COMPARISON BETWEEN A COGNITIVE BEHAVIOURAL ALCOHOL PROGRAMME AND POST-MAILED MINIMAL INTERVENTION IN HIGH-RISK DRINKING UNIVERSITY FRESHMEN: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

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Abstract — Aim: Examine the effect of a 10 h intervention programme compared with post-mailed minimal intervention (PMMI) given to high-risk alcohol-drinking university freshmen in a random design. Method: In total 693 freshmen at the Lund Institute of Technology, Lund University, Sweden were included in the study. A cognitive behavioural alcohol program (CBAP) or PMMI was given to high-risk drinking freshmen (n = 177) in a randomized design. A 10-item screening instrument, Alcohol Use Disorder Identification Test (AUDIT), was used before and 1 year after the intervention programmes were given. Results: There were no significant differences between the CBAP and the PMMI groups. Both groups declined their AUDIT scores with –1.7 [CI 95% –2.6, –0.7] and –2.7 [CI 95% –3.6, –1.7], respectively which could be explained by effects of regression to the mean. Conclusion: No significant differences between the groups were found.

INTRODUCTION

Drinking patterns vary during a lifespan. The group consuming most alcohol are young adults (18–25 years) (Grant, 1997). During this period, not only is the consumption high, it is also the most intense period of high episodic drinking (Naimi et al., 2003).

Among young adults, the college population has been studied extensively. Different studies identify college students as a population at high-risk for heavy consumption and negative consequences of alcohol (Sundbom, 1992; Wechsler et al., 1994; Marlatt et al., 1998; Wechsler, 1998; Borschos et al., 1999; Knight et al., 2002).

One reason is the perceived risk of hazardous alcohol consumption. A study conducted by Vik et al. (2000) reported that two-thirds of the heavy-drinking college students did not recognize the need to reduce their alcohol consumption, despite evidence of low tolerance and negative drinking consequences. Another reason is the misconception in the norm system about the use of alcohol and other drugs among peers. In their study with data from surveys representing over 100 diverse college campuses in the US, Perkins et al. (1999) found that students substantially overestimated how often the average student used alcohol and other drugs.

During the last decade, methods to intervene with this age group have been developed. In 2002, the Task Force on College Drinking (NIAAA, 2002) published a review on available evidence of interventions in college populations, including recommendations for further strategies. Three methods were regarded as having strong evidence for efficacy: cognitive-behavioural skills with norm clarification and motivational enhancement intervention, in combination; brief motivational enhancement intervention; and methodology with challenged alcohol expectancies.

Marlatt et al. (1998) developed a cognitive-behavioural program, Alcohol Skills Training Program (ASTP) (Fromme et al., 1994), that teaches the students the basic principle of moderate drinking and how to cope with high-risk situations. The ASTP programme also included topics like social drinking norms and the challenge of alcohol expectancies. The aim of the programme is to reduce harmful alcohol consumption and associated problems by using a skills-based curriculum. The programme significantly reduced alcohol consumption and alcohol-related problems compared with randomized controls after 1 year (Kivlahan et al., 1990) and 2 years (Baer et al., 1992), respectively.

Under the general umbrella of ASTP, Marlatt et al. (1998) developed a shorter version called BASICS (Brief Alcohol Screening and Intervention for College Students—a Harm Reduction Approach) (Dimeff et al., 1999), consisting of only two individual sessions, and with some components based on motivational interviewing (MI). This intervention is also based on harm-reduction with a non-confrontational approach. The BASICS programme significantly reduced both alcohol-related problems and alcohol consumption compared with randomized controls at 2-year (Marlatt et al., 1998) and 4-year follow-up assessments (Baer et al., 2001). The results have been confirmed in other studies. Murphy et al. (2001) reported that the BASICS programme was more efficient in reducing heavy drinking than a single session of drinking-related feedback or an assessment-only control after both 3 and 9 months. Larimer et al. (2001) studied brief motivational enhancement with feedback components. They showed that a brief motivational enhancement combined with skills-training intervention, given at fraternities, significantly reduced alcohol use and typical, peak blood alcohol concentrations. In the study they used both experts and peers as trainers and both reported similar results.

According to the Task Force on College Drinking (NIAAA, 2002), challenging alcohol expectancies seems to have a short-term effect on alcohol consumption. Darkes and
Goldman (1993, 1998) tested the efficacy of challenging expectancies in two studies. Both studies reported that subjects randomly assigned to expectancy challenge had a significant reduction in alcohol consumption compared with subjects randomly assigned to control or traditional information after 4 or 6 weeks, respectively.

Another method tested in college populations is personalized feedback, including components as perceived peer drinking at the university, risk status, correction of norm misperception, drinking habits, alcohol-related problems etc. The feedback can be given orally or via e-mail or post-mail. Personal feedback is included in ASTP programme as BASIC.

The Task Force on College Drinking did not discuss personalized feedback. However, several studies have reported positive effects with this method. In a study by Walters et al. (2000), high-risk drinking college students were randomly assigned to one of three groups: (i) information and motivation session plus mailed feedback; (ii) mailed feedback only, and (iii) no treatment. In a 6-week follow-up, the mailed feedback group significantly reduced their drinking more than controls. No other differences were statistically significant.

Agostinelli et al. (1995) reported that mailed normative feedback decreased drinking more than in controls assessed after 6 weeks. Collins et al. (2002) showed that a personalized normative feedback decreased consumption and frequency of heavy episodic drinking compared with controls after 6 weeks but not after 6 months. Murphy et al. (2004) examined the efficacy of personalized drinking feedback (PDF) with and without MI. The study did not support the hypothesis that MI would enhance the efficacy of PDF. Both groups decreased their alcohol consumption significantly and no differences were found between them. A study by Neighbors et al. (2004) evaluated the efficacy of a computer-delivered personalized normative feedback. The results showed that normative feedback was effective in changing perceived norms as well as alcohol consumption after 3- and 6-month follow-up assessments.

In a double blind randomized controlled trial Kypri et al. (2004) tested a web-based screening and intervention program (e-SBI) with the purpose of reducing hazardous drinking. At 6 weeks, subjects receiving the e-SBI intervention reported significantly lower total consumption, lower heavy episode frequency, and fewer problems than subjects receiving leaflets on health effects of alcohol did. After 6 months the personal and academic problems were lower in the intervention group. Most of these have included both drinking scores in relation to drinking patterns at the university and corrections of norm misperception.

In the present study we wanted to test an ASTP at a Swedish university and compare it with a post-mailed minimal intervention (PMMI). The ASTP was rather extensive with $5 \times 2$-h sessions. The PMMI only included a report of drinking scores based on Alcohol Use Disorder Identification Test (AUDIT) in relation to the scores of other students. No corrections of the norm misperception were given.

The primary aim was to assess if the skills training programme [cognitive behavioural alcohol program (CBAP)] was more effective than the PMMI in reducing alcohol consumption and related problems in a 1-year cohort of freshmen at the Lund Institute of Technology.

SAMPLE AND METHOD

Setting

Lund Institute of Technology is part of Lund University and divided into eight different departments representing the following curricula: Architecture, Building and Environmental Technology, Computer Science, Electro Science, Physics, Chemistry, Mechanical Engineering, and Mathematics. All departments are located on campus, but in different buildings, and there are no students living in the area. The students identify strongly with their respective departments, and they arrange several activities, not only separated from other departments, but also from the other faculties at the university. Male students are in a vast majority in most of the departments, sometimes up to as much as 85% of all students registered. Only the departments of chemistry and architecture display a more equal balance between genders. About 4000 students were registered at the Lund Institute of Technology, and a total of 37 000 were registered at Lund University. The initial part of the study was conducted in 1997.

Preparation

No advertising was done prior to the information about the study. However, massive work to secure support of the study among students representing the student body had been done 6 months prior to the information meeting and from then on. This work included meetings with representatives from the Lund Institute of Technology as well as the student body on at least 15 different occasions. Before giving the educational programme to the freshmen, a reference group of older students, representing all the departments mentioned above and previously responsible for festivity arrangements and now responsible for the introduction of freshmen, helped us develop the programme, so that the message would be understandable and acceptable to the freshmen. The Lund University Ethics Committee approved the study.

Participants

At the beginning of each semester, freshmen arrive at the university 2 weeks before the teaching starts. During this period, they are asked to participate in an annual introduction ceremony. Special student organizations in the different departments are responsible for the events during these 2 weeks, and they are a mix between information meetings, peer-led lectures, and social games.

Assignment

At one of the ordinary information meetings in the different departments during this period, all freshmen were given 30 min of information (oral and written) about the research programme. A member of the research team gave the information. At the subsequent presentation, a member from the local student union orally supported the study. Immediately after the information was given, students were asked to answer the questionnaire and sign the informed consent form if they accepted participating in the study.


Instrument

Before the randomization, the baseline assessment was conducted. The follow-up assessment was performed 1 year later by post-mailed questionnaires. A 10-item screening instrument, AUDIT (Saunders et al., 1993), was used as a measuring instrument. The instrument covers the domains of alcohol consumption, drinking behavior, and alcohol-related problems and was originally designed by the World Health Organization to screen for hazardous alcohol intake in primary health care settings. The instrument has good sensitivity and specificity (Saunders et al., 1993; Reinert and Allen, 2002; Kokotalio et al., 2004). The instrument has been translated into Swedish by Bergman et al. (1998). The AUDIT Test was measured on all freshmen before and after the interventions. In this study, the students in the quartile with the highest AUDIT scores were regarded as high-risk consumers.

Sample size

The power calculation was based on the assumption that minimal mailed intervention was not more effective than control conditions used in literature (assessment only). The sample size was based on results from Marlatt et al. (1998) (Kivlahan et al., 1990; Baer et al., 1992), who used similar methods with high-risk consumers, in which a reduction in alcohol consumption of 60% in the intervention group and 30% in the control group was found. To reach a 5% significant level with a power level of 80% (Altman, 1991), 80 subjects are necessary. Including those 25% with the highest consumption and a total attrition rate of 30%, a total number of 460 subjects had to be screened.

Objectives and hypotheses

Our intention was to examine the effects of an intervention programme compared with PMMI given to high-risk consumers. A 10-h CBAP, given in five different sessions at 1-week intervals, was compared with a written mailed minimal intervention (PMMI) describing the student’s consumption in relation to all other freshmen.

Our hypothesis was that an extensive intervention should give a significantly larger reduction on AUDIT than in a written feedback.

Randomization

A randomized procedure based on a computerized random sample programme (SPSS; SPSS Inc., Chicago) and stratified for gender and department affiliation was used. The whole randomization was performed at the same time. The students with an AUDIT score (male ≥11; female ≥7) in the highest quartile were randomized to a CBAP group or to a PMMI group.

INTERVENTION

Cognitive behavioural alcohol program

Students randomized to CBAP were invited to a 10-h educational programme, distributed over five different sessions given at 1-week intervals. The invitation included the same kind of feedback on their AUDIT scores as for the PMMI group (in the PMMI-feedback an additional recommendation to change behaviour was included). The training took place at the Student Health Clinic. Each course was mixed by gender and included 8–10 students. A member from the research team served as the main teacher. While we used only one expert responsible for all interventions, we used eight peers, trained in the programme, as co-educators. The peers were the same persons mentioned in the preparation chapter above. They were present at all sessions, two at a time, and worked primarily as discussion leaders. During sessions (i.e. session 3, 4, and 5) with focus-group discussions or more open group discussions, the peers worked by themselves, without the expert but always in close cooperation with the expert.

The content in the educational programme came from an early unprinted version of the BASICS manual (Dimeff et al., 1999). The content was similar to the published manual. The following parts were used in our programme: (i) Identify High-Risk Drinking Situations; (ii) Provide Accurate Information about Alcohol; (iii) Identify Personal Risk Factors; (iv) Challenge of Myths and Positive Expectations; (v) Establish Appropriate and Safer Drinking Goals; (vi) Managing High-Risk Drinking Situations, and; (vii) Learn from Mistakes.

Session 1 started with feedback on their AUDIT scores assessed at baseline. After that, (~1 h) the session focused on the students’ own expectancies of alcohol use. A short version, including three items of each of the six dimensions from the Alcohol Expectancy Questionnaire (Brown et al., 1987), was used. This version has been translated and developed for educational purposes at our department. The students responded to the questionnaire anonymously, and the results for the whole group were presented at the same session.

Session 2 focused on facts and myths about alcohol, such as: physical damage, biochemical effects, drinking patterns in Sweden. The effects of drinking alcohol depending on weight, gender, meals, etc. were discussed. The participants learned how to calculate their blood alcohol level, based on memories from a party they considered joyful and pleasant and without negative consequences. A table that included the effects of weight, gender, number of drinks, and time was used. A special ‘calendar’ was introduced to self-monitor alcohol consumption during the course.

Session 3 concerned gender roles. Students had the opportunity to ask members of the opposite gender how alcohol influences relations between men and women. The students discussed how alcohol effects differ between sexes and how men and women behave differently under intoxication.

Session 4 was a sham alcohol-drinking session where the students were supposed to estimate their blood alcohol level. They were served non-alcoholic beer in a pitcher, just presented as ‘beer’ (nothing was mentioned about the strength). At these sessions, a typical party atmosphere always presented itself. All students estimated some level of positive blood alcohol level, which could not be confirmed with a breath analyser [Lion Alcolmeter(tm) SD-400 (400i.07), PALMENCO AB] (Andersson, 1994; Merlet and Montamat, 1994). At the end of the session, expectancies were discussed.

Session 5 taught the students how to ‘plan’ their alcohol consumption at a party. The focus was on drinking-moderation strategies, drinking refusal, peer influences, assertive behaviour, identification of high-risk situations, and negative emotional states. The ‘calendar’ monitoring the
alcohol consumption during the course was used as a background for discussion.

Post-mailed minimal intervention

Written feedback on AUDIT scores was sent by ordinary mail. The students were given information about their AUDIT scores in relation to other freshmen. They were informed that they belonged to the upper quartile (25%) with the highest score and the score was plotted into a diagram, in which the different quartiles were shown. The feedback also included recommendations to drink less and, if necessary, get in contact with treatment organizations such as the Student Health Care clinic or the local welfare care centre. The feedback also included the telephone numbers to these organizations. In contrast to more traditional normative feedback, no questions were asked about perceived drinking norms and, consequently, no specific feedback was given in that context.

Follow-up examination

One year after the baseline examination, a post-mailed AUDIT questionnaire was sent to the subjects’ home address. The letter included a postage-prepaid envelope. The procedure was repeated three times.

Statistical method

The difference between sexes in the baseline AUDIT was tested with the Mann–Whitney U-test. The difference between intervention groups was checked with an unpaired t-test. Changes between the first and second examination in all groups were tested with a paired t-test. Differences of changes between the two groups were tested by linear regression. The 1-year AUDIT was regressed on treatment group as an indicator variable with the baseline score and the score was plotted into a diagram, in which the 25% with the highest scores in relation to all other freshmen. They were informed that they belonged to the upper quartile (25%) with the highest score and the score was plotted into a diagram, in which the different quartiles were shown. The feedback also included recommendations to drink less and, if necessary, get in contact with treatment organizations such as the Student Health Care clinic or the local welfare care centre. The feedback also included the telephone numbers to these organizations. In contrast to more traditional normative feedback, no questions were asked about perceived drinking norms and, consequently, no specific feedback was given in that context.

RESULTS

Recruitment

A total of 693 freshmen attended the initial meetings 1–2 weeks before their first semester and were asked to participate in the study. The acceptance rate was 95% (n = 660). All of them completed the AUDIT questionnaire.

Baseline data, total screened population

The reliability test of the AUDIT questionnaire gave a standardized item alpha of 0.80. Table 1 shows the distribution of AUDIT scores in the total population at baseline. Only 3% males and 2% females reported that they never drank alcohol. The majority of the students (69% males and 71% females) drank alcohol two to four times a month. In male students, 55% reported that they drank at least six drinks two times a month or more, and in female students, the corresponding figure was 15%.

<table>
<thead>
<tr>
<th>Item</th>
<th>0 point</th>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
<th>4 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Frequency</td>
<td>3/2</td>
<td>13/19</td>
<td>70/71</td>
<td>14/7</td>
<td>1/1</td>
</tr>
<tr>
<td>2. Quantity (drinks)</td>
<td>13/26</td>
<td>19/46</td>
<td>31/26</td>
<td>24/2</td>
<td>14/0***</td>
</tr>
<tr>
<td>3. Six drinks</td>
<td>12/34</td>
<td>33/51</td>
<td>41/11</td>
<td>14/4</td>
<td>0/0***</td>
</tr>
<tr>
<td>4. Not able to stop</td>
<td>72/85</td>
<td>24/15</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0***</td>
</tr>
<tr>
<td>5. Failed to do</td>
<td>61/78</td>
<td>36/22</td>
<td>3/1</td>
<td>0/0</td>
<td>0/0***</td>
</tr>
<tr>
<td>6. First drink in the morning</td>
<td>97/99</td>
<td>3/1</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0***</td>
</tr>
<tr>
<td>7. Feeling of guilt</td>
<td>53/67</td>
<td>41/30</td>
<td>6/3</td>
<td>0/0</td>
<td>0/0***</td>
</tr>
<tr>
<td>8. Unable to remember</td>
<td>48/63</td>
<td>47/35</td>
<td>5/2</td>
<td>0/0</td>
<td>0/0***</td>
</tr>
<tr>
<td>9. Injured</td>
<td>80/91</td>
<td>14/6</td>
<td>0/0</td>
<td>0/0</td>
<td>6/3***</td>
</tr>
<tr>
<td>10. Concerned about drinking</td>
<td>87/96</td>
<td>6/2</td>
<td>0/0</td>
<td>0/0</td>
<td>8/2***</td>
</tr>
</tbody>
</table>

Male/Female gender differences: Mann-Whitney U-test.

***P < 0.001.

The study design

After stratification (gender and department), the 27% with the highest AUDIT score (male >11, female >7) were randomized to a CBAP (n = 89; male = 67, female = 22) or PMMI (n = 88; male = 66, female = 22). We excluded those subjects (n = 11) who dropped out from the university during the first 2 weeks and never began their studies. AUDIT was repeated after 1 year with a response rate of 84%. An additional 6% who had reported data at baseline, but not at the 1-year follow-up, reported data from some of the later 3-year follow-ups. From this, an adjusted 1-year result was calculated and used for the analysis (Scheme 1).

Baseline data, the study population

Table 2 shows AUDIT scores at baseline by sex. There were no differences between the CBAP group and the PMMI group in reported AUDIT scores or age.

Outcomes

There were no significant differences in the total 10-item AUDIT scale between the CBAP and PMMI groups. In the alcohol problem subscale the PMMI group decreased significantly more than did the CBAP group, while in the alcohol consumption and alcohol dependence subscales, there were no differences at all. There were no significant differences between men and women (Table 3).

Items 9 and 10 explained most of the differences between the groups in the alcohol problem subscale. Item 9 decreased with −0.34 [CI 95% –1.00, +0.35] and item 10 with −0.60 [CI 95% –1.2, 0.0], item 7 with −0.09 [CI 95% –0.33, +0.16] and 8 with −0.14 [CI 95% –0.36, +0.07], all to the advantage of PMMI.

Items 9 and 10 differ from the other AUDIT items in that they include the total lifetime. Hence, scoring positive (2 or 4 points) at baseline assessment and negative (0 points) at follow-up is not correct. There were incorrect answers in 15 subjects (17%) in the CBAP group and 28 subjects (32%) in the PMMI group (χ² = 3.60, P < 0.10). Five subjects in the PMMI group and none in the CBAP group gave incorrect answers in both items 9 and 10. This indicates that there could be systematic differences between the two groups in answering items 9 and 10.
DISCUSSION

Main findings
There were no major differences between the two intervention groups. However, some minor differences were found. Most of the differences were to the advantage of PMMI intervention. The only significant difference between the groups was at the alcohol problem factor in AUDIT, where PMMI subjects reduced their scores more than did CBAP subjects.

Walters et al. (2000) showed similar findings in a study in which they compared a 2-h information and motivation session plus mailed feedback with mailed feedback only or no treatment. At the 6-week follow-up, the feedback-only group significantly decreased its alcohol consumption compared with control. In comparison with the full treatment condition, the feedback group decreased its alcohol consumption more, but not significantly. In a study by Murphy et al. (2004), they evaluated the efficacy of personalized feedback with and without MI. At the 6-month follow-up assessment, both groups showed significant reductions in alcohol consumption, but the groups did not differ. Thus, in both these studies, mailed feedback worked at least as good as the more elaborate intervention. Hence, both these studies support the findings in our study.

Both the CBAP group and the PMMI group improved their total AUDIT scores significantly at the 1-year assessment.
One possible explanation for this could be a regression to the mean (Morton and Torgerson, 2003).

Strengths and limitations

The strengths of the study were the randomized design, the high acceptance rate, the high response rate at follow-up, the use of peers as co-educators, and the use of manual-based intervention. The limitations were that there was no untreated control group, that only one instrument was used to measure outcome, and only one person was responsible for all educational sessions.

In this study, we used only one instrument to measure the outcome. The reason for this was that we prioritized a high acceptance rate. A very simple scale (e.g. 10 questions) should increase the student’s willingness to participate in the study. Our acceptance rate (95%) was considerably higher than in other studies. For example, in Marlatt’s (1991) study an initial response rate of 51% was reported. Of the identified high-risk consumers 68% accepted to participate in the study and at the 6-month follow-up the rate was 82%. In the Greek house study by Larimer et al. (2001), using cluster randomization, there was a 74% acceptance rate and a 75% follow-up rate. In two small studies, the acceptance rates were 41 and 47%, respectively, and short-term follow-up rates 88 and 86%, respectively (Agostinelli et al., 1995; Walters et al., 2000).

We used the same expert in all lecture groups, but different peers were involved in the groups. In a recent review article (O’Leary et al., 2002), it was concluded that the effects of peers was similar to that of experts as regards influencing alcohol consumption in college populations. Our use of different peers ought to improve the generalizability of the results even if the expert was a single person.

The systematic and close cooperation with the student body was one of the main strategies of the study. This cooperation and active support could be contributory reasons for the high acceptance and follow-up rates in the present study.

The AUDIT instrument and cut-off points

In the initial design of the study, we decided to use the upper quartile of the total sample AUDIT scores, and the initial power analysis was based on quartile scores. The upper quartile scores were ≥11 for men and ≥7 for women. The usual cut-off point is ≥8 for men and ≥6 for women (Reinert and Allen, 2002), but scores in college populations are considerably higher than in older populations (Fleming et al., 1991). Therefore, higher cut-off points could be used as a rationale for intervention. Fleming et al. (1991) showed that a cut-off point at 11 gave optimal sensitivity/specificity scores, but other studies (Reinert and Allen, 2002; Kokotailo et al., 2004) have suggested lower AUDIT cut-off points. If we had used lower cut-off points, as recommended by Reinert and Allen (2002), it would have been necessary to intervene with half the student body. This design would not have been accepted by the student body and thereby impossible to accomplish. Our study reported an internal consistent value of α = 0.80, which is acceptable and similar to previous studies (Reinert and Allen, 2002).

However, we found systematic but non-significant differences between treatment groups (CBAP and PMMI) likely to report harm in AUDIT items 9 and 10 at follow-up. Both questions are ‘lifetime questions’ and if people report harmful consequences at baseline they are assumed to report these consequences also at follow-up. However, subjects with the longer CBAP intervention reported more harmful consequences by alcohol than those with the shorter intervention (PMMI). A similar finding has been reported in a study among prison inmates in which the likelihood that they should admit cocaine use was positively related to previous psychosocial treatment (Farabee and Fredlund, 1996). The reason for this could be that longer psychosocial interventions contribute to a better memory of previous incidents of harm because these incidences were probably discussed in detail during intervention or treatment.

CONCLUSION

No major significant differences between intervention groups were found.

Table 3. Changes in AUDIT-scores, means (95% CI) by study groups and gender between baseline and 1-year follow-up

<table>
<thead>
<tr>
<th>CBAP</th>
<th>PMMI</th>
<th>Difference between groups</th>
<th>ANCOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIT total</td>
<td>−1.7 [−2.6, −0.7]</td>
<td>−2.7 [−3.6, −1.7]</td>
<td>−1.0 [−2.5, 0.4]</td>
</tr>
<tr>
<td>Male</td>
<td>−1.7 [−2.9, −0.4]</td>
<td>−3.1 [−4.2, −1.8]</td>
<td>−1.4 [−3.2, 0.4]</td>
</tr>
<tr>
<td>Female</td>
<td>−1.8 [−2.8, −0.8]</td>
<td>−1.9 [−3.3, −0.2]</td>
<td>−0.1 [−2.0, 1.9]</td>
</tr>
<tr>
<td>Alcohol consumed</td>
<td>(AUDIT items 1–3)</td>
<td>−0.8 [−1.2, −0.5]</td>
<td>0.0 [−0.6, 0.9]</td>
</tr>
<tr>
<td>Male</td>
<td>−0.8 [−1.2, −0.4]</td>
<td>−0.9 [−1.4, −0.4]</td>
<td>−0.1 [−0.7, 0.6]</td>
</tr>
<tr>
<td>Female</td>
<td>−0.8 [−1–3, −0.4]</td>
<td>−0.3 [−0.8, 0.2]</td>
<td>0.5 [−0.3, 1.2]</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>(AUDIT items 4–6)</td>
<td>−0.3 [−0.6, 0.0]</td>
<td>0.1 [−0.5, 0.4]</td>
</tr>
<tr>
<td>Male</td>
<td>−0.3 [−0.7, 0.1]</td>
<td>−0.5 [−0.8, −0.1]</td>
<td>−0.2 [−0.8, 0.4]</td>
</tr>
<tr>
<td>Female</td>
<td>−0.3 [−0.8, 0.1]</td>
<td>−0.5 [−0.5, 0.4]</td>
<td>0.5 [−0.3, 1.0]</td>
</tr>
<tr>
<td>Alcohol problems</td>
<td>(AUDIT items 7–10)</td>
<td>−0.5 [−0.1, 1.2]</td>
<td>−1.1 [−2.0, −0.2]</td>
</tr>
<tr>
<td>Male</td>
<td>−0.5 [−1.4, 0.3]</td>
<td>−1.7 [−2.4, −0.9]</td>
<td>−1.2 [−2.4, −0.1]</td>
</tr>
<tr>
<td>Female</td>
<td>−0.6 [−1.5, 0.2]</td>
<td>−1.4 [−2.5, −0.3]</td>
<td>−0.8 [−2.3, 0.6]</td>
</tr>
</tbody>
</table>
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