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Original Research Article

Importance of alcohol-related expectations and emotional expressivity for prediction of motivation to refuse alcohol in alcohol-dependent patients

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ABSTRACT

Background and objective: The aim of this study was to evaluate the importance of alcohol-dependent patients' emotional expressivity, alcohol-related expectations and socio-demographic factors for prediction of motivation to refuse alcohol consumption.

Materials and methods: The study sample consisted of 136 alcohol-dependent patients (100 men and 36 women) undergoing treatment in Kaunas center for addictive disorders.

Results: Only higher expression of negative alcohol-related expectations (std. beta = 0.192, $P = 0.023$), higher emotional impulse intensity (std. beta = 0.229, $P = 0.021$) and higher expression of positive emotional expressiveness (std. beta = 0.021, $P = 0.020$) as well as gender (std. beta = 0.180, $P = 0.049$), education (std. beta = -0.137, $P = 0.038$) and alcohol dependency treatment conditions (members of support group after rehabilitation program) (std. beta = 0.288, $P = 0.001$; std. beta = 0.608, $P = 0.001$) were significant factors for predicting the different level of alcohol-dependent patients motivation to refuse alcohol consumption.

Conclusions: Negative alcohol-related expectations, emotional impulse intensity and positive emotional expressiveness were significant even though quite weak triggers for alcohol-dependent patients' different level of motivation to refuse alcohol consumption. An assumption could be made that by changing these triggers it is possible to change addictive behavior.

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1. Introduction

According to Drug, Tobacco and Alcohol Control Department recent statistic in Lithuania shows that over the last 30 days, two-thirds of the Lithuanian population consume alcohol (66.7%). At the end of 2012, medical institutions accounted for a total of 3.6 thousand individuals with mild alcoholic psychosis, and 51.7 thousand – chronic alcoholism. Compared with the 2011, alcoholic psychosis occurrence rate has increased by 19.9% as well as chronic alcoholism – 19%. Given the large-scale problem in Lithuania there are five addiction centers, those are the largest organizations that provide long-term and short-term multidisciplinary help for individuals suffering from the different kinds of addiction problems. E.g., in 2012, Kaunas center for addictive disorders had 704 patients with dependencies on a variety of psychotropic substances, and 654 of them were alcohol-dependent patients.

WHO emphasizes that alcohol abuse and dependency are relevant to physical and psychological health-related problems that cause many negative consequences not only to a person, but also for all society [1]. The mechanism of alcohol dependency development is broadly analyzed, but there is still a lack of information on how to work effectively with alcohol-dependent patients in order to achieve long-lasting changes in their behavior, emotional functioning or even in personality.

According to Miller and Tonigan, readiness to change alcohol-related behavior has three stages, starting from the *ambivalence* (uncertainty if the change of alcohol-related behavior is needed) following by the *recognition* (acknowledgment of the problems related to alcohol consumption) and ending with the *taking steps* (starting to take appropriate actions for alcohol-related behavior changes) [2].

Studies have found that alcohol-related expectations [3,4] and emotional expressiveness [5] are the main psychological factors, significantly associated with readiness to change alcohol-related behavior [6].

The decision to start changing alcohol-related behavior has significant cognitive aspect: personal alcohol-related expectations [7], which can be positive and negative [8]. Many researches have shown that positive alcohol-related expectations are significantly related to higher and more frequent alcohol consumption [3] as well as the higher motivation to drink (social motives, motives to cope with negative emotions and to enhance positive emotions) and the lower level of readiness to change alcohol-related behavior [9,10]. However, negative alcohol-related expectations are significantly related to rarer and smaller alcohol consumption or even long-lasting abstinence [9] as well as higher readiness to change alcohol-related behavior and higher recognition of the severity of alcohol-related problems [10].

Usually people consume alcohol because of preset expectations to suppress the negative emotions and to enhance the positive ones [11]. Most research has found that the ability to perceive, interpret, regulate, or express emotions adequately and the ability to identify others emotions degenerate by increased usage and longevity of alcohol consumption [12]. It was found that alcohol-dependent patients are incapable of

identifying and differentiating their emotions as well as to control them without alcohol intake [13]. Still, no research was found defining the relation between emotional expressiveness and the readiness to change alcohol-related behavior. However, the relation between alcohol-related expectations, emotions and motivation to refuse alcohol consumption can be clearly identified: the readiness to change alcohol-related behavior and motivation to refuse alcohol consumption, depend on expressed individual's alcohol-related expectations (cognitive aspect) on changes in emotions (emotional aspect) after alcohol consumption [14].

The significance of sociodemographic factors in alcohol-dependent patients' cognitive and emotional functioning as well as their motivation to refuse alcohol consumption could not be denied. It was found that less educated younger, alcohol-dependent men, have stronger motivation to cope with negative emotions [15], as well as more positive alcohol-related expectations [16], also higher level of emotional expressiveness [17] and poorer recognition of their alcohol-related problems [10] comparing with older, highly educated, alcohol-dependent men. Also, research have found that younger, less educated, alcohol-dependent women have stronger motivation to enhance positive emotions [15], higher expression of positive, alcohol-related expectations [18] as well as higher emotional expressiveness and lower level of readiness to change alcohol consumption [10], comparing with older, highly educated, alcohol-dependent women.

The comprehensive analysis of the cognitive and emotional factors, related to the motivation to refuse alcohol consumption, in a sample of Lithuanian alcohol-dependent patients, could broaden psychological understanding of alcohol dependency in general and particular ways in our country. Secondly, this analysis could give some ideas as how to implement interventions for the alcohol-dependent patients. Psychological interventions are orientated to enable people to become more aware of their alcohol-related behavior reasoning, so they could identify and control triggers to change addictive behavior [11]. The aim of this study was to evaluate the significance of alcohol-related expectations, emotional expressivity and socio-demographic factors in predicting the motivation to refuse alcohol consumption and the readiness to change alcohol-related behavior in alcohol-dependent patients of Kaunas center for addictive disorders.

2. Materials and methods

2.1. Participants and study design

The study was conducted in Kaunas center for addictive disorders in 2013 from February to April. A self-administered questionnaire was used in a sample of alcohol-dependent patients. All the patients in the center were invited to participate in this study if they have not consumed alcohol for at least 5 days. The overall sample size was 136 alcohol-dependent patients, 10 patients refused to participate in the study. This sample mostly represents Kaunas center for addictive disorders patient cohort. Also, it may also represent

one fifth of Lithuanian population, who have addiction problems.

2.2. Instruments

Motivation to refuse alcohol consumption was evaluated using Lithuanian version of The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) [2]. It is a 19-item inventory that measures three levels of readiness to change addictive behavior: the ambivalence, the recognition and the taking steps. The internal validity of 3 scales was sufficient (Cronbach α ranged from 0.51 to 0.91). One question in ambivalence scale was eliminated in order to heighten scale reliability. Higher scores indicate higher readiness to refuse alcohol consumption.

The Lithuanian version of Alcohol Expectancy Questionnaire (AEQ-A) [19] was used in order to evaluate the expression of positive (personal and social), negative (personal and social) and cognitive – motor alcohol-related expectations. The internal validity of 3 scales was sufficient (Cronbach α ranged from 0.67 to 0.79). Higher scores indicate higher expression of alcohol-related expectations.

Emotional expressivity was assessed using the Lithuanian version of Five Expressivity Facet Scale [20]. A 62-item inventory evaluates 5 aspects of emotional expressivity: expressive confidence, positive expressivity, negative expressivity, masking of emotions and emotional impulse intensity. The internal validity of 5 scales was sufficient (Cronbach α ranged from 0.61 to 0.85). Higher scores indicate higher expression of different emotional expressivity aspects.

All Lithuanian questionnaires versions were adapted following the standard translation and back translation procedure. The characteristics of all scales are presented in Table 2.

Demographic data including gender, age, education, alcohol consumption duration and treatment condition.

Statistical analysis was performed using the SPSS 17.0 statistical package. The Kolmogorov–Smirnov test was used for the assessment of the normality distribution of the quantitative data. Descriptive statistics were applied for the presentation of study population characteristics. In order to investigate significance of the emotional expressiveness and alcohol-related expectations to alcohol-dependent patients' motivation to refuse alcohol consumption, three separate multinomial regression analyses with *enter* method were conducted. Each dimension of motivation to refuse alcohol consumption (ambivalence = model 1; recognition of the problem = model 2; and taking steps = model 3) was used as the dependent variable. Three groups of alcohol-related expectations (positive, negative and cognitive-motor), five aspects of emotional expressiveness (expressive confidence, positive expressivity, negative expressivity, emotional impulse intensity and masking of emotions) and socio-demographic factors like gender (male = 1; female = 2), age (years), education (primary = 1, secondary = 2, higher = 3, university = 4), type of treatment condition (detoxification = 1; rehabilitation = 2; support group after rehabilitation program = 3) and average period of alcohol consumption (years) were used as independent variables in each regression model. Statistical significance level $P < 0.05$.

3. Results

The majority of the patients were alcohol-dependent male, averagely 43 years old, who have secondary or higher education and about 13 years of alcohol consumption experience. Most of them were from detoxification treatment. Demographical features of the patients are presented in Table 1 and psychological features – in Table 2.

Multinomial regression analysis revealed that all regression models were statistically significant: for “ambivalence” $F = 1.805$, $P = 0.049$ (Model 1); for “recognition of the problem” $F = 6.467$, $P = 0.001$ (Model 2); for “taking steps” $F = 13.644$, $P = 0.001$ (Model 3). Results of all regression analysis are presented in Table 3. Different aspects of motivation to refuse alcohol consumption could be predicted by alcohol-related expectations, emotional expressiveness and socio-demographic variables. Ambivalence in alcohol-dependent patients group was not significantly related to alcohol-related expectations or to emotional expressiveness or to socio-demographic variables except gender (model 1). Results showed that alcohol-dependent women had more ambivalent thoughts related to motivation to give up alcohol consumption than alcohol-dependent men. However, better recognition of the problem (model 2) was predicted by higher expression of negative alcohol-related expectations, higher emotional impulse intensity and being a member of support group after rehabilitation program. Model 3 revealed that only higher positive emotional expressiveness and lower education (primarily or secondary) were significant factors in predicting taken steps to refuse alcohol consumption. Also, it was found that alcohol-dependent patients from support group after rehabilitation program were taking steps more often in comparison to alcohol-dependent patients from detoxification and rehabilitation departments.

4. Discussion

The results of this study have shown that only higher negative alcohol-related expectancies were a significant factor for better recognition of alcohol consumption as a problem.

Table 1 – Characteristics of the study population.

Characteristic	Men n = 100	Women n = 36
Age, mean (min-max), years	42.7 (22–70)	43.3 (27–63)
Education, n (%)		
Not finished secondary	13 (13)	2 (5.6)
Secondary	33 (33)	9 (25)
Specialized secondary	29 (29)	17 (47.5)
Higher education	25 (25)	8 (22.2)
Treatment condition, n (%)		
Detoxification	64 (64)	14 (38.9)
Rehabilitation program (12-steps)	29 (29)	16 (44.4)
Supportive group	7 (7)	6 (16.7)
The average of alcohol consumption, years	13.6	13.5

Table 2 – Characteristics of the used questionnaires.

	Range	Mean
<i>Motivation to refuse alcohol</i>		
Recognition (7 items)	15–35	28.96
Ambivalence (4 items)	7–15	12.25
Taking steps (8 items)	10–40	28.62
<i>Alcohol-related expectations</i>		
Positive personal and positive social expectations (33 items)	62–153	114.48
Negative personal and positive social expectations (17 items)	28–82	58.75
Cognitive – motor expectations (10 items)	16–46	27.48
<i>Emotional expressivity</i>		
Expressive confidence (14 items)	18–82	45.77
Positive expressivity (13 items)	16–88	58.00
Negative expressivity (11 items)	16–77	42.85
Emotional impulse intensity (11 items)	15–71	42.36
Masking (13 items)	22–76	51.65

Alcohol-dependent patients, who have expressed negative alcohol-related expectancies, were more aware of all negative physical, psychological, social and other consequences, happened because of his/her alcohol consumption. This personal insight may cause them a lot of negative feelings, especially shame and fear that encourage them to seek professional help and start creating plans for alcohol-related behavior change [21]. Differently, neither positive nor cognitive-motor alcohol-related expectations were significantly related to different stages of readiness to change alcohol-related behavior. These alcohol-related expectancies were significantly related to frequent alcohol consumption in large quantities [4,9].

The analysis of emotional expressiveness different levels revealed that higher intensity of emotional impulse predicts better recognition of the problems, caused by alcohol dependency. It is possible that people with high emotional impulsivity were able to find quick ways of overcoming negative emotions, mostly by using alcohol [22]. However, higher recognition of the problem might be a reason of higher consciousness that alcohol consumption did not help to mask or overcome emotions. Also, the results of this study have shown that higher expression of positive emotions was significantly related to the taking steps stage. An ability to express positive emotions in adequate way was related to a pleasant social interactions and greater self-confidence being sober. As the result, there was no need to improve emotional state in communication by alcohol consumption [23]. Still, no other aspect of emotional expressivity (expressive confidence, negative expressiveness and masking the emotions) was significantly related to the readiness to change alcohol-related behavior.

The findings of our study allow us to draw some conclusions about the importance of sociodemographic factors in relation to readiness to change alcohol-related behavior. The results showed that those alcohol-dependent patients, who were members of support group after rehabilitation program, had better recognition of the problem and they were ready to take steps in changing their alcohol-related behavior more often comparing with alcohol-dependent patients from other treatment conditions. These results could be explained by assumption that alcohol-dependent patients from support group had medical stabilization, pharmacotherapy and they were getting psychosocial help and social support, which helps them to be more aware of problems, caused by long-lasting alcohol consumption. All

Table 3 – Multinomial regression models for the prediction of alcohol-dependent patients' motivation to refuse alcohol consumption by alcohol-related expectations, emotional expressiveness and sociodemographic factors.

Variable	Model 1 Prognosis of ambivalence $R^2 = 7.2\%$		Model 2 Prognosis of recognition of the problem $R^2 = 34.5\%$		Model 3 Prognosis of taking steps $R^2 = 54.9\%$	
	Std. beta	P	Std. beta	P	Std. beta	P
Positive alcohol-related expectations	0.020	0.870	-0.018	0.855	0.049	0.557
Negative alcohol-related expectations	0.094	0.345	0.192*	0.023*	0.095	0.174
Cognitive-motor alcohol-related expectations	0.049	0.675	-0.025	0.801	0.020	0.801
Expressive confidence	0.041	0.678	0.028	0.741	-0.047	0.051
Positive expressivity	0.103	0.402	0.109	0.290	0.021*	0.020*
Negative expressivity	-0.055	0.617	0.054	0.556	-0.024	0.751
Emotional impulse intensity	0.092	0.434	0.229*	0.021*	0.119	0.145
Masking	-0.098	0.281	-0.033	0.661	-0.058	0.360
Gender	0.180*	0.049*	0.034	0.652	-0.002	0.974
Age	0.011	0.919	0.109	0.216	-0.030	0.681
Education	-0.020	0.830	-0.134	0.092	-0.137*	0.038*
Treatment condition	0.137	0.189	0.288*	0.001*	0.608*	0.001*
Average time of alcohol consumption	0.003	0.979	-0.009	0.919	-0.047	0.510

Model 1, multinomial regression model for prediction of ambivalence. Model 2, multinomial regression model for prediction recognition of problem. Model 3, multinomial regression model for prediction of taking steps.

* Level of significance $p < 0.05$.

such multidisciplinary help provides safety and confidence in changing alcohol-related behavior.

Also, the results of this study showed a statistical tendency that alcohol-dependent women had more ambivalent thoughts. They tended to have more pros and cons of giving up alcohol consumption in comparison to alcohol-dependent men, who are more willing to take one position of two – recognition of the problem or taking steps in changing alcohol consumption. However, only a small number of alcohol-dependent women participated in this study, so these results were not definite and this result showed only a prognostic tendency. Finally, it was found that higher education predicts lower probability of taking actions in changing alcohol-related behavior. It is stated that better educated individuals appear to have a higher sense of self-control [12]. An active social life and a high sense of self-control may lead better educated individuals to have more frequent and possibly heavier alcohol consumption sessions as well as lower awareness of seriousness of alcohol-related problems [24]. Consequently, an assumption could be made that alcohol-dependent patients with higher education tend not to admit alcohol-related problems and usually do not take any actions to seek professional treatment.

This study has certain limitations. The design of this investigation does not allow making causality statements between variables of this research. The study was conducted with a quite small sample, which does not represent all alcohol-dependent patients in Lithuania. A larger sample size from different cities of Lithuania would help in the robustness of the findings and possibility to use more sophisticated data analysis methods. Also, the predictability of the results is not very high and reveals more prognostic tendencies, which should be tested with a larger sample. Moreover, not all psychological, social and demographic characteristics have been evaluated in this study that might be the significant factors for the motivation to refuse alcohol consumption.

5. Conclusions

Alcohol-dependent patients, members of support group after rehabilitation program, who have higher expression of negative alcohol-related expectations and higher intensity of emotional impulse are more likely to be motivated for recognition of the problems caused by alcohol consumption.

Alcohol-related expectations and emotional expressiveness are not significant factors in predicting the first level of motivation to refuse alcohol (ambivalent thoughts) in alcohol-dependent patients.

Alcohol-dependent patients, members of support group after rehabilitation program, who have lower education (primarily or secondary) and a higher positive emotional expressiveness are more likely to be motivated for taking steps to refuse alcohol consumption.

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Conflict of interest

The authors state no conflict of interest.

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