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Brief intervention aimed at fetal alcohol syndrome prevention: effectiveness study

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Summary

This article represents the results of the study aimed at the research of psychological effects of a dual-focused brief intervention for prevention of fetal alcohol syndrome and alcohol-exposed pregnancy among childbearing age women in Russia. 280 women took part in the research. The study used the following methods: screening, «Audit», Calendar method, baseline interview, follow-up interviews at 3, 6 and 12 months, the Big Five questionnaire, the method of motivational induction, the method of assessing the level of subjective control. The study measured women's knowledge about FAS and FASD, their attitudes towards alcohol consumption and in particular alcohol use during pregnancy, their real alcohol consumption level, use of contraception, the risk of alcohol-exposed pregnancy and possibly FAS or FASD, the socio-demographical characteristics and psychological features of women. The results of the study showed the effectiveness of dual-focused brief intervention and passive informing that were designed and used for FAS prevention.

fetal alcohol syndrome, alcohol-exposed pregnancy, childbearing age women, brief intervention, effectiveness

INTRODUCTION

Currently, brief interventions in connection with the solution of preventive tasks are becoming increasingly important in the practice of psychologists and other professionals. However, there is clearly insufficient attention paid to the study of their effectiveness. This study focuses on the psychological effects of brief interventions aimed at preventing Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Spectrum Disorders (FASD).

FAS is one of the most serious consequences of alcohol consumption by women during pregnancy. This is one of the main causes of mental retardation, behavioral disorders, and problems in the learning process, as well as social disadaptation [1-9]. The prevalence of FAS is from 2 to 7 per 1000 children born and exceeds the prevalence of such congenital disorders such as Down's syndrome, etc. [10]. The rather high level of alcohol consumption by women, the erosion of gender differences in the degree of alcoholism and the nature of alcohol use [11-14] do not only inflict damage to the physical and mental health of women, but also have negative social consequences, increasing the number of divorces, orphans and delinquencies.

Fetal alcohol syndrome is an incurable disease that manifests itself throughout the life of a person. The only way to prevent these violations is to deny a woman from drinking alcohol during pregnancy [11, 15]. Therefore, the development

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of programs aimed at preventing FAS is an important task of high social importance.

The FAS example clearly demonstrates the importance of prevention and the crucial role of psychological, behavioral factors and interventions to prevent even incurable disorders and the formation of the nation's health and mental capacity: all violations of the Fetal Alcohol Spectrum, including mental retardation, can be completely prevented if the mother does not drink alcohol while being pregnant.

The methodology of preventive programs in the field of health involves conducting research aimed at identifying the problem, collecting data on problem behavior and characteristics of the specific group to which the intervention will be directed, and developing a new preventive program on this basis that is empirically tested [5, 15]. Accordingly, within the framework of the scientific project «Prevention of Fetal Alcohol Syndrome and neurodevelopmental disorders in Russian children» a prevention program was developed. The St. Petersburg State University (Russia), the Nizhny Novgorod State Pedagogical University (Russia), and the University of Oklahoma Health Sciences Center (USA) took part in the project. The main preventive measures of this program are:

1) Directed informing based on screening the nature of alcohol consumption by women of childbearing age and the contraception style.
2) Dual-focused brief clinical and psychological intervention.

Theoretically, the basis for developing the strategy and design of the intervention was the model of health beliefs [13] and the model of the stages of change [7]. Opinions about personal risk and the expected consequences that determine readiness for action were considered a mechanism for changing behavior. The results obtained at the previous stages of the study [4] indicate the willingness of women to change their opinion under the influence of information coming from significant sources. The most significant sources of information, according to the results of the research, are scientifically based information materials presented in an accessible form and the OBGYNs that determined the main elements of the prevention program – information brochures and brief interventions by an OBGYN physician.

METHODS

The dual-focused brief intervention developed in the project represents a method of psychological counseling based on the principles of motivational interviewing, focused on the client's problems, and aimed at motivating positive changes in the way of life. The basic principles of the brief intervention are as follows:

1. Educate, that is, provide facts and do not blame.
2. Provide the client with a choice.
3. Emphasize the responsibility of the client for the choice.
4. Support and express confidence in the client's ability to change their behavior.

This method of brief intervention is dual-focused, since a woman is given a choice between two options of health-saving behavior. If a woman is pregnant or planning a pregnancy, then any amount of alcohol represents a risk, and the purpose of the intervention is to stop using alcohol completely. If a woman irregularly uses contraception and can possibly become pregnant, the purpose of the intervention depends on the choice of the woman: prevention of pregnancy and / or refusal to drink alcohol.

Dual-focused brief intervention is a method consisting of 5 consecutive steps: ask, provide feedback, discuss behavior changes, help (discuss ways to achieve the goal and complexity that a woman may encounter) and track changes.

The study of the effectiveness of brief interventions in the field of health requires uniformity in their implementation. Only the standard implementation of the intervention by all specialists can ensure the reliability of the results. Therefore, in this study, special attention was paid to the training of physicians in the standard procedure of intervention and implementation of reliability criteria in the course of its implementation by specific physicians.

Training of physicians included: informing about the FAS, demonstration of the model video and its discussion, distribution of information materials and their discussion, training in small groups, playing in pairs, recording a sample session, feedback, discussion, and consolidation of acquired skills. In the process of training, physi-

cians had to master a number of specific actions and their sequence: ask about alcohol use, provide feedback on possible risks, give the advice to refuse/reduce alcohol use, help set a goal and implement it, track changes.

Training of OBGYNs for a brief intervention was carried out according to the same scheme using the same materials. After successfully completed training, the physician began to implement the knowledge and skills obtained in practical work.

In the study, the following reliability plan was implemented:

1) All the doctors underwent training and assessment of their skills to the criterion of performing all the intervention components.
2) Systematic monitoring of the intervention implementation was done.
3) Audio recordings of the physician's intervention were carried out and followed by supervisors' evaluation.
4) 80% of all components of the intervention were considered mandatory in at least 95% of participants.
5) Supervisors of the study were psychologists, a gynecologist, and a narcologist, who, if necessary, could evaluate the intervention, provide feedback and help in skills training.
6) Supervisors monitored the OBGYNs' practice by viewing all the Intervention Evaluation Forms and listening to audio records (by two expert supervisors).

The sample of the study consisted of 280 women of childbearing age: 140 women entered the experimental group and 140 – the control group. The design of the study suggested the following selection criteria: childbearing age (18-44 years), absence of pregnancy at the time of the study beginning, the possibility of having children (absence of pathology of the reproductive function), absence of alcohol use problems, the presence of at least one unprotected sexual intercourse and the use of alcohol in any doses at least once in the last 90 days. Respondents were recruited in 10 women's consultations in St. Petersburg and were randomly divided into experimental and control groups. All participants were screened, a basic interview and three subsequent interviews at 3, 6, and 12 months were conducted. All women received information materials (a brochure) about the alcohol effects on the fetus and fetal alcohol syndrome. With women of the experimental group, after a baseline interview, twice in the period from 2 weeks to one and a half months, specially trained OBGYN physicians carried out a dual-focused brief intervention.

The study used methods developed by the FAS Prevention Study Group (3), as well as three psychodiagnostic methods: screening, «Audit» (WHO, 2001, adapted by Balachova, 2005), Calendar method, baseline interview, follow-up interviews at 3, 6 and 12 months, the Big Five questionnaire (adaptation and standardization by Janichev, 2003), the method of motivational induction by Nutten (Tolstykh adaptation, 2004), the method of assessing the level of subjective control (Bazhin, Golynkina, Etkind, 1984).

RESULTS

The results of the study showed that the majority of women of childbearing age (77%) do not have any knowledge about fetal alcohol syndrome, the causes of its occurrence and the possible consequences for the child. 89% of women have an opinion that alcohol (especially strong) is harmful to the fetus. While only 69% of women have an opinion that during pregnancy, a woman should refrain from drinking alcohol, 28% of respondents consider it permissible to use alcohol in this period in small doses, and 23% of women consider the use of red wine not only acceptable but also useful during pregnancy.

The women of the sample are characterized by a rather high level of alcohol consumption: there are no women who do not drink alcohol; 100% of the sample at least once in the last 90 days used alcohol at the risky level (4 or more drinks at a time). On average, women use three standard drinks at an average frequency of 1-2 times a week; 70% of women use 1-5 standard drinks of alcohol at a time, 28% drink 6-10 standard drinks, 3% of women have 11-15 drinks. Women, who plan pregnancy, by the alcohol consumption level, do not differ from the general sample.

The level of knowledge about fetal alcohol syndrome in women of childbearing age in-

creases at the end of the study (after 12 months since baseline interview) in both groups; however, participants who underwent a dual-focused brief intervention are more likely to correctly answer questions about the concept of FAS, the FAS-specific violations, and also about the causes of the syndrome.

Dual-focused brief interventions and passive informing cause positive changes in attitudes towards alcohol consumption during pregnancy and the effect of alcohol on the fetus: a statistically significantly larger number of women in both groups felt that alcohol consumption during pregnancy was unacceptable by the time the study ended. The dynamics of the changes in the studied groups was different: in the experimental group, under the influence of brief intervention, significant changes in the attitudes were detected during the first three months, further changes were smoother; in the control group changes in attitudes took place smoothly during all 12 months. In the experimental group, under the influence of intervention, there is also a more explicit rejection of the stereotype of the benefits of red wine.

The dynamics of the actual alcohol consumption by women of childbearing age under the influence of dual-focused brief intervention and passive informing indicate a significant decrease in the frequency of alcohol consumption (after 3, 6, and 12 months). While women who underwent brief interventions significantly lowered the level of alcohol use compared to women who did not undergo the procedure of intervention. A dual-focused brief intervention affects the risk of a pregnancy that is prone to alcohol: initially, the entire sample (100% of women) was at risk. After three months after the brief intervention, significant differences were found between the experimental and control groups: 47% of the women in the experimental sample and 62% in the control group were at risk. After six months, the differences are found at the level of the statistical tendency (45% and 55%, respectively), and after 12 months no significant differences were revealed (46% and 49%, respectively), which indicates a faster effect achieved with the brief intervention method.

FAS risk was indicated in case a woman had at least one unprotected intercourse in the past 90 days and had 4 or more doses of alcohol at a time or 7 or more doses of alcohol per week within the last 90 days. The Figure 1 shows the number of women at risk of alcohol-exposed pregnancy and possibly FAS during the study (4 measures) in experimental and control groups. Comparison statistics are as follows. Follow-up 3 months: $\chi^2 = 6{,}355$, $p<0{,}05$. Follow-up 6 months: $\chi^2 = 2{,}800$, $p<0{,}1$. Follow-up 12 months: $p>0{,}5$.

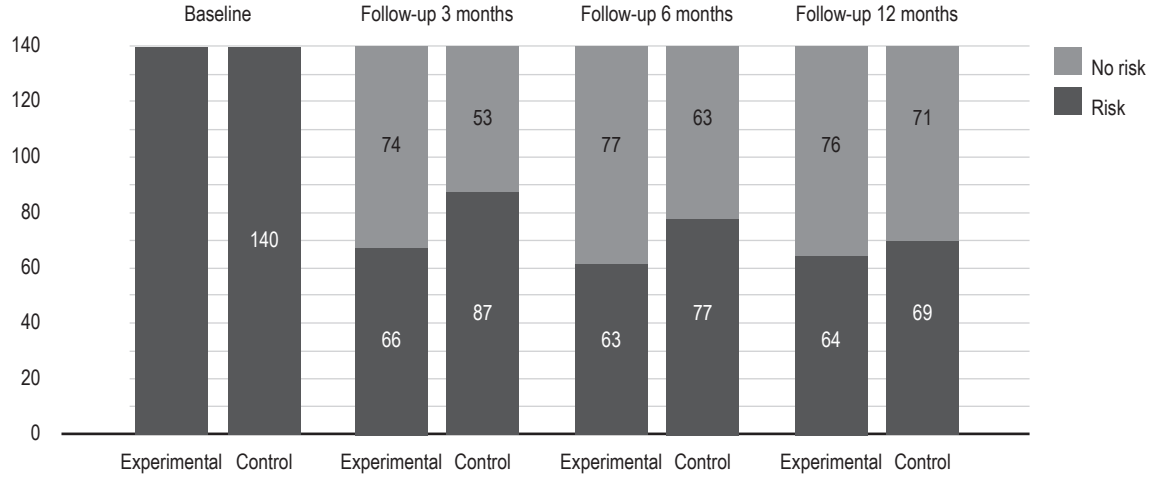

Figure 1. The dynamics of amount of women in groups with FAS risk

DISCUSSION

It has been revealed that the risk of a pregnancy that is subject to alcohol influence is not related to individual psychological characteristics but is related to several socio-demographic characteristics: unemployed women with higher or secondary vocational education, unmarried or divorced are more likely to be at risk.

The main factor that influences the formation of attitudes for the refusal of drinking alcohol during pregnancy and the decrease in the level of real alcohol consumption is awareness of the impact of alcohol on the fetus and the health of women, which determines the main content of the prevention program: informing and brief intervention, motivating a change in attitudes and behavior.

As in every study there are some limitations. The results are shown for a big city, the FAS risk situation may be different in rural area of Russia. Moreover, a huge part of effectiveness results depended on the OBGYN physicians, who realized the dual-focused brief intervention. The doctors were taught, trained, constantly monitored and supervised but a personal factor may always play its role. Furthermore, the fact of women-doctor trust and contact may play a significant role in women's desire and readiness to change their knowledge, attitudes and behavior.

CONCLUSION

Thus, the results of the study indicate the effectiveness of the brief intervention designed to prevent FAS and FASD.

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