Title: National scale-up of psychological intervention for harmful alcohol use among men in India: A cost-benefit analysis

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Conflicts of Interest: None

Background: In India, the Counseling for Alcohol Problems (CAP), a brief psychological intervention delivered by lay workers, has shown to have sustained cost-effectiveness at 12 months for increasing remission and abstinence rates in 18-65 years old men with harmful alcohol use. We conducted a cursory cost-benefit analysis for CAP national scale-up.

Methods: We conducted a retrospective analysis for annual costs and economic benefits of CAP scale up in 2019. Health system integration costs for CAP (HS costs) were obtained from CAP sustained cost-effectiveness study. The per capita gross domestic product (GDP) and total health expenditure (THE) values for 2019 were obtained from GHDx. AUD prevalence and DALY values were taken from Global Burden of Diseases (2019). Annual scale-up costs for meeting overall need was the product of the AUD prevalence in 20-64 men and the per capita HS costs. The economic benefits were potential averted AUD DALYs multiplied with the non-health GDP per capita (GDP - THE). Net benefits were the difference between economic benefits and scale-up costs.

Results: In 2019, the annual cost for national CAP scale-up was US$2,349,441,166 (95% Uncertainty Interval: 1,933,157,735-2,823,118,648). This was 0.024% of GDP and 0.67% of THE. The economic benefit from DALYs averted was $13,340,779,916 (95%UI: 10,138,772,438-17,259,482,864). The net benefits were $10,991,338,750.

Conclusion: The benefits of CAP scale-up are substantial and the costs are less than <1% of health expenditure, making it feasible.
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INTRODUCTION

India accounts for 13% of the global burden of alcohol use disorders (AUDs). Counseling for alcohol problems (CAP), a preventive and intervention strategy provided by health workers was shown to decrease excessive alcohol consumption by 30% in high-risk drinkers [2]. This study aims to calculate the net benefits of scaling-up CAP in India to meet the current and projected needs of AUD burdens.

METHODS

Study design: A retrospective analysis for India in 2019.

Data sources and variables:

In 2019, adult male AUD prevalence was 6.6% [3]. However, the net benefits of scaling up CAP to meet the current and projected needs of AUD burdens were calculated using India as the unit of analysis.

Economic benefits using Human Capital Approach (HCA) and Value of a Life Year (VLY) approach:

- Net benefits using HCA or VLY = \( (\text{HCA} - \text{VLY}) \times 2.8 \)
- Economic benefits of mental health programs = \( \text{HCA} - \text{VLY} \)
- Economic benefits of mental health programs in AUD = \( 2.8 \times \text{HCA} - \text{VLY} \)
- Economic benefits of mental health programs in AUD = \( 2.8 \times (\text{HCA} - \text{VLY}) \)

CONCLUSIONS

The net benefits of scaling up CAP were substantial. The study estimates that scaling up and benefiting from a national strategy of CAP could provide substantial benefits in terms of reduced alcohol use and improved mental health outcomes. The study recommends scaling up CAP to meet the current and projected needs of AUD burdens in India.

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REFERENCES