

Risk factors for alcohol use among youth and main aspects of prevention programs

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Summary. *Increasing alcohol consumption becomes more relevant social and health problem among youth. There is no reason to believe that this problem will decrease or be solved in the future. In such situation, it is necessary to build on the experience and conclusions of research performed by other countries. In this article, the risk factors for alcohol consumption among youth and preventive programs, in which family, school, and community play the main role, are analyzed. Such programs may attract the attention of public health specialists and public health politicians and can be not only declared, but also really implemented.*

Introduction

Despite attitudes to reduce alcohol consumption in Lithuania, indicated officially in health program of Republic of Lithuania and Alcohol Control Law, the majority of law acts and law corrections during the last decade basically only liberalized alcohol marketing, advertisement, improved availability, formed favorable public attitudes towards alcohol consumption. Following processes inevitably influenced attitudes of children and youth regarding alcohol consumption and changed habits of its consumption. The results of two international surveys of schoolchildren lifestyle (“European School Survey on Alcohol and other Drugs – ESPAD” and “Health Behavior in School-Aged Children – HBSC”) demonstrated only increasing extent of alcoholic consumption, and in the nearest future, a steady decrease cannot be expected as well (1-3).

Situation can be characterized as problematic: preventive matters of alcohol use are being solved slowly without clear tactics, programs are implemented episodically, and the community involvement in dealing with problems is limited. On the other hand, no quality evaluation system for alcohol prevention programs is developed.

Above-mentioned facts suggest that it is very important to analyze the phenomenon of alcohol consumption and to strive at least for stabilization of alcoholic beverage use among young people in Lithuania. In such situation, it is actual to appeal to research conclusions and experience of other coun-

tries. In the article, we aimed to review the risk factors for alcohol use among youth and preventive programs in which the main role is played by family, school, and community. The information provided in this article might attract the attention of public health specialists, public health politicians and can be useful in planning and realizing alcohol use prevention programs for youth.

The risk factors for alcohol use

In the last decade, it is more and more referred about a risk behavior syndrome in adolescence (4). This term commonly specifies behavior increasing serious danger to the health. Adolescence, being itself a unique transition period, is a risky period in person’s life. The risk factors developing in this moment easily cause changes of behavior. Factors of alcohol use develop early and consistently increase a probability to use it in the future (5).

Epidemiological researches enable to indicate some factors of the universal risk of alcohol use among young people such as uncontrolled availability of alcoholic beverages, miscellaneous family problems, peer pressure, and others. Youth using alcohol commonly smoke, their sexual behavior more frequently can be characterized as unsafe sex, and suicides or other risk behavior are common among them. Based on scientific literature, the presumptions of alcohol use and risk factors can be divided into two categories. The first – legal, social, and cultural factors that provide norma-

tive presumptions of behavior. The second – the factors of the individual and its interpersonal environment.

Legal, social, and cultural factors

Laws and norms. The consequences of global alcohol consumption motivate the states to realize the principles of alcohol control policy by legally and economic restrictions. In the world practice, alcohol consumption is reduced by taxes. The associations between the use of alcoholic beverages and price are established. A 1% increase in the price of alcohol reduces beer consumption by 0.3%, wine – 1%, and spirit – 1.5% (6). F. A. Sloan and colleagues found that a 10% increase in the price of alcoholic beverages decreased the number of binge-drinking episodes by 8% (7). According to the analysis of statistical data, health economic specialists indicate that an increase in alcohol taxes reduces the mortality rate from liver cirrhosis (8). Legal age limits for buying alcoholic beverages, advertising restrictions are an effective means against its use among youth. It is established that the increase in the minimum legal drinking age and alcohol taxes is directly proportional to the decrease of its consumption (9). Price control in reducing the total alcohol consumption is approximately twice as effective as health education (10).

Availability. Although the availability of alcoholic beverages is determined by law and public norms, this condition is analyzed as separate factor stimulating alcohol use. Incompletely strict control of availability and marketing of alcoholic beverages determines higher consumption. E. R. Weitzman *et al.* found that the risk for youth drinking increased from 4.76 to 6.50 when alcohol was easily obtained (11). According to the same authors' data, strict alcohol control at school decreases its consumption.

Social and economical factors. F. J. Elgar *et al.* found that alcohol consumption among schoolchildren depended on social and economical possibilities of the country's population and their inequality (12). According to the data of this research, 11- and 13-year-old adolescents in the families of high income compared with contemporaries in the families of low income were 82% and 123%, respectively, more likely to drink regularly (5-6 times a week). These adolescents were more frequently intoxicated with alcohol. Such situation is associated with increasing income of parents and more pocket money given to children. Finish researches reported that drunkenness was more common among 14-year-olds who got more pocket money (13). A risk of alcoholic beverage use among youth depends on parents' occupation and profession too. M. Droomers

et al. found that adolescents from the lowest occupational groups 2.5 times more frequently drank alcohol (14). Adolescents who were working more than 10 hour a week consumed alcohol more often (15).

Possibility is not rejected that there are strong associations among social factors of neighborhood and negative behavior. Researchers of Finland analyzed alcohol use among adolescents according to the aspect of socioeconomic factors (16). The relative risk for alcohol use was 1.35 times among boys living in areas with low employment status compared with boys living in areas with better employment status, whereas the relative risk for alcohol abuse was 1.47 times among girls living in areas with high education status compared with areas with low education status. The results of research, mentioned above, established the influence of social factors on alcohol use.

Factors of individual and its interpersonal environment

Physiological and genetic factors. Researchers report that an early risk of alcohol use associates with the complex of physiological processes in the organism such as alcohol metabolism, the development of endocrine and nervous system functions. Organism's sensitivity to alcohol is biochemically related to platelet monoamine oxidase activity (17). Studies of monozygotic and dizygotic twins explain addiction to alcohol use (18). Alcohol dependence in monozygotic twins is more than twice as in dizygotic. Genetic studies found that from 40% to 60% of biological parents influence children alcoholism (18). According to other similar studies, less than 30% of children of alcoholic parents became alcoholic themselves (5).

Individual features. In the scientific literature, individual features are indicated as early risk behavior factors (4). According to the date of longitudinal studies, children with a "difficult" temperament, who are characterized as reticent, emotionally unstable, slow adapting, became regular users of alcohol, drugs, and tobacco in late adolescence (19). Alcohol consumption depends on other personal characteristics: impulsivity, extraversion, sensation seeking, inaptitude to cope with psychological problems (20). L. Hechman with colleagues, after a 10-year cohort study, reported that hyperactivity in childhood predicted future alcohol use (21).

Family structure role. Scientists in various aspects analyze the associations of alcohol consumption with family and its functioning peculiarities. There are several factors which increase alcohol consumption among children: disrupted communication among the members of family, insufficient control of parents, persistent con-

flicts, long-lasting family disorganization after of father's or mother's death, divorce (22). Adolescents living with single parents or parent married one more time tend to use alcohol more than three times. Older brother or sisters using alcohol show a strong negative example for the juniors. According to longitudinal data, parental alcohol use is an important risk factor stimulating adolescents to use it in late adolescence, especially if adolescents behave antisocially (23). The research by American scientists demonstrated that maternal drinking during pregnancy determines alcohol-related problems in offsprings at the age of 21 years (24).

Parenting style in the family. Parenting style is one of the most important characteristics of family. A. C. Fletcher and B. C. Jefferies found that alcohol use depended on parental authoritative style (25). Adequate control and the acceptance of children's autonomy displays responsibility for behavior and self-regulation that help to resist against negative peer pressure. In the families where there are strict roles and restrictions, alcohol use is decreased, but constant parental communication about the consequences of alcohol use is not effective (26). According to the data from same research, the trust of parents in the older adolescents prevents the juniors from the alcohol use. However, the more parents pay attention to alcohol problems of the younger children, the more older adolescents drink.

Academic achievements. Adolescents using alcohol are characterized by poor academic achievements, more often are absent from school, and have more academic penalties (22).

Peer pressure. Research in the last decade proved strong associations existing between alcohol use and peers (20). Adolescents under the influence of drinking peers pass from binge drinking to the problematic stage of alcohol use (27). F. Li *et al.* conclusions indicated that drinking adolescents had stronger influence on younger adolescents (14–15-year old) than seniors (16–18-year old) (28).

Youth alcohol prevention programs and the main aspects of them

Conceptions reducing the risk factors and hindrances in their implementation

The creation of prevention programs starts with an analysis of a real situation and its evaluation. In this stage, it is essential to identify risk factors determining alcohol use. There again, it is important to establish causal risk factors related to alcohol consumption.

The concepts of vulnerability and resiliency encourage defining the individual risk level. Vulnerability denotes intention of susceptibility to risk, and resiliency –

the ability to surmount or withstand against the risk (29). It is important to pay attention to the effect of risk factor interaction, which increases their general influence (5).

Strategies of alcohol prevention must be directed at eliminating the most common risk factors, distancing from the moment of their development, and establishing groups or individuals at the greatest risk (5). It may be possible to reduce the risk factors or eliminate them at all directly with the help of preventive intervention. While creating a program, a task is set to ascertain which risk factors can be controlled, moderated, or which risk factors cannot be affected at all. For example, the problem of alcoholism in family can be so complex that is impossible to solve it; then it is needed to search for means how to protect children growing in the risky environment. Therefore, the importance of protective factors becomes very great. The protective factors reduce the effect of risk factors.

J. S. Brook *et al.* noted two mechanisms by which protective factors reduce risk for adolescent alcohol use (5). In the first “risk/protective” mechanism, the influence of risk factors is moderated by protective factors, for example, a risk of adolescent alcohol use due to drinking peers can be straiten by strong attachment to parents or defined norms of behavior. In the second “protective/protective” mechanism, one protective factor determines another thus strengthening effect of it, for example, a strong attachment to parents strengthens discipline that effectively protects adolescents against alcohol use.

Disregarding the role of protective factors in reducing the effect of risk factors is one of the major reasons for failure of most alcohol prevention programs. Therefore, it is actually that prevention programs, directed at reducing risk factors, simultaneously would strengthen the protective factors. It is essential to understand interaction mechanisms of risk and protective factors and predict optimal actions to avoid alcohol use of youth. It is noted that scientific researches revealed many above-mentioned factors which can successfully help to avoid global subsequence of alcohol use (5).

Recently special efforts of countries and competent organizations are directed towards laws and social norms (30). Restriction of alcohol consumption is effected in several ways – by increasing taxes, age limits for buying alcoholic beverages, tightening up hours and places of sale. As it is noted above, restriction of availability and increasing prices of alcohol reduce consumption frequency. Age limit and restriction of alcohol sale places have desirable results too, but are less effective than taxes (9).

Based on above-mentioned factors, applied strategies should give expected effect on reducing the alcohol consumption among youth. Nevertheless, vicious attitudes exist in the society that youth alcohol use is a normal and inevitable phenomenon. It is probable that changing social norms would give positive results. Therefore, it would be effective to involve the mass media which would consistently form consciousness of community. Unfortunately, weak interest of various sectors, media too, only retards the solving of alcohol-using problems. Another problem, often created by mass media, is that some conclusions of research are incorrectly interpreted, for example, that alcohol use reduces blood pressure and the risk of cardiovascular diseases (31).

Social skills training programs

Scientific studies confirmed strong associations between adolescents' alcohol use and communication with drinking peers. According to social learning theory, alcohol consumption in adolescence can be relatively explained as modeled behavior of others (32). Consequentially, friends are a risk or causal factor, so efforts directed towards them might considerably reduce alcohol use. In worldwide practice, social skills training programs are implemented that learn communication and interrelationship skills, resistance to peer pressure. Such programs motivate the formation of negative attitude towards drinking, develop self-control skills, and learn to cope with stress and to solve emergent problems positively (33-35).

E. A. Smith *et al.* found that social skills training already after a year has given positive changes in alcohol use (36). It is noticed that aggressive, rejected by peers, or bullied children more tended to delinquent behavior, so programs designed to develop social competence can help to solve not only alcohol consumption, but the other problems too. Social skills training programs reveal real guidelines for prevention strategies. However, an object for research often is the age of children for whom interventions are most effective.

Discussions emerge about the programs that are designed for the prevention of several addictions, for example reduction in alcohol and drug use and smoking. According to P. L. Ellikson's and R. M. Bell's data, mixed programs had influence only on two addictions from three (37). Meanwhile A. Biglan *et al.* found no influence of smoking refusal program on alcohol and marijuana use (38). Continuing discussions once again confirm complex associations of these addictions. More research is needed which would deter-

mine the interactions of various addictions and possibilities of their application in programs. Besides, the titles of programs, often having form of slogan, are important too. Recent data suggest that such formulations as "just say no" or "do not drink," which are common in Lithuania too, only encourage forbidden behavior (34, 35).

School program

The majority of articles designed to analyze alcohol use among youth highlight preventive role of school. School, where thousands of children meet every day, is an ideal place for realization of alcohol prevention and intervention programs. However, not only active actions are necessary, but and comprehensive analysis of school environment, when schoolchildren are surveyed for the identification of the main problems. Only in such case, it is possible to expect that the content of prevention programs will fulfill the existing needs and their realization will be effective.

In Lithuania, it is generally accepted that universal prevention models are alcohol prevention programs directed at school-aged population. National alcohol programs at schools are often a political priority of country, but it is a matter of debate whether they are the most effective part of prevention (35, 39). Researches of other countries demonstrated that not every program could have a positive effect. In the US, the largest at the country level drug and alcohol use prevention program, DARE (Drug Abuse Resistance Education), has failed (35, 40).

The spread of information is one of the most common means of alcohol consumption prevention programs taking place in schools. However, only information about alcohol and its harm to health commonly do not produce expected results. Probable consequences of alcohol consumption are seen by most youth as distant and directly unrelated to their behavior. There again, providing information unprofessionally it is possible just to pique curiosity and to stimulate alcohol consumption. Consequently, prevention programs designed for alcohol use prevention and reduction of harm among youth must be based not only on realistic arguments, suggestive examples, but also effective methods.

In most countries, alcohol preventive programs are grounded on interactive teaching during which the priority is given to motivation, contemplation, and emotional education (33). Programs at universities familiarize students with "safe-drinking" norms (39). Analogous programs could be really implemented in Lithuanian universities and colleges too.

School organizational activities are related to schoolchildren behavior, academic achievements, and attendance, so its efforts and changes directly motivate young people to live healthier and to avoid addictions. Novelty of learning, opportunity to be involved in school life, wide spectrum of out-of-school activities, projects – there are only few alcohol prevention strategies.

Family programs

Little research has yet been conducted to explore the possibilities of alcohol prevention in family, and there are no data about pursued programs of sufficient size in Lithuania. Family is commonly analyzed as an integral prevention part, the functions of which confine to reunions of groups. Meanwhile in other countries, the main component of programs is family involvement. The project Northland, which lasted for 7 years in Minnesota, demonstrated how the involvement of parents strengthened communication with children on alcohol use questions (41). Classical examples of early childhood and family support programs showed that such programs helped to decrease academic failure and the problems of childhood behavior in preschool and school, to stop the progression of addictions in adolescent (42, 43).

In conclusion, alcohol is a psychoactive substance, legally produced and sold, the production and marketing of which can be easily controlled and regulated by country. Therefore, country's policy when it only maintains and encourages production of alcoholic beverages but leaves the prevention of use and the elimination of consequences to the health specialists is especially dangerous. The results of such policy are obvious – the proportion of youth using alcoholic beverages is increasing. Researches demonstrate that legal measures give the greater effect than pursued programs. Moreover, law means conditionally does not cost anything, but pursued programs need big investments and very high professionalism that applied measures would not cause more harm than benefit. How-

ever, it does not deny the necessity of programs and education in scholastic institutions, action with family and community. This review of literature shows that as other diseases of "civilization," alcohol prevention orientated to person must begin at early age. Realizing it, the main role takes family, school, and community. But as the experience of other countries shows, alcohol prevention does not always give expected results – not only material resources, but also objective scientific information about the risk factors for alcohol use among youth and effective means for reducing them are needed. Only correctly adjusting already applied measures, adapting them in the context of the country, and following science-based methodology it is possible to hope that alcohol consumption will stabilize and the aim of Lithuanian health program will be achieved.

Conclusions

1. Alcohol use is determined by many presumptions and risk factors, which conditionally are divided into two categories. First category includes legal, social, and cultural factors that provide normative presumption for behavior. The second – the factors of the individual and its interpersonal environment.
2. The situation on alcohol consumption among youth in the country shows that prevention is ineffective, and possibilities are not explored yet. Therefore, attention given to above-mentioned laws and alcohol prevention programs must be a priority in improving youth mental health.
3. Planning and implementing youth alcohol use prevention programs in Lithuania it is worth to appeal to research conclusions and experience of other countries, correctly adapting and adjusting them to social-cultural and economical context of the country.

As compared to other countries, in Lithuania, little attention is paid to the solution of this problem, and frequently it is restricted to information exchange, morals, or prohibitions.

Jaunimo alkoholinių gėrimų vartojimo rizikos veiksniai ir prevencijos programų kryptys

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Raktažodžiai: jaunimas, alkoholinių gėrimų vartojimas, rizikos veiksniai, prevencijos programos.

Santrauka. Didėjantis alkoholinių gėrimų vartojimo dažnis tarp jaunų žmonių tampa vis aktualesne sveikatos ir socialine problema. Tikėtis, kad ši problema sumažės arba išsispręs savaime, nėra pagrindo. Esant tokiai situacijai, reikėtų remtis kitų šalių mokslinių tyrimų išvadamis ir patirtimi. Straipsnyje analizuojami jaunimo

alkoholinių gėrimų vartojimo rizikos veiksniai ir profilaktikos programos, kuriose svarbiausias vaidmuo tenka šeimai, mokyklai ir bendruomenei. Tokios programos Lietuvoje gali sulaukti visuomenės sveikatos specialistų, sveikatos politikų dėmesio ir gali būti ne tik deklaruojamos, bet ir realiai įgyvendinamos.

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