pooled prevalence of breast cancer self-examination practice. Health workers and students made up 28.35% of the total participants. Data were extracted using a standardized data extraction format prepared in Microsoft Excel and analyzed with Stata 14. To assess heterogeneity  $I^2$  test were used. A random effect meta-analysis model was used to estimate the pooled breast cancer self-examination (BCSE) practice of Ethiopian women. Moreover associated factors were also assessed.

### Results

In Ethiopian women, the overall ever and regular pooled breast cancer self-examination practice was 36% (95% CI: 28, 43) and 16% (95% CI: 28, 43) respectively. The ever pooled prevalence for health workers or students was 53% (95% CI: 41, 65), whereas for other participants it was 25% (95% CI: 19, 30). Good knowledge about breast self-examination (AOR: 3.69: 95% CI: 2.70, 5.05), positive attitude towards BCSE (AOR: 2.72: 95% CI: 1.74, 4.24), Getting to know people with breast cancer (AOR: 2.77: 95% CI: 1.51, 5.09), family history of breast cancer (AOR: 2.49: 95% CI: 1.60, 3.88) and personal history of breast cancer (AOR: 2.26: 95% CI: 1.70, 3.01) were associated factors to BCSE practice among Ethiopian women. All of the studies included in this review were conducted in a cross-sectional design was a limitation of this review and meta-analysis.

## Conclusion

This review and meta-analysis showed the ever and regular pooled prevalence of BCSE among Ethiopian women. More than one third of Ethiopian women ever practiced BCSE. We recommend that awareness creation should be perform in order to tackle the risk of breast cancer.

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## Section snippets

### Background

Neoplasm is a group of diseases causing cells in the body to change and proliferate beyond of control, and form a lump or mass called a tumor, and are named after the part of the body where the tumor originates [1], [2], [3]. In 2018, there were an estimated 18.1 million new cases of cancer and 9.6 million deaths due to cancer, from this 11.6% (about 2.1 million new cases and nearly to 1.2 mortality were owed female breast neoplasm worldwide [1], [2], [4]. For many years, breast cancer like ...

### Search strategy and study setting

The review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Published and unpublished research articles on the practice of breast neoplasm self-examination and its related factors among Ethiopian women were searched. Studies, relevant to practice of breast neoplasm self-examination and its factors were identified through a literature search of databases: Google scholar, PubMed, Science Direct, HINARI and Cochrane Library. Unpublished ...

### Competing of interest

The authors declare no conflict of interest for this review. ...

### Acknowledgements

The authors thanks the primary study's authors. ...

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