Motivational interviewing for people with chronic viral hepatitis and who drink alcohol: *a randomised controlled trial*

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Background

A significant synergy exists between heavy alcohol consumption and hepatitis virus infection (hepatitis B and C), which may suggest a common pathway for hepatocarcinogenesis[1,3,4]. Additionally it has been reported that Hepatitis C (HCV) is a common cause of cirrhosis[3,4] with alcohol consumption further leading to an accelerated development of fibrosis[4]. Furthermore patients with chronic hepatitis virus infections should consider abstaining from consuming alcohol in order to lower the harmful effects especially when combined with these risks factors. The provision of assessment and brief interventions for behaviour change in health care is increasingly being advocated for reducing harmful alcohol consumption[1,6,7]

Measurements

- Demographic information about the participants was collected using a data collection form developed by the researcher.
- Alcohol use was measured using The Alcohol Use Disorders Identification Test-Consumption (AUDIT-C)[8] which is a validated brief assessment tool for the identification of risky drinking, alcohol abuse and dependence.
- The Timeline Follow-back Survey-Alcohol (TLFB_A)[9] is a validated self-report measure for assessing recent drinking behaviour and was used to estimate a person's alcohol use.
- The WHOQOL-BREF[10] is a validated self-report instrument and was used to provide a profile of the quality of life of the participants. Scores were derived from the four domains which identify an individual's perception of their quality of life.

Interventions

Participants were blinded to the intervention; computer generated numbers were used for randomisation and the randomisation process was blinded to the clinicians. Group 1 (assessment and BI), were assessed for alcohol use using the Audit-C and received via the NP, the BI using the 5As model.. The 10 minute intervention was conducted as a part of the routine 30 minute appointment. The BI comprised of Assessing people for their alcohol use, readiness to quit/reduce, and level of alcohol dependence; Advising how they may stop drinking and the provision of evidence based written information; Agreeing on a realistic set of goals with the patient; Assisting with a plan to stop drinking and Arranging follow up with a specialist Alcohol and Drug service where necessary(11).

Group 2, the control group received routine care i.e., they were asked if they drink alcohol and were advised to stop; no formalised assessment or intervention was provided as per usual care.

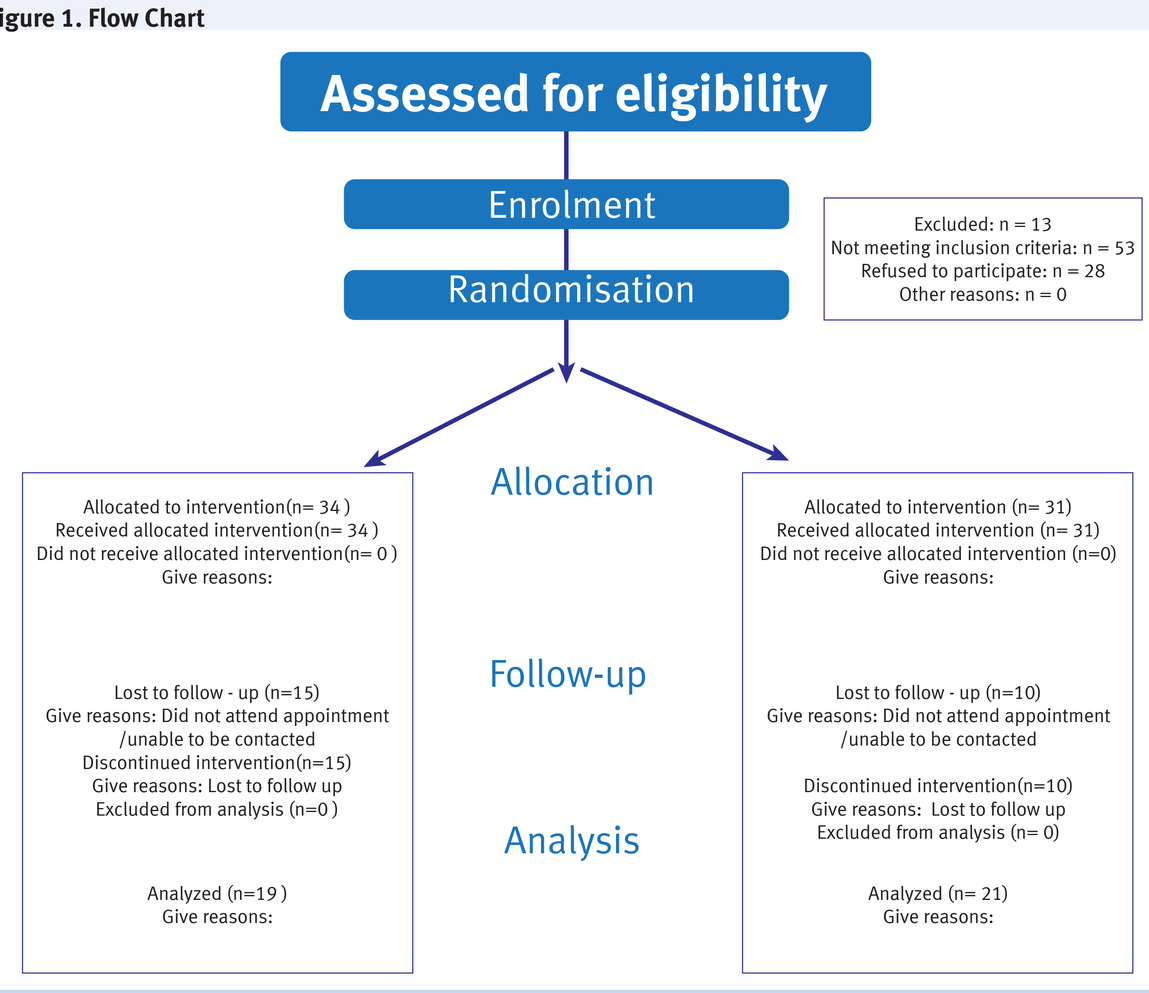
Data Collection

Data was collected at 3 time points; baseline (time 1), week 4 (time 2) and week 8 (time 3) after commencement.

Data Analysis

Data for this study were analysed using SPSS.

Figure 1. Flow Chart



Results

DEMOGRAPHIC VARIABLES:
Demographic information was collected using a tool developed by the researcher. Participants in the control group on average were aged 51 (9.4) years old compared to 45.6 (8.1) in the intervention group. There were no other differences found between the participants in the intervention group and the control group.

OVERALL:
At baseline those in the control and intervention groups reported a similar number of days without consuming alcohol. At Time two and Time three those in the intervention group were 20% more likely to have a greater amount of days without alcohol compared to those in the control group .

AUDIT_C:
At baseline those in the control and intervention groups reported a similar number of days where alcohol was consumed at risky levels. The intervention group had 20% reduction of having risky drinking days at Time two. Those in the intervention group also showed 20% less likelihood to have days of risky drinking compared to those in the control group.

TLFB:
The results of TLFB_A were also found to significantly reduce over time ($p<0.001$) The intervention group generally reported a lower mean TLFB_A compared to the control group. A clear trend emerged with the intervention group having a much sharper sustained drop in TLFB_A over time . Whilst not found to be statistically significant . This, however, was found to be clinically significant.

WHOQOL_BREF:
The variables Physical Health and QOL were found to have high scores among both groups and this remained stable throughout the study . The results of Psychological, Social and Environment variables (subscales) showed average scores for both groups and this remained stable over time.

BLOOD PATHOLOGY:
Pathology results for Alanine transaminase (ALT), Aspartate transaminase (AST) and Gamma-glutamyl transpeptidase (GGT) were inconclusive due to a small number available for data analysis and were therefore not included, as data analysis could not be performed.

Table: Linear mixed model results for Audit C and TLFB_A

Variable	Group	baseline	4 weeks	8 weeks
		mean (95% CI)	mean (95% CI)	mean (95% CI)
Audit C	control	6.6 (5.6, 7.6)	6.0 (4.7, 7.4)	5.7 (4.5, 7.0)
	intervention	7.2 (6.2, 8.2)	5.4 (4.0, 6.8)	5.1 (3.8, 6.3)
TLFB_A	control	47.3 (31.3, 71.1)	31.6 (15.9, 62.1)	22.8 (9.8,51.6)
	intervention	55.4 (37.2, 82.5)	13.4 (6.6, 26.3)	8.6 (3.4,20.1)

NB: Models adjusted for age, 2 TLFB_A has been logarithmically transformed and back transformed means and 95% confidence intervals are reported.

Implications for Practice

Assessing for alcohol use using the AUDIT C and TLFB_A, and providing a brief intervention using motivational interviewing and the 5As model by the Nurse Practitioner, Hepatology compared to routine care was an acceptable and feasible intervention to reduce alcohol consumption in people with chronic viral hepatitis in this specialist outpatient setting. Finally the results from this study support the National Hepatitis B and C Strategies[12,13] by increasing capacity of nursing services to provide an effective response to hepatitis B and C treatment in this population.

Implications for Research

Larger and more robust studies using this intervention and outcome measures, with larger sample sizes over longer periods of time are needed in this patient group to confirm the benefits of the interventions found in this study in relation to patient outcomes. This brief intervention should be further developed and tested as part of a clinical pathway for people with chronic viral hepatitis attending a specialist outpatient setting.

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