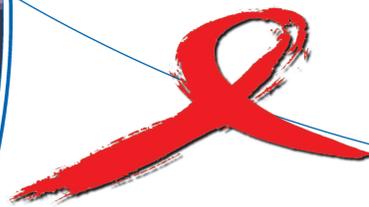


IMPLEMENTATION AND MONITORING OF SCREENING AND BRIEF INTERVENTION FOR ALCOHOL USE DISORDERS AMONG TUBERCULOSIS PATIENTS



Conducted by HSRC:

Karl Peltzer, Pamela Naidoo, Julia Louw, Gladys Matseke, Gugu Mchunu, Khangelani Zuma, Bomkazi Tutshana, Musawenkosi Mabaso, Adlai Davids
HIV, AIDS, TB, and STIs (HAST), Human Sciences Research Council (HSRC)

Pretoria, Cape Town, Durban, Port Elizabeth, South Africa.

Funded by: Department of Health, South Africa



HUMAN SCIENCES RESEARCH COUNCIL

The aim of this study, was to conduct a cluster randomized control trial to assess the effectiveness of screening and brief intervention (SBI) for alcohol use disorders among TB patients in public primary care clinics.

METHODOLOGY

Three provinces were targeted for this study, viz KwaZulu Natal, Eastern Cape and Northern Cape. Within each province one district with the highest TB burden was selected. Furthermore, 14 primary health care facilities with the highest TB caseload in each district were selected. In each district, 7 of the 14 (50%) clinics were randomly assigned to a control arm and another 7 of the 14 (50%) clinics assigned to an intervention arm. At the clinic level systematic sampling was used to recruit newly diagnosed and re-treatment TB patients. Those consenting to participate in the study were screened for alcohol misuse using the Alcohol Use Disorder Identification Test (AUDIT). Patients who screened positive for alcohol misuse over a 6-month period were given either a brief intervention based on the Information-Motivation-Behavioural (IMB) Skill Model or an alcohol use health education leaflet. Of the 42 eligible clinics, 2 clinics were found not to be having any patient screened positive for alcohol misuse; thus, the 2 clinics were excluded resulting to 40 clinics participating in the intervention control cohort based trial.

Participants were evaluated and screened at baseline. Immediately thereafter, those in the intervention arm were provided with the brief intervention based on the IMB skill model whilst those in the control arm received an alcohol use health education leaflet. A total of 4 882 TB patients were screened for alcohol and agreed to participate in the trial. Of these 4 882 TB patients, 1 196 (24.6%) tested positive for the AUDIT with 455 (38%) from the control arm and 741 (62%) from the control arm. Participants were followed up at 3months and 6months. However, some participants were only seen at 3months only, 6months only and also some at both 3 and 6months for both intervention and control arm.

RESULTS

Among the 853 (71%) patients who attended at 6-month follow-up session, 269 (59%) participants were from control arm and 584 (79%) participants were seen at 6-months from the intervention arm.

In the control group, all 455 participants screened positive for alcohol misuse based on the AUDIT at baseline. At follow up, the proportion screened positive for alcohol misuse based on the AUDIT significantly decreased to 21.2% ($P < 0.001$).

The 95% confidence interval from the proportion screened at follow up ranged from 11.4% to 33.9%. The results show a 78.8 percentage-decline in the risk of alcohol misuse from baseline to follow up among patients randomised into the control arm. This was after receiving a health education leaflet targeted at the control group.

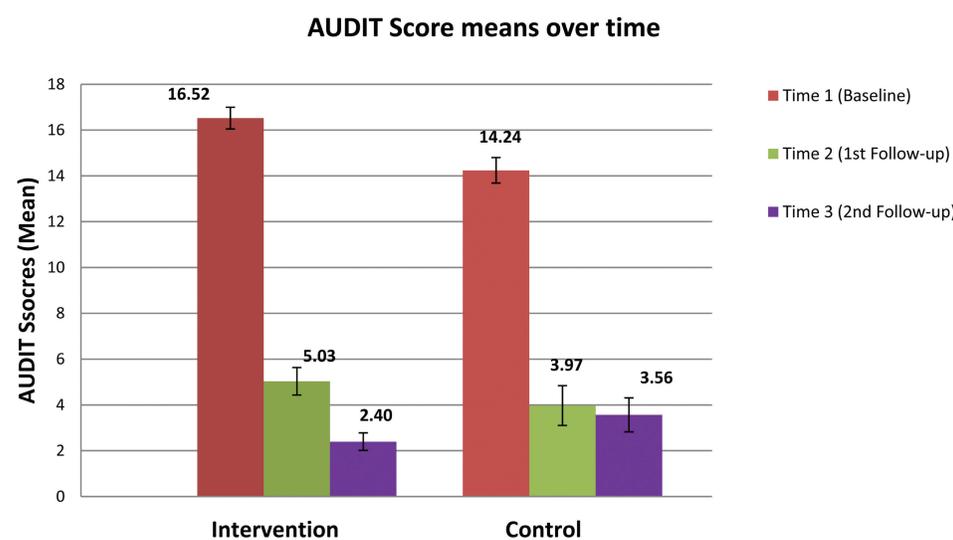
In the intervention arm, all of the 741 participants screened positive for alcohol misuse based on the AUDIT at baseline. The proportion that screened positive for alcohol misuse decreased significantly down to from 100% to 16.8% ($P < 0.001$) after receiving IMB skill model intervention. The 95% confidence interval ranged from 9.6% to 25.2%. This implies a drastic 83.2 percentage-decline in alcohol misuse from baseline to follow up among patients randomised into the intervention arm.

The results show that both health education leaflet and IMB skill model intervention significantly reduce alcohol misuse. However, IMB skill model seems to be reducing alcohol misuse more than the health education leaflet but this was not statistically significant. Even though the intervention effect was not statistically significant between control and intervention arm, the intervention effect was significant for high risk drinkers and alcohol dependent drinkers (AUDIT: 7-40) ($P = 0.005$), alcohol dependent drinkers ($P = 0.009$) and heavy episodic drinking ($P = 0.000$), while the control group effect was significant for high risk drinkers (AUDIT: 7-19) ($P = 0.000$).

Further, the study found that at 6-month follow-up the intervention group had a lower TB treatment cure or completion rate than the control group. The results of TB outcome were classified as cured of TB, completed treatment, treatment failure,

defaulted, died during treatment or transferred out. More patients were cured in the control (53.6%) than the intervention (45.9%) arm. Slightly more patients completed treatment in the intervention arm (21.5%) compared to control arm (20.9%). Furthermore, more patients (24.6%) defaulted in the intervention arm compared to control arm (17.9%). Focusing only on the TB treatment cure and completion rate, patients in the control arm were significantly (p -value=0.02) more likely to be successfully treated or complete TB treatment (74.5%) compared to patients in the intervention arm (67.4%).

Figure: Mean Audit Scores from baseline to 2nd Follow-up



DISCUSSION

The IMB skill model intervention was found to be significantly effective for high risk or alcohol dependent drinkers, alcohol dependent drinkers and heavy episodic drinking, while the health education leaflet implemented to the control arm was effective in high risk drinkers. This indicates that the effect was greater for those who had developed a physiological dependency on alcohol and those who had heavy episodic drinking. This finding seems to suggest that health education may be sufficient for TB patients with hazardous drinking and brief intervention is needed and may be sufficient for alcohol dependent or harmful drinkers.

The significant reduction of hazardous and harmful alcohol use found in this trial in the control or no-treatment group could possibly be explained by 1) the intervention effect of alcohol screening/follow-up and provision of health education leaflet on sensible alcohol drinking, 2) the intervention effect of standard care (nurses provide advice on alcohol drinking) and 3) natural history changes in drinking over time in the course of TB treatment, especially among those randomised into control arm. Furthermore, the fact that the intervention group did not have better cure rates or positive TB treatment outcomes than the control group suggests that the intervention per se did not improve the bio-behavioural mechanisms associated with TB cure in those with AUDs.

CONCLUSION

The results suggest that alcohol screening and brief intervention performed at the beginning of anti-TB treatment in public primary care settings may be effective in reducing alcohol consumption. The significant intervention effect for alcohol dependent and heavy episodic drinkers and the significant control group effect among high risk drinkers seem to suggest that health education may be sufficient for TB patients who are hazardous drinkers and brief intervention to reduce alcohol consumption is effective and necessary for alcohol dependent or harmful drinkers. Based on these results, the evidence for the effectiveness of brief interventions in TB public primary care patients is still inconclusive. Thus, more studies are needed to explore the effects of brief alcohol interventions with TB patients in primary care settings.