SCIENTIFIC NEWS

KNOWLEDGE IS THE KEY TO PREVENTION: REDUCTION OF ALCOHOL-EXPOSED PREGNANCIES THROUGH MOTIVATIONAL INTERVENTION

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Pre-natal alcohol exposure during pregnancy is the leading known cause of mental retardation.2 It is estimated that up to 10 of 1,000 live births in industrialized countries are effected by Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Spectrum Disorder (FASD).3 Consequences of alcohol-exposed pregnancies include physical and mental disabilities, leading to poor academic performance, legal and employment difficulties, thus resulting in a poor quality of life.4-6

Since the consumption of alcohol is a potentially preventable source of birth defects, it is essential to strive to educate women of childbearing age about preventive strategies. “Motivational intervention to reduce alcohol-exposed pregnancies-Florida, Texas, and Virginia 1997-2001” reviews the effectiveness of counseling sexually active women to decrease their alcohol intake and implementing effective contraception.1 This commentary evaluates a study conducted by the CHOICES intervention research group.7

Women of reproductive age who reported drinking at least seven drinks per week, or had at least one binge-drinking episode three months prior to recruitment, were sexually active and using ineffective contraception, were recruited into this single-arm study. Subjects were assessed on their demographics, alcohol and substance use history, AUDIT (Alcohol Use Disorders Identification Test) scores, and mental health treatment. Four motivational intervention sessions and one session of contraceptive counseling followed. The women were followed-up for 6 months to evaluate changes in their practices.

Participants were compensated $20.00 to $35.00 for each session.

Of the 2,384 screened women, 190 consented to participate and 143 (ages 19-44) completed the 6-month follow-up. The majority of subjects were ethnic minorities with high school education and reported annual incomes of less than $20,000. These women were recruited from 6 community-based settings: primary practice health care in Florida and Virginia; urban jail in Texas; and two alcohol treatment centers in Texas. The results indicate that 68.5% of the women were no longer at risk of having an alcohol-exposed pregnancy:

- 12.6% reduced drinking only,
- 23.1% used effective contraception only,
- 32.9% reported contraceptive use and decreased drinking.

The women scored an average AUDIT score of 17. Women at higher risk of having an alcohol-exposed pregnancy had lower success in reducing their risk. Women who scored low AUDIT scores were less likely to reduce drinking than women with medium and high scores. They were, however, more likely to institute effective contraception. Overall, the lower scorers were most likely to reduce their risk for alcohol-exposed pregnancy than those with higher scores. The authors concluded that the baseline AUDIT scores were the strongest predictor for reduced risk of alcohol-exposed pregnancy.

This study is the first to investigate the effects of offering both motivational and contraceptive counseling to women who are at risk of having an alcohol-exposed pregnancy. These findings are significant since women who are unaware of their pregnancy will continue their usual practices in their early stages. Previous studies have indicated that motivational interventions alone can significantly decrease the consumption of alcohol during pregnancy because of the woman’s desire...
to have a healthy baby.\textsuperscript{8-13} The success of these studies relied on sensitive screening of prenatal clinics, motivational interviews, treatment referral, monitoring of care, and compassionate medical care.

Although 143 women completed the CHOICES study, the sample size is fairly small considering the involvement of three states. A larger sample would have provided results with more power. Another design aspect is the lack of a randomized control group in this study and the short (6-months) duration of the study. The short length may have resulted in increasing the subjects’ compliance with regard to the use of contraception and reduced alcohol use. In the long run it is hard to tell whether they would continue this practice or return back to their initial habits. The participation of a diverse ethnicity of women increases the generalizability of these findings. However, the inconsistency among their surrounding environments (i.e. jail vs. housing), may predispose them to limited accessibility of materials and social circumstances, therefore altering their compliance.

The data collected in this study were based on the women’s self-reported alcohol use and change in practice. There is debate about the reliability of self-reported alcohol consumption and practices since the drinkers may report a lower value because they wish to appear at a low risk.\textsuperscript{14-17} A method to corroborate subjects’ reporting is to obtain biological samples or ask a family member or partner to confirm their reports. Another motivational and confounding factor may have been the compensation that women received per session. Subjects may have unconsciously altered their responses to please the interviewers.

AUDIT is a screening tool that was developed by the World Health Organization in the late 1980’s to detect early hazardous or harmful drinking.\textsuperscript{17,19} The test is comprised of ten questions that are highly correlated with harmful alcohol consumption and reliably identified high-risk drinkers in a six-nation study. In terms of sensitivity and specificity, AUDIT has been analyzed and found valid across different cultures and age groups.\textsuperscript{18-22} However, it has been debated whether the cut off scores for AUDIT (low=1-7, medium=8-18, high=19-40) should be set at different levels for males and females.\textsuperscript{22-27} A study investigating the retest reliability of AUDIT indicated a higher reliability for males, young adults, and moderate consumers.\textsuperscript{27} An alternative scale, TWEAK, which focuses on identifying the risk of drinking by pregnant women could be employed as a screening instrument.\textsuperscript{28,29}

It is currently not known how much alcohol is required to cause FAS/FAE.\textsuperscript{30} In fact, although the Surgeon General advises women not to consume any alcoholic beverage during pregnancy, a recent survey of physicians reported that 41% of physicians placed the threshold for FAS at one to three drinks per day, while 38% placed the threshold at one or fewer drinks per day.\textsuperscript{31} Another important issue is training professionals to counsel high-risk drinkers. A randomized control trial of videotaped alcohol counseling and motivational training enabled professionals to express greater empathy, minimize patient defensiveness and increase support in the woman’s belief in the ability to change.\textsuperscript{32}

A study reporting alcohol use among adolescents indicated that alcohol use was prevalent in 23.9%, 37.9%, and 48.9% of students in grade 8, 10, and 12, respectively.\textsuperscript{33} A prevention trial that informed women of alcohol’s effect in pregnancy showed that the majority of women reduced or stopped drinking after learning of FAS/FAE.\textsuperscript{11} Although the majority of women in the study reported high school education, none had knowledge about FAS/FAE. Therefore, it is important to educate women about FAS/FAE when they become sexually active and start drinking. While this study addresses an important aspect of primary prevention of FAS, longer studies are needed to see whether this short-term effect will eventually persist into these women’s future pregnancies.

REFERENCES


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