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CONTENTS
TURINYS

Dear friends and colleagues,

I am pleased to present the latest 2018 issue of Biological Psychiatry and Psychopharmacology.

In a prospective study Stanyte and Smigelskas explored the association of dietary habits with personality traits and problematic eating behavior in a large sample of young adults in Lithuania. Miela with colleagues reviewed pharmacotherapy for Alcohol Use disorders. Walyzada with colleagues present an educational case report of a young woman with intellectual disability and multiple hospitalizations. Lukoseviciute and Smigelskas performed validation study of the Lithuanian translation of the Cynical Distrusts Scale, while Steibliene presented guidelines for psychosocial assessment of patients at suicide risk. Finally, we are happy to present an abstract of recently defended Ph.D. thesis of Julius Burkauskas, which are focused on cognitive functioning of coronary artery disease patients.

On behalf of Editorial board I would like to thank authors and reviewers for their valuable contributions and wish our authors and readers Merry Christmas, and prosperous and productive 2019.

Sincerely,

Adomas Bunevicius, MD, PhD

Editor in Chief

Biological Psychiatry and Psychopharmacology

Personality traits and problematic eating behavior as predictors of dietary habits in young adults

Asmenybės bruožų ir probleminės mitybos elgsenos sąsajos su mitybos įpročiais tarp jaunų suaugusiųjų

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SUMMARY

Purpose. This study aimed to investigate how personality traits and PEB associate with daily dietary habits in young adults.

Methods. Anonymous questionnaire was distributed in Kaunas city public places (n = 300). Personality traits were measured using Modern Personality Assessment based on Big Five Personality Dimensions, eating styles – with Three-Factor Eating Questionnaire-R21, dietary habits – with self-constructed items about frequency of foods consumption.

Results. Participants reported highest levels of conscientiousness (m = 26.8) and lowest levels of neuroticism (m = 17.0) compared to other Big Five traits. Assessment of PEB revealed that participants reported highest levels of uncontrolled eating (m = 43.2) and lowest levels of emotional eating (m = 29.9). Associations between personality traits and PEB versus dietary habits showed that men, compared to women, tend to consume more meat and soft drinks, but are less likely to consume sweets on a daily basis. Lower education associated with lower vegetable and grains consumption, conscientiousness – with higher consumption of grains and meat, while cognitive – with lower consumption of meat and sweets.

Conclusions. Personality from perspective of Big Five traits and problematic eating behavior were only partially related with dietary habits, however, the associations were not consistent as to enable defining more healthy personality profile. In contrast, sociodemographic indicators like gender and education seem stronger factors, though the associations are also rather inconsistent.

Keywords: personality traits, Big Five, eating behavior, dietary habits.

SANTRAUKA

Tikslas. Nustatyti kaip asmenybės bruožai ir probleminė mitybos elgsena siejasi su kasdieniais mitybos įpročiais tarp jaunų suaugusiųjų.

Metodai. Tyrime dalyvavo 300 tiriamųjų, apklaustų anoniminės anketos būdu viešose Kauno miesto vietose. Asmenybės bruožai matuoti naudojantis „Didžiojo penketo asmenybės dimensijų“ skale, mitybos stiliai – „The Three-Factor Eating Questionnaire-R21“, mitybos įpročiai – autorių sudarytais klausimais apie maisto grupių vartojimo dažnumą.

Rezultatai. Vertinant Didžiojo penketo asmenybės dimensijas, tiriamieji pasižymėjo labiausiai išreikštu sąmoningumu (m = 26,8) ir žemiausiai išreikštu neurotiškumu (m = 17,0). Vertinant probleminę mitybos elgseną, tiriamieji pasižymėjo labiausiai išreikštu nekontroliuojamu valgymu (m = 43,2) ir mažiausiai išreikštu emociniu valgymu (m = 29,9). Nagrinėjant sąsajas tarp asmenybės bruožų, probleminės mitybos elgsenos ir mitybos įpročių nustatyta, kad vyrai, lyginant su moterimis, dažniau kasdien vartoja mėsą ir gaiviuosius gėrimus, bet rečiau valgo saldumynus. Žemesnis išsilavinimas buvo susijęs su retesniu daržovių ir grūdinių produktų vartojimu, sąmoningumas – su dažnesniu grūdinių produktų vartojimu, o kognityvinis ribojimas – su retesniu mėsos ir saldumynų vartojimu.

Išvados. Asmenybės bruožai, vertinami pagal Didžiojo penketo asmenybės bruožų teoriją, ir probleminė mitybos elgsena buvo tik dalinai susiję su mitybos įpročiais, tačiau šios sąsajos buvo nenuoseklios, todėl negalima nusakyti, kuris asmenybės profilis yra sveikesnis mitybos atžvilgiu. Kita vertus, sociodemografiniai rodikliai, tokie kaip lytis ir išsilavinimas, stipriau siejosi su mitybos įpročiais, nors sąsajos taip pat nėra nuoseklios.

Raktažodžiai: asmenybės bruožai, Didysis penketas, mitybos elgsena, mitybos įpročiai

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INTRODUCTION

Dietary habits are defined as habitual decisions of individuals or group of people regarding foods they eat [1]. These everyday choices play a significant role in human health [2]. Basic principles of a healthy diet are to increase consumption of fruits, vegetables, legumes, whole grains and nuts as well as to limit energy intake from total fats, free sugars and use less than 5 grams of salt per day [3–5]. Unhealthy dietary choices which mainly consist of frequent consumption of energy-dense, nutrient-poor food products are associated with higher rates of obesity [6]. The latter is increasing worldwide [7] and associates with increased mortality [6], higher prevalence of non-communicable diseases, including cancer, cardiovascular diseases, and type 2 diabetes [3, 6, 8], while healthy diet can prevent major non-communicable diseases [5].

Dietary habits are formed through eating behavior – a complex interplay of physiological, psychological, social and genetic factors that influence meal timing, quantity of food intake, food preference, and food selection [9]. While normal eating patterns are formed by state of hunger, the problematic eating behavior (PEB) manifests from eating in response to negative mood states or being more sensitive to environmental food cues [10]. PEB is categorized into different eating styles: emotional eating ("tendency to overeat in relation to negative mood states"), uncontrolled eating ("tendency to lose control over eating when feeling hungry or when exposed to external stimuli"), and cognitive restraint ("tendency to control food intake in order to influence body weight or body shape") [10]. Previous research has shown that emotional eating is positively related to more frequent energy-dense snack consumption, for example, cakes, cookies, chocolate, ice-cream [11-14]. Uncontrolled eating is associated with higher energy and fat intake [15], while restraint eating is positively associated with lower overall energy intake [14] though it can cause episodes of binge eating [16]. Overall, these PEB styles are associated with obesity and unhealthy dietary choices [11–14; 17].

Personality differences also play a major role in everyday decision making [18]. Expressed personality traits, such as the Big Five personality traits, are distinguished as one of the main influences on dietary intake [19]. Previous studies have documented the relationship between personality traits and different dietary habits. They show that all Big Five personality traits are more or less connected to the food choices that people make every day. Neuroticism has been positively associated with more frequent consumption of sweets and sour snacks [20, 21], soft drinks [22], and rarer consumption of fish, vegetables [21, 22], and dairy products [21]. Extraversion has been positively associated with more frequent consumption of sweets and sour snacks, soft drinks [20], meat, vegetables [20–22], and dairy products [21]. Openness has been positively related to more frequent consumption of fruits and vegetables [19, 21, 22], and lower consumption of sweets [22]. Conscientiousness has been positively associated with more frequent consumption of fruits [20–22], dairy products, fish, and vegetables [20]. Agreeableness has been related to rarer consumption of soft drinks [22]. Even though there have been a few studies concerning food and personality traits, these relationships are still unclear due to the differences in used methods and fragmented approaches.

Expressed personality and behavior is considered to be the main influencers on dietary intake [19]. In the world where the obesity rates are growing [7], young adults are particularly significant group, because even though obesity is still relatively uncommon, particular eating habits and PEB can lead to such problems later in their lives [23]. Therefore it is important to figure out how personality and PEB are related to dietary habits, especially regarding particular food choices. Thus, the aim of this study was to investigate how personality traits and PEB associate with daily dietary habits in young adults. We additionally analyzed sociodemographic characteristics and body mass index as potentially associated factors.

METHODS

Participants

A convenience sample of 300 participants, aged 18–29 years, was recruited in various public places (libraries, market places, supermarkets) of Kaunas city, Lithuania. Participants were approached and asked to participate in the study. After agreeing to participate, they were informed about the study, signed informed consent forms and completed the questionnaire. Response rate was 93%. Data collection took place between December 2016 and March 2017. The study was approved by the Lithuanian University of Health Sciences ethics committee, reference No. BEC-SP(B)-10.

Participants were asked about their age, gender, education, height, and weight. Height and weight were used to calculate body mass index (BMI) and later grouped into categories: low (<18.5), normal (18.5 to 24.9), and high (25 and higher) [24]. Detailed characteristics of respondents are shown in Table 1.

Instruments

Big Five personality traits

A Lithuanian version [25] of Modern Personality Assessment based on "Big Five" Personality Dimensions (MPA) [26, 27] was used to assess personality traits. Participants were asked to indicate how well each of the 25 pairs of adjectives described them on a 7-point Likert scale (maximum 35 points on each subscale). Each personality factor was assessed with 5 pairs of adjectives. Cronbach's α was 0.608 for neuroticism, 0.591 for conscientiousness, 0.584 for extraversion, 0.582 for agreeableness, and 0.547 for openness

Table 1. **Sociodemographic characteristics of study participants (n=300)**

Variables	Mean ± SD or N (%)
Age	21.6 ± 2.3
Gender	
Men	145 (48.3)
Women	155 (51.7)
Education	
Lower than secondary	23 (7.6)
Secondary	193 (64.3)
Higher	84 (28)
Body mass index (BMI)	
Low	24 (8.1)
Normal	218 (73.2)
High	56 (18.7)

to experience. Due to the lack of prior literature suggesting a cut offs for this questionnaire, participants were grouped into 2 categories based on the median values of each scale.

Eating styles

Problematic eating behavior was assessed with The Three-Factor Eating Questionnaire-R21 (TFEQ-R21) [28]. This questionnaire measures three different styles of eating behavior and consists of 21 items. The first subscale assesses emotional eating (6 items, example item "I start to eat when I feel anxious") ($\alpha = 0.907$). The second subscale measures uncontrolled eating (9 items, example item "Sometimes when I start eating, I just can't seem to stop") ($\alpha = 0.818$). The third subscale measures cognitive restraint (6 items, example item "I deliberately take small helpings to control my weight") ($\alpha = 0.798$). Items were measured using 4-point Likert scales that ranged from "definitely true" to "definitely false". Possible scores ranged from 0 to 100 with higher scores indicating greater prevalence. Based on previous research [11, 29], scores were dichotomized based on the median values of each subscale.

Dietary habits

Dietary habits were measured by asking participants to rate the frequency of consuming certain food items (fruits, vegetables, grains, dairy, meat, fish, sweets, fast food, soft drinks, and alcohol). Participants had to rate the consumption of each product on a scale ranging from "everyday" to "rarely". Then the answers were grouped into two categories: everyday consumption (in order to reflect habitual nature of choice) and rarer than everyday consumption. Due to small percent of answers in everyday category, fish, fast food and alcohol items were excluded from this analysis.

Statistical analysis

Statistical analyses were performed using "IBM SPSS Statistical version 23". The descriptive analysis was presented as means and standard deviations for continuous variables. Due to the fact that data on Big Five personality traits and problematic eating behavior were not normally distributed, non-parametric Spearman's correlation was used to compute associations between Big Five personality traits and PEB.

Multivariate logistic regression was used to determine whether personality, problematic eating behavior and other characteristics associate with dietary habits. The regression method was used to assess how different factors (sociodemographic, personality, problematic eating behavior, and body mass index) associate with daily consumption of particular food groups. For regression, the independent variables were used as dichotomous in order to enable the comparison of their associations with dependent variables. Significant independent variables from literature review were entered into a multivariate logistic regression. Odds ratios (OR) and 95% confidence intervals for each independent variable in the model were computed.

Statistical significance level was set at 5 percent ($p < 0.05$), and in order to control for multiplicities, 1% significance ($p < 0.01$) was also presented.

RESULTS

From perspective of the Big Five traits, study participants reported highest levels of Conscientiousness (26.8 pts on average) and Agreeableness (25.8 pts) with the lowest levels of Neuroticism (17.0 pts). In addition, we also examined which features of each Big Five personality traits were mostly expressed among young adults. Here, Extraversion was mostly characterized as being friendly (5.8 ± 1.12 pts) and sociable (5.1 ± 1.56 pts), Conscientiousness – being reliable (6.1 ± 1.05 pts) and conscientious (5.8 ± 1.12 pts), Agreeableness – being sympathetic (5.7 ± 1.39 pts) and courteous (5.6 ± 1.12 pts), Neuroticism – being high strung (3.9 ± 1.46 pts), nervous (3.6 ± 1.53 pts) and worrying (3.6 ± 1.49 pts), and Openness – having broad interests (5.5 ± 1.32 pts), being creative (4.4 ± 1.60 pts) and original (4.4 ± 1.45 pts).

From the perspective of eating styles, the subjects reported highest levels of Uncontrolled eating (43.2 pts) and lowest levels of Emotional eating (29.9 pts). Then we examined individual statements of each eating style subscale. Emotional eating was characterized as eating too much when feeling anxious (37%), sad (31.3%), and tense (27.7%). Uncontrolled eating was mostly characterized as wanting to eat when being with someone who is eating (73%), going on eating binges even when not hungry (56%), and finding it difficult to keep from eating when smelling or seeing certain food (44.3%). Cognitive restraint was mainly characterized as having a successful effort to eat less than one wishes (52%), deliberatively taking small helpings to control ones' weight (35.7%), and avoiding stocking up on tempting foods (34%).

Table 2 contains descriptive statistics of psychological subscales under study.

We also examined the intercorrelations between the psychological variables reflecting personality traits and problematic eating (Table 3). The results showed that among the Big Five constructs, mostly correlated features were Agreeableness and Extraversion ($r = 0.36$). However, the feature that was most consistently associated with others was Neuroticism, negatively correlating at levels of $r \approx 0.25$, except for Openness. In addition, Neuroticism also correlated with Emotional and Uncontrolled eating at similar levels.

Among eating styles it can be marked that Emotional eating and Uncontrolled eating correlate moderately ($r = 0.42$). Of note, personality traits did not associate with problematic

Table 2. **Descriptive statistics of psychological variables under study**

	Scale points			
	Theoretical range	Mean	SD	Median
Big Five				
1. Extraversion	5–35	24.5	4.44	25
2. Conscientiousness	5–35	26.8	3.98	27
3. Agreeableness	5–35	25.8	4.42	26.5
4. Neuroticism	5–35	17.0	4.53	17
5. Openness	5–35	22.5	4.75	23
Problematic eating behavior				
6. Emotional eating	0–100	29.9	25.63	27.8
7. Uncontrolled eating	0–100	43.2	19.16	44.4
8. Cognitive restraint	0–100	34.4	22.06	33.3

Table 3. **Intercorrelations between psychological variables under study**

Scale	Subscales	1.	2.	3.	4.	5.	6.	7.
Big Five	1. Extraversion							
	2. Conscientiousness	0.09						
	3. Agreeableness	0.36**	0.11					
	4. Neuroticism	–0.29**	–0.23**	–0.24**				
	5. Openness	0.23**	0.14*	–0.01	–0.03			
Problematic eating behavior	6. Emotional eating	0.03	–0.09	0.05	0.30**	0.03		
	7. Uncontrolled eating	0.06	–0.17*	0.07	0.25**	–0.08	0.42**	
	8. Cognitive restraint	0.01	0.09	–0.01	0.08	0.06	0.21**	–0.07

*p<0.05,**p<0.01

eating behaviors, except above mentioned Neuroticism in relation with Emotional eating and Uncontrolled eating.

Finally, we conducted the multivariate logistic regression analysis in order to identify psychological and personal factors that could affect the food choices (Table 4). Median values (50 percentiles) for psychological measures were used as cut points for dichotomization. We will comment only statistically significant findings.

The study revealed that analyzed personality traits and features can be considered as factors associated with food choices only in rare cases. First, what was observed is that sociodemographic indicators have more associations than personality factors. Here the gender may play the role with men being more likely to choose meat and soft drinks on daily basis (OR = 4.12 and OR = 4.00, respectively), but less likely to consume sweets (OR = 0.44) than women. On the other hand, lower education makes less likely healthy choices, especially for vegetables (OR = 0.49) and grains (OR = 0.28). From the perspective of personality features, the food choices were associated in a way that high Conscientiousness was associated with higher daily consumption of grains (OR = 1.91) and meat (OR = 1.82) compared to low Conscientiousness, while high Cognitive restraint – lower consumption of meat (OR = 0.58) and sweets (OR = 0.29) compared to low Cognitive restraint (all $p < 0.05$). All other psychological measures did not associate with daily habits in terms of food choices. In addition, it can be noted that body mass index was not significant factor for daily food choices either.

DISCUSSION

Unhealthy dietary habits can increase the risk of non-communicable diseases and obesity [6]. The personality traits and problematic eating behavior (PEB) may influence the dietary intake [19]. Understanding how they affect dietary habits can lead to specific treatment and prevention programs. Therefore, our aim of the study was to investigate how personality traits

Table 4. **Daily consumption of food products depending on sociodemographic and psychological indicators: multivariate logistic regression**

Indicator	Group	Fruits	Vegetables	Grains	Dairy	Meat	Sweets	Soft drinks
Gender	women	OR=1.00						
	men	0.94 (0.52–1.71)	0.63 (0.36–1.1)	1.27 (0.72–2.24)	0.57 (0.31–1.02)	4.12** (2.27–7.5)	0.44* (0.23–0.85)	4.00* (1.08–14.79)
Education	higher	OR=1.00						
	secondary	0.69 (0.39–1.22)	0.45 (0.16–1.22)	1.23 (0.71–2.15)	0.75 (0.42–1.33)	0.93 (0.52–1.66)	1.62 (0.50–5.19)	3.14 (0.67–14.68)
	lower	0.71 (0.25–1.99)	0.49* (0.28–0.85)	0.28* (0.09–0.95)	0.32 (0.10–1.02)	1.65 (0.6–4.59)	0.58 (0.17–2.01)	5.58 (0.77–40.2)
BMI	normal	OR=1.00						
	low	1.66 (0.65–4.26)	1.77 (0.93–3.39)	0.50 (0.18–1.38)	0.28 (0.08–1.02)	1.68 (0.65–4.35)	0.72 (0.31–1.66)	2.05 (0.32–13.04)
	high	0.80 (0.39–1.64)	1.59 (0.62–4.1)	1.19 (0.62–2.29)	0.84 (0.42–1.68)	0.90 (0.46–1.76)	0.46 (0.16–1.35)	0.85 (0.24–2.95)
Extraversion	low	OR=1.00						
	high	0.90 (0.52–1.57)	1.10 (0.65–1.86)	0.83 (0.49–1.40)	1.19 (0.68–2.06)	0.66 (0.38–1.15)	0.94 (0.52–1.72)	0.88 (0.30–2.54)
Conscientiousness	low	OR=1.00						
	high	1.17 (0.69–1.99)	1.31 (0.79–2.17)	1.91* (1.15–3.17)	1.47 (0.86–2.5)	1.82* (1.07–3.12)	0.94 (0.53–1.69)	0.90 (0.32–2.52)
Agreeableness	low	OR=1.00						
	high	1.27 (0.73–2.18)	1.24 (0.74–2.07)	1.08 (0.65–1.81)	1.70 (0.99–2.93)	0.94 (0.55–1.6)	0.90 (0.5–1.61)	1.19 (0.43–3.3)
Neuroticism	low	OR=1.00						
	high	1.12 (0.64–1.99)	0.91 (0.53–1.57)	0.75 (0.43–1.28)	0.75 (0.42–1.32)	0.88 (0.5–1.54)	1.59 (0.85–2.98)	0.82 (0.27–2.52)
Openness	low	OR=1.00						
	high	1.25 (0.73–2.11)	1.14 (0.96–1.89)	1.44 (0.87–2.4)	1.17 (0.69–2.00)	1.44 (0.85–2.45)	1.01 (0.57–1.81)	0.41 (0.14–1.21)
Emotional eating	low	OR=1.00						
	high	1.04 (0.58–1.88)	1.23 (0.70–2.16)	1.28 (0.72–2.27)	1.41 (0.77–2.56)	0.95 (0.53–1.7)	1.63 (0.85–3.13)	0.77 (0.25–2.39)
Uncontrolled eating	low	OR=1.00						
	high	0.89 (0.51–1.53)	0.75 (0.44–1.26)	1.30 (0.77–2.21)	0.84 (0.48–1.46)	1.29 (0.74–2.22)	0.65 (0.35–1.19)	1.37 (0.48–3.91)
Cognitive restraint	low	OR=1.00						
	high	1.43 (0.82–2.48)	1.01 (0.60–1.71)	0.74 (0.44–1.26)	0.64 (0.37–1.12)	0.58* (0.34–0.99)	0.29** (0.16–0.55)	0.43 (0.13–1.39)

*p<0.05, **p<0.01. Note: multivariate regression odds ratios (OR), adjusted by all independent variables in the model

and PEB associate with daily dietary habits in young adults.

Examination of the Big Five personality traits showed that young adults from general population report highest levels of conscientiousness and lowest levels of neuroticism. Compared to another study in Lithuania that used the same personality assessment inventory on similar study participants, the distribution of Big Five personality traits was similar [30]. Other studies from different countries reveal similar pattern [31, 32], though sometimes participants report highest levels of openness that are closely followed by conscientiousness [33]. This shows that young adults have a tendency to describe themselves as conscientious and reliable while rarely exhibiting neuroticism as a trait.

Investigation of PEB revealed that young adults from general population report highest levels of uncontrolled eating and lowest levels of emotional eating. Compared to other similar samples, the distribution of eating style levels was also pretty similar, with highest levels of uncontrolled eating and lowest levels of emotional eating [34–36]. Uncontrolled eating is a tendency to overeat while hungry or when exposed to various food stimuli [10]. It can be seen that nowadays people tend to come across different food stimuli in various contexts and such stimuli make them eat more even without being hungry [37]. Uncontrolled eating may be the most prevalent among young adults because it is closely related to eating culture: it is culturally accepted to eat with other people while not feeling hungry, to accept snacks from other people, to snack at cinema or while working and to stock tempting foods for later consumption. These things cause people not to pay attention to what and how much they are eating which later may result in increased levels of uncontrolled eating.

Lastly, we examined psychological and personal factors that could potentially affect food choices. Analysis revealed that sociodemographic factors such as gender and education had more predictive potential for everyday food habits than personality traits or PEB.

From sociodemographic characteristics we found that men, compared to women, were more likely to consume meat and soft drinks, but less likely to eat sweets every day. Also, people with lower education, compared with higher education, were less likely to eat vegetables and grains every day. These findings are consistent with previous literature that shows that overall women report a more healthy diet than men [38] and people with higher education have more health literacy, which is connected to healthier eating habits [39]. It is possible that people with lower education have less knowledge about healthy diet or they have limited resources to stick to such dietary plan.

From personality traits perspective we found that people with high conscientiousness were more likely to consume grains and meat every day compared to low conscientiousness. This may be rather random finding, since other personality traits in our study were not related with dietary habits. Such result could show that other factors come into play when talking about dietary habits and that personality does not have such a major influence on food choices. However, this is in contrast to Keller and Siegrist [20] who discovered that personality traits influence dietary intake through eating styles. It is possible that personality influences other factors that can mediate the relationship between personality traits and dietary intake (for example, food choice motives [40] or coping styles [41]). Food choices can also be determined by the factors as health literacy or general education which may have been different in our study participants compared to other studies and therefore we found associations that discerned from previous research.

We also found that people with high cognitive restraint were less likely to consume meat and sweets every day than those with low cognitive restraint. Similar to our findings, other researchers have found that cognitive restraint is associated with lower consumption of high calorie foods such as sweets [14, 15]. Other PEB were not good predictors for daily dietary choices. It could be possible that subjectively assessed PEB reflect only peoples' beliefs about their eating habits but does not show the real situation, because uncontrolled and emotional eating styles reflect more unconscious and emotional processes, while cognitive restraint examines conscious efforts to limit the food intake.

If personality and PEB do not associate with everyday dietary choices, what other factors could influence such behavior? Lunn and colleagues [19] divided various factors into two categories: external and internal factors. One of the most important aspects of external influences is social modeling and environmental cues that was outside of our scope of study. As already mentioned, seeing other people eat and being in contact with various external food stimuli (such as smell or sight of food) can have a major impact on food choices and consumption. Research has shown that people regulate their snack consumption depending on what the people around them are eating [42]. Another aspect connected to external influences is parenting and the model that parents set to their children. Children see their parents' attitudes towards food and their eating practice and try to model such behavior [43]. Parents also actively shape own food parenting practices and choose what their children will consume. Research has shown that positive food parenting practices increase desirable and healthy dietary practices [44]. This can result in better or worse food choices later in adult life.

Looking to internal factors, there is also a possibility that other personality traits, not included in this study, could have a bigger influence on dietary intake. For instance, a lot of research is focused on impulsivity and its' relationship with dietary intake. Kakoschke and colleagues [45] have found that higher levels of impulsivity influence higher intake of unhealthy foods. Overall, impulsive tendencies increase unhealthy food choices while feeling hungry [46]. The relationship with dietary intake and other personality types is also being examined, for example type D personality is found to influence food choices, with type D personality being more prone to unhealthy food choices [41]. Among internal factors, the motivation could also play the role.

Our study has some strengths and limitations. One of the main strengths is that our study sample was drawn from general population of young adults, which means that inferences could be drawn about general population, although with some reservations due to convenience sampling. In addition, we had a high response rate, meaning that those who agreed to participate in this study were not likely to be characterized by

specific personality traits. This suggests that we succeeded to represent a broad range of young adults.

Some limitations should also be acknowledged. First, we did not have the conditions to measure actual food intake and therefore used subjective dietary intake measures. Participants could have forgotten their real intake and that could skew some results. In addition, the self-report could have been influenced by participants' emotional state or feeling of hunger. Similarly, the respondents may have been more likely to report the consumption habits based on last days experience that may in part deviate from owns general eating pattern.

Future research in this field could address other factors (both external and internal) not included in our study and to check their relevance for dietary habits or food choices. Moreover, the dietary behavior could be objectively measured instead of self-report. Concerning personality in general and Big Five personality in particular, it would be interesting to see if it could influence change in dietary habits and could work as a risk or a protective factor for changing ones' dietary habits. However, such questions should rather be addressed on longitudinal basis rather than cross-sectional as it was in our case.

To conclude, we can state that the current study revealed personality from perspective of Big Five traits being only partially related with dietary habits, however, the associations were not consistent as to enable defining more healthy personality profile by traits. In case of problematic eating behavior, it is only cognitive restraint that seems to act as a restrictive factor against meat and sweets consumption but not other foods. In contrast, sociodemographic indicators like gender and education seem stronger factors, though the associations are also rather inconsistent.

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Pharmacotherapy of Alcohol Use disorder. A Review of Current Literature

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SUMMARY

Aim. The objective of this review is to provide an updated analysis of currently approved as well as emerging pharmacotherapeutic options for the management of alcohol use disorder (AUD).

Methods: Relevant papers were selected for review following extensive, language, location and date unrestricted, electronic and manual searches of published literature regarding pharmacotherapeutic modalities in alcohol use disorder.

Results. Acamprosate, disulfiram, naltrexone, nalmefene, sodium oxybate and baclofen are the only approved pharmacotherapeutic options for the treatment of alcohol use disorder. Acamprosate and naltrexone have been evaluated in numerous clinical trials and represent evidence-based treatments in AUD. Nalmefene use, however, is controversial. Controversy also surrounds sodium oxybate, currently approved in Italy and Austria. The GABA (γ-aminobutyric acid) receptor agonist baclofen has shown mixed results; it is currently licensed for the treatment of AUD in France only. Supervised disulfiram is a second-line treatment approach. Compounds developed and licensed for various neuropsychiatric disorders are potential alternatives. Encouraging results have been reported for topiramate, gabapentin and also varenicline, which might be useful in patients with comorbid nicotine dependence. Metadoxine, pregabalin, ondansetron, already have a therapeutic profile and are currently evaluated with respect to efficacy in AUD. OSU6162 represents a novel compound under investigation.

Conclusion. Pharmacotherapeutic management of alcohol use disorder has been shown to be moderately efficacious with reasonably few safety concerns. Though it is grossly underutilized, ongoing studies of novel pharmacotherapeutic modalities, inclusive of pharmacogenetics, in alcohol use disorders are promising.

Key words: alcohol use disorder, pharmacotherapy

INTRODUCTION

In 1952, the American Psychiatric Association Committee on Nomenclature and Statistics published the first edition of the Diagnostic and Statistical Manual. The DSM-I featured descriptions of 106 disorders, featuring alcoholism with acute and chronic specifiers. Subsequent editions classified alcohol-related use as; excessive, episodic, habitual, intoxication, abuse and dependence. In 2013, the DSM-5 integrated the two previous DSM-IV disorders, alcohol abuse and alcohol dependence, into a single entity designated as alcohol use disorder (AUD) with mild, moderate, and severe sub-classifications. Modern pharmacotherapy for AUD has its roots in the failure of National Prohibition in the United States and the rise of the disease model of alcoholism. Beginning in the early 1950s, the US Food and Drug Administration (FDA) approved pharmacotherapy for alcohol use disorder was introduced. Nevertheless, the scope of therapeutic options for those with AUD remains limited, as most studies examining outcomes of individuals attending treatment find that 70–80% will relapse in the first year, with the highest rate of relapse taking place in the first 3 months. Those that remain abstinent from alcohol for the first year following treatment initiation have a relatively low risk of relapse [1]. It seems crucial, that the ongoing improvements in the efficacy of treatment, including pharmacotherapy, be diligently evaluated and updated. The present review will summarize the data on currently approved medications and also discuss recent findings concerning off-label evidence-based alcohol use disorder pharmacotherapies.

Pharmacotherapeutic agents currently approved for treatment of AUD

Disulfiram, acamprosate and naltrexone are the pharmaceutical agents licensed for the maintenance of abstinence/relapse prevention in abusive drinkers in the majority of countries advocating the use of pharmacotherapy for the management of alcohol use disorder. Sodium oxybate has been approved for the treatment of alcohol withdrawal

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syndrome and for relapse prevention in Italy and in Austria [2, 3, 4]. Similarly, nalmefene is approved in some countries, for use in people who are drinking at high-risk levels who wish to reduce their alcohol consumption but not necessarily abstain [5]. Baclofen is authorized by the French Health Agency, under a specific measure known as a "temporary recommendation for use" as a second-line drug to prevent relapse or reduce drinking in people with alcohol dependence.

Disulfiram

Disulfiram was discovered in the 1920's and received FDA approval for use in the treatment of alcohol use disorder in 1951. The oral preparation is licensed for relapse prevention in North America, much of Europe, the UK, Australia and parts of Asia. Despite its apparent efficacy, when used in compliant and/or supervised patients, overall, its use remains controversial. Alcohol is metabolized in the liver, via the enzyme alcohol dehydrogenase, to acetaldehyde and then to acetate via the enzyme acetaldehyde dehydrogenase (ALDH). Disulfiram is an ALDH inhibitor. The accumulation of high levels of acetaldehyde following alcohol ingestion in patients taking disulfiram results in the development of a constellation of symptoms such as flushing, nausea, vomiting, tachycardia, hypotension, dyspnea, dizziness and headache [6]. These symptoms appear approximately 5–15 min after alcohol consumption and last from 30 min to several hours. The intensity of the reaction varies with the amount of alcohol consumed and can prove fatal. The fear of the unpleasant effects provoked by alcohol is believed to be the primary mechanism facilitating abstinence from alcohol [5, 7]. Its efficacy also could be related to secondary central nervous system actions, through modulation of catecholamine neurotransmission. Specifically, at clinical doses, disulfiram inhibits the enzyme dopamine-β-hydroxylase, which converts dopamine to norepinephrine, potentially leading to increases in dopamine levels [8].

Not surprisingly, disulfiram has shown potential in maintaining abstinence and reducing relapse, but its effectiveness requires supervision due to a high rate of medication noncompliance. The utility of disulfiram is further decreased due to its various contraindications with drugs metabolized by cytochrome p450 enzymes including imipramine, warfarin, phenytoin, various benzodiazepines, omeprazole, and others. Furthermore, disulfiram is known to produce other unintentional side effects including various types of neuritis, hepatotoxicity, fulminant hepatitis, confusion, and psychosis. More severe adverse effects of disulfiram include myocardial infarction, congestive heart failure, respiratory depression, and rarely, death. Disulfiram is not recommended for individuals with a history of psychosis, cardiovascular disease, pulmonary disease, previous renal failure, diabetes, or those over the age of 60. Thus, despite over 60 years as an approved medication, disulfiram is not recommended as a first-line treatment for alcohol dependence [9]. NICE guidance suggests that disulfiram should be used as a second-line treatment after acamprosate or naltrexone or if a strong preference for its use is expressed. Treatment should be started at least 24 h after the last alcoholic drink with an initial and average maintenance dose of 250 mg per day. Warnings should be provided about the nature and seriousness of the interaction with ingested alcohol and the presence of alcohol in foodstuffs, perfumes and aerosol sprays. Supervision should be sought whenever possible. Treatment, if successful and relatively free from side-effects, may be continued long-term [10,11,12].

Studies of disulfiram are heterogeneous. Since its discovery, no consensus has been reached as to trial methodology and the efficacy of disulfiram as a treatment for alcohol use disorder [13]. It has long been held that it cannot be appraised fairly in double-blind, randomized, clinical trials (RCTs) because the psychological fear of provoking an unpleasant disulfiram-alcohol reaction is key to its effectiveness. According to the guidelines of the Cochrane Handbook for Systematic Reviews of Interventions, a lack of blinding of participants and personnel in randomized trials increases the risk of bias [14]. Notwithstanding, a number of systematic reviews and meta-analyses of the available trial data have been undertaken with some degree of consensus on treatment efficacy [15, 16]. The most comprehensive of these included a total of 22 RCTs, published between 1973 and 2010, comparing the efficacy of disulfiram to no treatment, placebo or other pharmacological treatments, irrespective of blinding or supervision of medication. Based on the results of the open-label studies, where compliance was assured by supervision, disulfiram is a safe and efficacious treatment compared to no treatment or to other pharmacological agents. However, no evidence of efficacy was found in blinded RCTs or where there was no supervision [5, 17].

Acamprosate

Until the early 1990s, disulfiram was the predominant pharmaceutical agent indicated for AUD. By the late 1990s, acamprosate had been introduced and became the most likely drug to be prescribed. On July 29th, 2004, it became approved by the FDA for alcohol use disorder. Acamprosate is licensed for the maintenance of abstinence in alcohol-dependent people in a wide range of countries including North America, most of Europe, UK, Australia, parts of Asia and Africa and, most recently, Japan.

Researchers have proposed that acamprosate's actions may be mediated through antagonism of the N-methyl d-aspartate (NMDA) glutamate receptor site or via modulation of glutamate neurotransmission at metabotropic-5-glutamate receptors. Furthermore, in vitro data suggests that acamprosate has an affinity for type A and type B GABA receptors. However, recent findings suggest that these hypothesized mechanisms of action are not evidenced in the therapeutic dose range that normally is used to reduce alcohol use [18]. Moreover, it has been suggested that acamprosate has no direct neurotransmitter target and that the therapeutic effects associated with its use are due to the co-administered calcium moiety. These findings have yet to be substantiated [5, 19, 20].

The results of a large number of RCTs and meta-analyses have shown that treatment with acamprosate, in conjunction with psychosocial support, significantly increases the proportion of alcohol-dependent patients who remained completely abstinent from alcohol at 6 months. A meta-analysis of 17 RCTs, involving 4087 participants, showed that 36.1% of patients receiving acamprosate achieved this

endpoint compared with 23.4% of those receiving placebo. Overall the number needed to treat (NNT) to achieve continuous abstinence was 7.8 at 6 months and 7.5 at 12 months [21]. A Cochrane review, including 24 RCTs with 6915 participants, showed a significant beneficial effect of acamprosate on a number of outcome measures other than abstinence; thus, its use was associated with a reduction in the return to any drinking with a NNT of nine; a reduction in the risk of any drinking to 86% of the placebo rate and an increase in the number of abstinent days by approximately three per month [22].

Acamprosate is not metabolized in the liver and has no impact on drugs subject to hepatic metabolism or those which affect the cytochrome P450 system. Thus, it does not interact with alcohol and it is generally safe in patients with impaired hepatic function. However, as it is excreted predominantly via the kidney, it should be used with care in people with renal insufficiency. Pharmacovigilance data in 1.5 million patients indicate no serious adverse events; the most commonly reported side-effect is diarrhea, and, occasionally, headaches, dizziness and pruritus being described. It does not have addictive potential and appears safe in overdose. Acamprosate is contraindicated in patients with severe renal impairment and in those who are hypersensitive to the drug or any of its components. Guidelines in the UK, France, the USA and Australia recommend that acamprosate is used as first line treatment for alcohol use disorder. It should be started as soon as possible after assisted withdrawal from alcohol in a daily divided dose of 1998 mg in people weighing >60 kg and of 1332 mg in those weighing <60 kg. There is no need to adjust the dose in people with mild to moderate hepatic impairment, although dose adjustment is recommended for people with moderate renal impairment. Treatment should continue for 6 months or longer in those deriving benefit who wish to continue; it can be continued if patients lapse but should be stopped if drinking persists beyond 4–6 weeks [5, 23].

Naltrexone

Naltrexone was initially synthesized in 1963 and used in the management of opioid dependence since 1984. In 1995, the FDA approved naltrexone as a treatment for AUD. The oral preparation is licensed for relapse prevention in alcohol-dependent people in a wide range of countries including the USA, much of Europe, the UK, Australia and Asia. Naltrexone and its active metabolite 6β-naltrexol act as opioid receptor antagonists, particularly at the μ and κ-opioid receptor. Its excretion is primarily renal [24, 25]. Naltrexone's efficacy in reducing alcohol drinking is believed to be mediated through interactions between the endogenous opioid system and dopamine systems, specifically through antagonism of the μ-opioid receptors. Evidence from animal models indicates that alcohol increases the release of β-endorphins modulating the dopaminergic mesolimbic pathway known to be involved in alcohol reward and that naltrexone administration blocks this release [8].

A substantial number of RCTs have been undertaken to examine the efficacy of naltrexone for the treatment of alcohol dependence. These have been the subject of a number of systematic reviews and meta-analyses employing varying inclusion criteria and drinking outcomes, nevertheless, with broadly comparable results. Thus, in alcohol-dependent people who have been withdrawn from alcohol, naltrexone, in combination with psychosocial support, has a modest, albeit significant beneficial effect on relapse rates, and in reducing alcohol intake. A Cochrane systematic review and meta-analysis, including 40 placebo-controlled RCTs of naltrexone, involving approximately 4500 participants, showed that treatment with naltrexone significantly reduced the risk of a return to heavy drinking to 83% of the placebo rate with a NNT of nine [26]. Treatment was also associated with a 4% reduction in the number of drinking days; a 3% reduction in the number of heavy drinking days; and a reduction in the amount of alcohol consumed, on drinking days, by about 11 g. It did not, however, have a significant effect on the return to any drinking [27]. The effect on overall abstinence rates was not determined. The results of a number of other meta-analyses confirm the effects of naltrexone in reducing the risk of a relapse to heavy drinking and the number of drinks consumed on drinking days. Some found that its use was, in addition, associated with a significant, albeit modest effect on the return to any drinking and overall abstinence rates [27, 28].

The metabolism of naltrexone takes place in the liver via the enzyme dihydrodiol dehydrogenase predominantly to 6β-naltrexol; the metabolites are further conjugation with glucuronide. Naltrexone is not metabolized via the cytochrome P450 system, therefore interactions with drugs subject to hepatic metabolism are likely to be minimal. Notably, increased plasma naltrexone concentrations have been reported in patients with cirrhosis. Naltrexone has no addictive potential, and it does not interact with alcohol. The most commonly reported side-effects are nausea, vomiting, dizziness, abdominal pain, reduced appetite, insomnia, anxiety; these are dose-dependent and appear to be worse in women [29]. Hepatotoxicity has been reported in association with the use of naltrexone in doses of >300 mg/day to treat obesity. However, reviews of the available safety data have confirmed that hepatic toxicity is very unlikely to occur with the standard daily dose of 50 mg. The most important safety consideration in relation to naltrexone is its reaction with opioid drugs. Opioid receptor blockade persists for 48–72 h after the last oral dose; thus, in an emergency non-opioid analgesia would have to be used for pain relief. If future use of opioids is anticipated, for example, for elective surgery, then naltrexone should be discontinued ahead of time [23]. Naltrexone is contraindicated in individuals taking or likely to take opioids. It is also contraindicated in people with acute hepatitis and acute or chronic liver failure. It should be used with caution in people with serum transaminase activities exceeding three times the upper reference range and in patients with renal failure.

At present, there is no consistent advice about monitoring of liver function tests in people receiving this drug but NICE guidance recommends that this should be considered in the elderly and the obese and that the drug should be discontinued immediately if the user feels unwell. Guidelines in the USA, UK, France and Australia recommend that naltrexone should be considered as a first-line treatment for alcohol use disorder. Opioids should be stopped 7–10 days beforehand but treatment can be started while patients are still drinking and during medically-assisted withdrawal from alcohol. An initial

dose of 25 mg/day is recommended increasing over a period of 2 weeks to a maintenance dose of 50 mg/day. Treatment should be continued for 6 months or longer in those deriving benefit who wish to continue. It can be continued if patients lapse but should be stopped if drinking persists beyond 4–6 weeks [5, 23].

Combined treatment with acamprosate and naltrexone

Since the therapeutic efficacy of acamprosate and naltrexone are moderate, the effect of combining the two treatments has been studied. In a study conducted by Keifer et al., where 160 severely dependent drinkers were randomised to acamprosate, naltrexone, acamprosate/naltrexone combined or placebo for 12 weeks, all participants received specific relapse prevention intervention. Both acamprosate and naltrexone and their combination had a positive treatment effect relative to placebo. The naltrexone/acamprosate combination was more effective than acamprosate alone but comparable in effect to naltrexone alone [30]. Anton et al., randomized 1383 much less severely dependent drinkers to the same four arms of treatment for 16 weeks. Participants were further randomized to receive one of two different types of behavioral therapy. Outcomes improved in all participant groups but were significantly better in those receiving naltrexone together with intensive behavioral therapy; combining treatments had no additional beneficial effect. Meta-analysis of these two trials confirmed that there were no significant differences in outcome favoring combined treatment [31].

Nalmefene

On 13 December 2012, nalmefene, an opioid antagonist, was approved by the European Medicines Agency (EMA) for the reduction of alcohol consumption in adult patients with alcohol dependence, a high-risk drinking level, no physical withdrawal symptoms and not requiring immediate detoxification [32]. Nalmefene is an opioid system modulator which is structurally similar to naltrexone but it has a different receptor profile as a μ and δ-opioid receptor antagonist and a partial κ-opioid receptor agonist. It was first introduced into clinical practice for the treatment of alcohol dependence in the early 1990s. However, a meta-analysis of the three RCTs available from that time, which utilized daily doses in the 20–80 mg range, showed that although nalmefene had some beneficial effect on drinking outcomes, none of these was significant. Subsequently, the drug was remarketed and licensed, on the basis of a small number of additional industry sponsored initiatives, for use in people who were drinking harmfully and wanted to reduce, though not necessarily stop, their alcohol consumption. However, this so-called „harm reduction" approach to AUD remains controversial [33, 34]. In November 2014, NICE, despite concerns raised by its own Evidence Review Group, recommended nalmefene, taken in a dose of 18 mg daily, as needed, together with psychosocial support, as a treatment option for people drinking at high-risk levels who, although alcohol-dependent, did not need medically-assisted withdrawal from alcohol and wished to reduce rather than stop alcohol. In France, nalmefene is recommended as the first-line medication for reducing alcohol consumption in people who are alcohol-dependent [5, 11].

More than 3,000 patients have been exposed to nalmefene in clinical studies. Adverse events were frequently reported in these studies and were slightly more frequent in the nalmefene arms (81% and 68% in ESENSE 1 and ESENSE 2, respectively) than in the placebo arms (67% and 59% in ESENSE 1 and ESENSE 2, respectively).

The most common adverse reactions were nausea, vomiting, dry mouth, weight loss, decreased appetite, tachycardia, palpitation, dizziness, headache, somnolence, tremor, disturbance in attention, paresthesia, hypoesthesia, malaise, sleep disorders, confusion, restlessness, decreased libido, muscle spasms, hyperhidrosis. Hallucinations and dissociation also reported. The majority of these reactions were mild or moderate, associated with treatment initiation, and of short duration. Co-administration with potent inhibitors of UGT2B7, may significantly increase the exposure to nalmefene. This is unlikely to present a problem with occasional use, but if long-term concurrent treatment with a potent UGT2B7 inhibitor is initiated, a potential for an increase in nalmefene exposure cannot be excluded. Conversely, concomitant administration with UGT inducers, may potentially lead to subtherapeutic nalmefene plasma concentrations. If nalmefene is taken concomitantly with opioid agonists, for example, certain types of cough and cold medicinal products, certain antidiarrheal medicinal products, and opioid analgesics, the patient may not benefit from the opioid agonist. Simultaneous intake of alcohol and nalmefene does not prevent the intoxicating effects of alcohol [35]. A slightly higher percentage of patients discontinued treatment because of adverse events in the nalmefene arms compared with the placebo arms (23% and 6.7% in the nalmefene arms versus 7% and 5.9% in the placebo arms of the ESENSE 1 and 2 studies, respectively). No difference was observed in terms of serious adverse events. Notwithstanding, regulators and advisory bodies in other European countries, for example, Germany and Sweden, have not recommended nalmefene for this indication [36, 37]. The drug is not licensed for use in the USA or Australia.

Palpaceur et al., have recently undertaken a meta-analysis of the efficacy and safety of nalmefene for the treatment of alcohol use disorder. They included all available RCTs of nalmefene irrespective of publication status, primary outcomes, and licensed indications. Overall, there was some evidence of a beneficial effect of nalmefene on the number of heavy drinking days per month and on total alcohol consumption but there were more withdrawals for safety reasons in the nalmefene-treated groups and the findings were not robust. There was no evidence of a beneficial effect of nalmefene on the health outcomes examined. The authors concluded that, at best, nalmefene has limited efficacy in reducing alcohol consumption but they were clearly aware of the limitations of their review and made specific recommendations for future studies. The licensing and subsequent recommendations for the therapeutic use of nalmefene have been widely criticized [38, 39, 40] (Table 1).

Sodium Oxybate

Sodium oxybate has been used to treat AUD in Italy since 1992, and in Austria since 1999. Sodium oxybate (SMO) or the sodium salt of γ-hydroxy-butyric acid, GHB, is a short-chain fatty acid that occurs naturally in the mammalian

Table 1. **Essential details of pharmacotherapeutic agents most commonly licensed for the treatment of Alcohol Use Disorder**

Drug	Order	Mode of Action	Contra-indications	Precautions	Side-effects	Dosage	Duration	Comments
Disulfiram	Second-line	ADH inhibitor	Cardiovascular disease Systemic hypertension Severe personality disorder Suicidal risk or psychosis Pregnancy & breast-feeding Caution in the presence of renal failure, hepatic or respiratory disease, diabetes mellitus and epilepsy	Caution due to seriousness of the interaction with ingested alcohol, alcohol in foodstuffs, perfumes, aerosol sprays	Headaches rowsiness Lethargy Peripheral neuropathy Optic neuritis Hepatotoxicity Psychosis	200 mg/day	Long term if required	Start 24 h after last drink Treatment most effective if supervised or witnessed
Acamprosate	First-line	GABA agonist Glutamate antagonist	Severe renal impairment (creatinine clearance <30 mL/min)	Does not eliminate or diminish withdrawal symptoms.	Diarrhoea Anorexia Flatulence Nausea Pruritus Dry mouth Paraesthesia Fatigue	Weight: > 60 kg 1998 mg/day < 60 kg 1332 mg/day Reduce in moderate renal failure	6 months, or longer	Safe for use in mild to moderate hepatic failure
Naltrexone	First-line	μ and κ-opioid receptor antagonist	Acute hepatitis Acute / chronic liver failure Use of / likely use of opioids Caution: if serum transaminase activities exceeding three times the upper reference range and in patients with renal failure.	Warning: Naltrexone blockade persists for 48–72 h after the last oral dose	Nausea Vomiting Dizziness Abdominal pain Anorexia Headache Daytime sleepiness Hepatotoxicity with high doses	Start with: 25 mg/day Maintenance 50 mg/day	6 months, or longer	Stop opioids 7–10 days before prescribing
Nalmefene	First-line (in France only)	μ and δ-opioid receptor antagonist, partial κ-opioid receptor agonist	Severe hepatic impairment Severe renal impairment Patients with a recent history of acute alcohol withdrawal syndrome (including hallucinations, seizures, and delirium tremens) Galactose intolerance Pregnancy Breastfeeding Current or recent opioid use	Discontinue in opioid administration Caution in psychiatric comorbidity seizure disorder including alcohol withdrawal seizures Caution with UGT2B7 enzyme inhibitors / inducers	Nausea, vomiting, dry mouth, weight loss, decreased appetite, tachycardia, palpitation, dizziness, headache, somnolence, tremor, disturbance in attention, paraesthesia, hypoaesthesia, malaise, sleep disorders, confusion, restlessness, decreased libido, muscle spasms, hyperhidrosis, hallucinations, dissociation	18 mg/day	No longer than 6 months	GP to monitor patient at monthly intervals for adverse effects, adherence treatment, attendance at psychosocial support, and reduction in alcohol consumption

brain, in particular in the thalamus, hypothalamus, and basal ganglia. SMO is structurally similar to the inhibitory neurotransmitter γ-amino-butyric acid (GABA), binding to GABAB receptors. Its functions are as both a precursor and a metabolite of the GABA system [41]. It is thought that the alcohol-mimicking effect of SMO is related to the effects of the dopamine increase mediated by GABAB receptors in the mesocorticolimbic circuitry. Most evidence suggests that mesolimbic dopaminergic neurons, originating in the ventral tegmental area and projecting their neurons into the nucleus accumbens, play a pivotal role in the regulation of alcohol craving, being stimulated by alcohol consumption [3, 42].

SMO was tested in preclinical and clinical settings for the treatment of alcohol withdrawal syndrome (AWS). A meta-analysis performed in 2010 by the Cochrane Collaboration showed that SMO (50–100 mg/kg/day) is more effective than placebo in reducing the CIWA-Ar score with an equal efficacy to benzodiazepines and clomethiazole without any differences in the onset of side effects. Recently, the GATE 1 study (phase IV, multicenter, multinational, randomized, double-blind, with parallel groups) showed that SMO presents a similar efficacy to oxazepam, one of the gold standard benzodiazepines, in the treatment of uncomplicated AWS [43]. Due to the ability of SMO to inhibit voluntary alcohol consumption, SMO is used for the treatment of AUD with encouraging results in maintaining total alcohol abstinence. In particular, 50–60% of treated patients achieve and maintain alcohol abstinence at the end of the first three months of treatment. In addition, SMO is at least as effective as naltrexone or disulfiram in the maintenance of abstinence in alcohol-dependent patients [44]. SMO was shown to be significantly more effective than placebo in reducing the number of daily drinks ($p < 0.00001$) and in reducing relapses into heavy drinking ($p < 0.00032$) in a controlled clinical trial. In a two-phase trial exploring the efficacy of dose-fractioning of SMO treatment, 17.4% of patients did not achieve complete abstinence but they significantly reduced their daily drinking ($p < 0.05$) at the end of the first three-month phase. An open multicenter study found a reduction of biomarkers of alcohol abuse after SMO treatment, and the group of patients who did not achieve complete abstinence did reduce their average alcohol intake. Maremmani et al. described a long-term treatment with SMO in a population of treatment-resistant patients; although the size of the group was limited, the partial responder group who reduced their alcohol intake for an average of 40% was larger than the total responders who achieved complete abstinence from alcohol (14.3% vs. 11.4%) [45, 46, 47, 48].

SMO has also been evaluated in combination with other drugs. An open, randomized, comparative study evaluated the efficacy of SMO in combination with naltrexone in maintaining alcohol abstinence compared to SMO and naltrexone alone. These data confirm that the two drugs combine their different actions synergistically without suppressing the favorable effects of each other. In SMO treatment-resistant chronic alcoholics (30–40%), the combination with disulfiram was proposed. SMO-disulfiram combines the adverse effect of disulfiram with the anti-reward effect of SMO [49, 50]. There is some preliminary evidence that SMO can be effective in reducing alcohol intake in patients who fail to maintain total alcohol abstinence. It also seems that, for less motivated patients to achieve total alcohol abstinence immediately, the reduction in alcohol intake could be the primary end-point of SMO treatment, suggesting a role in „harm reduction" treatment. Unfortunately, the endpoints defined by published trials are varied and non-comparable: heavy drinking days, daily alcohol intake, total amount of alcohol intake, or cumulative days of abstinence. Thus, more studies to confirm these data and to explore the efficacy of SMO in patients considering alcohol reduction as their primary goal are warranted [3].

SMO is primarily eliminated by the liver by the enzyme GHB dehydrogenase, and by a still not fully ascertained process of beta-oxidation. Only a modest quantity of SMO remains unmodified (2–5%) and eliminated with urine with a relatively short window of detection (3–12 h). A dose of 50 to 100 mg/kg/day, fractioned into three to six daily administrations, is considered a safe approach in the use SMO. About 30% of alcohol-dependent patients treated with SMO can develop side effects, represented by nausea, vomiting, diarrhea, dizziness, sedation, enuresis and paresthesia. These events do not, in general, require discontinuation of treatment, as the dizziness subsides spontaneously after the first doses, while sedation and paresthesia abate within 2–3 weeks. In addition, no side effects due to the combination of SMO 50 mg/kg/day and alcohol were observed in those SMO-treated patients who were still drinking during treatment. A recent randomized, double-blind, crossover trial in healthy volunteers aimed at exploring the pharmacodynamic interaction of the solid immediate release formulation of SMO and alcohol, showed that SMO and alcohol have separate adverse effect profiles and that the objective effects of SMO are much less marked than those of alcohol, without any deleterious interaction. Caution should be maintained in concomitant use of with divalproex sodium which may result in a 25% mean increase in systemic exposure to SMO [3, 51, 52, 53].

Concerns have been raised about the risk of developing addiction to, misuse, or abuse of SMO. However, clinical trials have shown that episodes of craving for, and abuse of, SMO in alcohol-dependent cohort are limited (~10% of cases), and are mainly confined to patients with AUD associated with polydrug addiction and psychiatric co-morbidity, in particular, borderline personality disorder [54, 55]. GHB as a "street drug", sold for recreational use, is mostly reported in Anglo-Saxon countries, with some cases reported in Italy. Recreational use represents the primary cause of GHB-related death. Risk factors are unknown: dose/concentration, frequently combined use with other drugs, difficulties with dose titration, and narrow safety margins between a recreational dose and lethal dose. Cardiorespiratory depression is a documented dose-related effect of GHB, and it is likely to be the principal cause of death in GHB overdose. Whereas it is well known that a GHB blood concentration of 500 mg/L causes death due to cardiorespiratory depression, it is impossible to clearly define a "lethal" dose. Reduced vigilance leading to trauma and driving impairment are other possible causes of GHB-related death. With regard to SMO treatment for AUD, there are no published data concerning related deaths [3, 56, 57, 58].

Baclofen

In 2014, baclofen, in doses up to 300 mg/day, was authorized by the French Health Agency (FHA) as a second-line drug to prevent relapse or reduce drinking in people with alcohol dependence. This authorization, which is a specific measure known as a "temporary recommendation for use" (TRU) requires a centralized collection of follow-up data. Baclofen is a selective γ-aminobutyric acid GABAB receptor agonist which was originally approved for the treatment of spasticity associated with multiple sclerosis and spinal cord lesions. Activation of GABAB receptors reduces anxiety and it was for this reason that it was identified as a potential treatment for alcohol withdrawal and dependence. A number

of placebo-controlled RCTs of baclofen, 30–60 mg/day, have been undertaken but with widely different results [5)] A series of trials undertaken by one Italian group, including a trial in patients with cirrhosis, showed significantly higher abstinence rates in participants receiving baclofen compared with placebo, together with improvements in other drinking outcomes. However, studies undertaken in the USA, Australia and Israel showed no beneficial effects of baclofen over placebo on any drinking outcome, although a post hoc analysis of the Australian data showed that baclofen conferred some benefit, in terms of relapse behavior, in a subgroup of patients with a comorbid anxiety disorder [59, 60]. The divergent results of these studies have not been fully explained. One suggestion is that they may relate to the relatively low doses of baclofen used in the trials undertaken to date. Baclofen is rapidly absorbed and excreted primarily unchanged by the kidney but there is significant inter-subject variation in its pharmacokinetics, which could potentially be reflected in differences in population responses. This view was supported by the self-reported experience of a French physician who treated his own alcohol dependence and anxiety disorder with baclofen in a dose of 270 mg/day [61]. The consequent media interest resulted in an unprecedented demand, in France, for off-label treatment with high dose baclofen (Table 2).

Studies utilizing high doses of baclofen are now being reported. A German group randomized 56 alcohol-dependent people to either baclofen titrated to 270 mg/ day or placebo. The mean daily dose of baclofen achieved during the 12 week high dose phase of the trial was 180 mg and during this phase abstinence rates were higher in those receiving baclofen than placebo (68.2% vs. 23.8%, p = 0.014); baclofen also had a significant beneficial effect on overall abstinence rates during the 20 week trial (42.9% vs. 14.3% p = 0.04) [62, 63]. However, there was no relationship between the individualized doses of baclofen and drinking behavior outcomes suggesting that the efficacy of baclofen does not have a clear dose threshold. A multicentre RCT95 undertaken in the Netherlands randomly assigned 151 alcohol-dependent individuals to 6 weeks titration and 10 weeks maintenance with either low-dose baclofen (30 mg/day), high-dose baclofen (up to 150 mg/ day; mean 94 mg/day), or placebo. No significant differences were observed between the groups in the time to first relapse; the proportions who relapsed; the proportions who attained continuously abstinence; the cumulative abstinence duration; or the dropout rates [64, 65].

The results of two French high-dose baclofen studies, which will be pivotal in determining whether the TUR currently in place will be removed by the FHA or made official, have been reported but in abstract form only.

In the first of these, the ALPADIR study, 320 alcohol-dependent outpatients attending French specialist alcohol treatment clinics were randomized to baclofen (target dose 180 mg/day attained by 66%) or placebo using a 7-week titration, and 17 weeks maintenance paradigm. The proportions of patients who were continuously abstinent throughout the trial were similar in both groups viz. baclofen 11.9%; placebo 10.5%. Post hoc subgroup analyses showed more evidence of benefit in the heaviest drinkers and when the outcome variable selected was the overall reduction in consumption. The second of these French studies, the multicenter BACLOVILLE study, was designed to explore pragmatic risk reduction in a general practice. A total of 320 attendees diagnosed as having an alcohol use disorder were randomized to treatment with baclofen, individually titrated to a maximum dose of 300 mg/day, or placebo for 12 months. There was no requirement for participants to be withdrawn from alcohol or to receive psychosocial support. The primary outcome, which was the proportion of patients who achieved WHO defined safe drinking levels (1–20 g/day for women and 1–40 g/day for men) was attained by 56.8% of the baclofen group and 36.5% of the placebo group (risk reduction 1.56 [95% CI: 1.15–2.11]; p = 0.004) [5, 64, 65].

These four high-dose baclofen studies are not directly comparable as they differ considerably in aspects of patient selection, study design and duration, dosage schedules, and outcome variables. In addition, the reporting of the two French studies is still incomplete. Thus, overall conclusions about the efficacy of baclofen as a treatment for alcohol dependence cannot be made at this time. Baclofen and alcohol are both central nervous depressants so there are considerable safety concerns around the use of this drug. Fatigue, transient drowsiness, nausea, confusion, headache, insomnia, constipation, urinary frequency, euphoria were more frequent, particularly in the high-dose studies. Vomiting, muscular hypotonia, accommodation disorders, respiratory depression, seizures, and coma have been reported in overdose. Several case reports of baclofen-induced mania have recently been presented in the literature. Reports of further adverse event such as confusion, major sedation, and sleep apnea are increasing in parallel with increased use of this drug. Hallucinations and seizures have occurred on abrupt withdrawal. Because baclofen is primarily excreted unchanged by the kidneys,

Table 2. **Pharmacotherapeutic agents approved for the treatment of Alcohol Use Disorder in some European countries**

Drug	Mode of Action	Dosage	Side-effects	Precautions
Sodium Oxybate	GABAB receptor agonist	50 mg/kg/day	Nausea, vomiting, diarrhea, dizziness, sedation, asthenia, enuresis	Caution should be maintained in concomitant use of with divalproex sodium
Baclofen	GABAB receptor agonist	30–300 mg/day	Nausea, confusion, headache, insomnia, constipation, urinary frequency, euphoria	Caution in severe renal impairment (creatinine clearance <30 mL/min) Caution in Phenylketourea contains phenylalanine

it should be given with caution and it may be necessary to reduce the dosage in patients with impaired renal function. Phenylketonuric patients should be informed that baclofen contains phenylalanine [66, 67, 68, 69].

Emerging pharmacotherapies for Alcohol Use Disorder

Several other agents have been proposed and are currently under investigation as potential treatment options for AUD. The majority already have a therapeutic profile and are being repurposed for use in this field. Of these, topiramate and metadoxine, gabapentin and pregabalin are the best known.

Topiramate

Topiramate's actions have been associated with antagonism of AMPA/kainate glutamate receptors and voltage-dependent sodium channels, as well as agonism of extrasynaptic GABAA receptors. In animal models, topiramate has been shown to reduce alcohol use and alcohol withdrawal-induced convulsions [8]. Like many other drugs proposed for the treatment of alcohol dependence, it is thought to reduce mesolimbic dopaminergic activity. A small number of RCTs of topiramate vs. placebo, no treatment or an active comparator for the treatment of alcohol dependence have been undertaken and subjected to systematic review with or without meta-analysis [70, 71]. A systematic review of topiramate vs. placebo including seven RCTs, involving 1125 participants, demonstrated significant, though moderate, benefits of topiramate for abstinence and heavy drinking outcomes. A more generic Cochrane review of anticonvulsants in the management of alcohol dependence included a separate analysis of six placebo-controlled RCTs of topiramate, involving 970 participants, and showed a modest but significant beneficial effect on heavy drinking and the number of drinks per drinking day, but a rather less robust effect on the number of abstinent days. Topiramate is a mild inhibitor of CYP2C19 and a mild inducer of CYP3A4. In a dose of 300 mg/day, it appears to be relatively well-tolerated with the most common adverse effects being dizziness, paresthesia, anorexia, mild-to-moderate taste disturbances and metabolic acidosis. Rarely, topiramate causes serious ophthalmologic effects. However, all the trials undertaken to date are short-term; with long-term treatment, there is potential, given the drug's safety profile, for the emergence of other side-effects [5, 71].

Metadoxine

Metadoxine (pyridoxal L-2-pyrrolidone-5- carboxylate) is an ion pair salt of pyridoxine and L-pyroglutamate. It is approved in several European countries, India, the Russian Federation and Brazil for treating acute alcohol intoxication, based on its ability, when given as a single 900 mg intravenous dose, to facilitate the elimination of alcohol from blood and tissues. Metadoxine has also been used to treat alcohol dependence based on its properties as a selective serotonin receptor subtype 5-HT2B antagonist and a monoamine-independent GABA modulator. In an open-label study, patients treated with metadoxine, 1500 mg/day in divided doses, were significantly more likely to maintain abstinence at 3 months than untreated controls (44.8% vs. 21.6%; $p < 0.004$). In another randomized, open-label study in patients with severe alcoholic hepatitis survivors who received metadoxine, in addition to standard therapy, were significantly more likely to maintain abstinence at 6 months than those who did not (74.5% vs. 59.4%, $p = 0.02$). Metadoxine may reduce the effects of levodopa and is contraindicated in pregnancy and lactation. Most common side effects consist of diarrhea, skin rash, numbness, and drowsiness [72, 73, 74].

Gabapentin

Gabapentin, 1-(aminomethyl) cyclohexa- neacetic acid is an anticonvulsant used for spasticity and epilepsy. Gabapentin is structurally related to GABA. However, it does not bind to GABAA or GABAB receptors, and it does not appear to influence synthesis or uptake of GABA. High-affinity gabapentin binding sites have been located throughout the brain; these sites correspond to the presence of voltage-gated calcium channels specifically possessing the α2-δ subunit. This channel appears to be located presynaptically and may modulate the release of excitatory neurotransmitters. In a 28-day placebo-controlled trial (n = 60), gabapentin significantly reduced the number of drinks per day and mean percentage of heavy drinking days, and increased the percentage of days of abstinence. Gabapentin may be more effective in patients experiencing withdrawal symptoms and may improve outcomes over naltrexone alone during early stages of abstinence. Ongoing clinical trials in the USA are promising, raising the likelihood of approval for the use in AUD [75, 76, 77, 78].

Pregabalin

Pregabalin, (S)-3-(aminomethyl)-5-methylhexanoic acid, along with gabapentin, derive their chemical structure and consequently their USAN generic names from GABA. Nevertheless, both drugs are inactive at GABA receptors including GABAA, benzodiazepine, TBPS and GABAB binding sites. In many respects, pregabalin is pharmacologically similar in its mechanism to gabapentin. Both of these compounds have bulky aliphatic chemical substitutions at the 3-position of the GABA backbone which changes their pharmacological properties significantly in comparison to GABA. Pregabalin binds to the α2-δ subunit of voltage-gated calcium channels within the CNS and modulates calcium influx at the nerve terminals, thereby inhibiting excitatory neurotransmitter release including glutamate, norepinephrine, serotonin, dopamine and substance P. A randomized trial showed no differences in alcohol abstinence between pregabalin and the comparator, naltrexone whereas hitherto no placebo-controlled study has been reported [79, 80].

Novel treatments with an evidence base evaluated for Alcohol Use Disorder

Varenicline

Varenicline is a partial neuronal α4 β2 nicotinic receptor agonist; prevents nicotine stimulation of mesolimbic dopamine system associated with nicotine addiction. Also binds to the 5-HT3 receptor with moderate affinity. Varenicline stimulates dopamine activity but to a much smaller degree than nicotine does, resulting in decreased craving and withdrawal symptoms. It reduces alcohol intake in preclinical models and is of particular interest due to the high comorbidity of nicotine and

alcohol use disorder. While varenicline was associated with significantly reduced alcohol drinking and alcohol craving compared to placebo in both alcohol-dependent smokers and non-smokers, another trial failed to detect any effect in a similar population [81, 82, 83, 84].

Ondansetron

Ondansetron, a 5-HT3 receptor antagonist used as an anti-emesis prophylaxis before chemotherapy, has shown efficacy in reducing alcohol drinking in subgroups of patients with an early onset type of alcohol use disorder in which serotonergic dysfunction may play a role. In one RCT, ondansetron was shown to significantly reduce self-reported drinking. Patients who received ondansetron 4 mcg per kg twice per day had fewer drinks per day. They also had a greater percentage of days of abstinence (70 vs. 50% with placebo) and a greater total number of days abstinent per study week (6.7 vs. 5.9 with placebo) in patients with early-onset alcoholism. Its clinical usefulness remains to be determined in replication trials [75, 85].

OSU6162

OSU6162 belongs to a novel class of dopamine stabilizers characterized by the ability to suppress, stimulate, or not influence dopamine activity depending on the prevailing dopaminergic tone. It exhibits partial agonist action at both dopamine D2 receptors and 5-HT2A receptors. In rats, OSU616 reduces voluntary ethanol consumption, ethanol withdrawal symptoms, operant ethanol self-administration, and cue-induced reinstatement of ethanol, and blunts ethanol-induced dopamine output in nucleus accumbens of ethanol-naive rats. A clinical trial of OSU6162 on cue-induced alcohol craving in humans is currently in progress [75, 86, 87] (Table 3).

Additional compounds are predicted to be effective based on a battery of animal models. Using such models, a short list of targets has accumulated sufficient preclinical validation to merit clinical development. These include the cannabinoid CB1 receptor, receptors modulating glutamatergic transmission (mGluR2, 3 and 5), and receptors for stress-related neuropeptides corticotropin releasing factor (CRF), neuropeptide Y (NPY) and nociceptin. Similarly, preclinical studies with D-Penicillamine, as well as Mesyl Salvinorin B (MSB), a potent selective κ-opioid receptor (KOP-r) agonist, as novel pharmacological strategies to treat AUD are currently underway. In the past few years, many studies have focused on scrutinizing genetic polymorphisms that alter a person's vulnerability to developing AUD as well as the efficacy and response to treatment. Association of these polymorphisms in shaping the response to medications, or pharmacogenetics, has only begun recently. And although only a handful of published studies address AUD pharmacogenetics, those that have, demonstrate a clear advantage over prescribing a common pill to all. Considering the fact that the "ideal" and effective pharmacotherapeutic modality for all phenotypes of alcohol use disorder patients does not exist, the future challenge will be to identify a more personalized approach. Finally, according to Clinical Practice Research Datalink study, published by Thompson et al. 2017, only 4,677 (11.7%) of the cohort of 39,980 people with an incident diagnosis of alcohol dependence aged 16 years or older between 1 January 1990 and 31 December 2013, received relevant pharmacotherapy in the 12 months following diagnosis in the UK [88]. Similarly, only about 9% of individuals meeting diagnostic criteria for alcohol use disorder receive pharmacologic treatment in a given year in the USA [89].

Table 3. **Emerging and novel pharmacotherapies in Alcohol Use Disorder**

Drug	Mode of action
Topiramate	GABAA receptor agonist AMPA/kainate glutamate receptors antagonist voltage-dependent sodium channels antagonist
Metadoxine	GABA modulator 5-HT2B antagonist
Gabapentin	Voltage-gated Caα2-δ-channel agonist
Pregabalin	Voltage-gated Caα2-δ-channel agonist
Varenicline	α4 β2 neuronal nicotinic receptor partial agonist 5-HT3 receptor agonist
Ondansetron	5-HT3 receptor antagonist
OSU6162	D2 partial agonist 5HT2A partial agonist

CONCLUSION

Alcohol has a complex neuropharmacology and can affect many different brain neurotransmitter systems. Several pharmacological agents that interact with specific neurotransmitter systems affected by alcohol have shown efficacy in the treatment of alcohol use disorder and many exciting investigational agents are on the horizon. The evidence indicates that best choices for prevention of relapse are acamprosate and naltrexone with concurrent counseling through professional or self-help programs. The evidence is lacking for combination pharmacotherapy, but research is underway. Because of its lack of effectiveness and problems with adverse effects and compliance, disulfiram is not recommended as first-line treatment in the primary care setting. Controversy surrounds Nalmefene and Sodium oxybate. Baclofen has shown mixed results. Encouraging results have been reported for topiramate, gabapentin and also varenicline, which might be useful in patients with comorbid nicotine dependence. Metadoxine and ondansetron, already have a therapeutic profile and are currently evaluated with respect to efficacy in AUD. OSU6162 represents a novel compound under investigation. Thus, enhancing existing treatment modalities, conducting trials on off-label pharmacotherapies, furthering the investigation and investment in pharmacogenetics, and facilitating access to treatment emerge as the most crucial priorities in the management of prevalence of AUD.

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A young woman with intellectual disability and multiple hospitalizations: An educational case report

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SUMMARY

We look into the case of an intellectually disabled female, with diagnoses of impulse control disorder, seizure disorder and hypothyroidism that is frequently brought into our psychiatric emergency department for, what we discovered was the mother's secondary gain. At the time of her most recent admission, her mother states that the patient was difficult to control and expressing suicidal ideation in the context of poor compliance with medication regimen. The patient relies on her mother for help with everyday activities. Multiple presentations to our hospital's psychiatric emergency department prompted admission to change the patient's medication regimen. Once on the inpatient unit, patient made a comment about having been discharged from another hospital hours prior being brought to our psychiatric emergency room. This statement along with a suspicion that the patient's mother had been using area hospitals for respite care led to a more thorough investigation be initiated. Our goal is to highlight the often unmet needs of treatment of patients with an intellectual disability and difficulties associated with treatment, and abuse potential.

Key words: intellectual disability, psychopathology, psychosis, abuse

INTRODUCTION

The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) defines Intellectual Disability (Intellectual Developmental Disorder) as a disorder with onset during the developmental period that includes both intellectual and adaptive functioning deficits in conceptual, social, and practical domains [1]. In the United States 12.6% of the population is considered disabled with 4.8% considered cognitively disabled [2]. Internationally, it was estimated the prevalence of people living with intellectual Disability was 1.04% [3].

"Individuals with intellectual disability have an increased risk of psychiatric disorders in comparison with individuals with intelligence in the normal range [1, 4–6]. The most frequent comorbid psychiatric disorders are problem behavior (18.7%), affective disorder (5.7%), autism spectrum disorder (4.4%), psychotic disorder (3.8%), and anxiety disorder (3.1%) [1]."

Persons with intellectual disability frequently have the same type of psychopathology, such as auditory or visual hallucinations as those with intelligence in the normal range [7]. About 20% of individuals with intellectual disability suffer from epilepsy [8].

Persons with intellectual disability are at greater risk for physical and sexual abuse for many reasons, including discrimination, societal stigma, or simply the inability to recognize abuse [2, 3, 9]. One study found that children with intellectual disability were at twice the risk of physical and sexual abuse compared to children without disabilities [10].

As clinicians, we are trained to look for any signs of abuse and reporting it to the proper authorities. What if the abuse comes in a nontraditional form? Factitious disorder imposed on another (formerly factitious disorder by proxy) should not be overlooked as it is considered the most lethal of abuse [11]. It is not often picked up at first as the parent or caretaker is versed in medical knowledge and/or hospital protocols and procedures. It is after repeated visits that another provider may recognize the patient or medical records from another hospital showing that they were admitted and evaluated for the same symptoms previously. [12]

One should also be on the look-out for child brides as McFarlane et al did a study showing that 1 in 6 women

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reported that that they were forced to get married and that 45% of those women were under 18 [13]. The risk is also there that infanticide may be ruled as SIDS [14]. There are also risks of children experiencing medical neglect as a result of religious beliefs, and teens engaging in sex exchange [15, 16]. A trained physician should be able to pick up on the signs of abuse and explore further to confirm their findings.

Caretakers may hope to establish a diagnosis for social security disability benefits or use facilities for respite care but what does this do to the patient [17, 18]. There is a risk of unnecessary medical tests and in our case, emergent intramuscular injections and polypharmacy with antipsychotics.

CASE REPORT

This is a 21-year-old female living with her mother in supportive housing. She has a medical history of hypothyroidism and seizure disorder with a psychiatric history of intellectual disability and impulse control disorder presenting to our psychiatric emergency department for the eighth time in a one month period, including six days admitted to the inpatient unit.

Currently, patient's mother states her daughter was running into traffic and uncontrollable. Patient's blood tests consisting of a basic metabolic panel, complete blood count, and thyroid panel were within normal limits. She was on levothyroxine, haloperidol decanoate, which she had received 2 weeks prior to this admission, haloperidol and levetiracem.

Her previous presentations in the psychiatric emergency department were similar: patient's mother would tell us the patient is acting out or hearing voices. The patient is usually observed overnight and discharged the next day although it has been noted that when the patient was held for observation, patient's mother did not answer the phone or come for her leading to an inpatient admission. Patient is able to maintain good behavioral control when her mother is around but once her mother leaves she has a low frustration threshold. If the patient could not get in touch with her by phone or the mother did not come to pick her up, she would begin to cry, punch the windows in the nurse's station and spit at staff. This would inevitably lead to her being emergently medicated intramuscularly and at times, placed in restraints.

It was during this psychiatric emergency department visit, administration made the decision to admit to the inpatient unit and start clozapine, given there appeared to be an increase in the patient's impulsive behavior, and a long history of multiple antipsychotics used. Once on the inpatient unit, patient said she had been at another local hospital two hours prior, was discharged and her mother brought her to our psychiatric emergency department. This comment launched an investigation as there had been some concerns about her being overmedicated or her mother using hospitals as respite care facilities.

Patient was born following a full-term pregnancy without complications. There is suspicion of drug exposure in utero. She was delayed in all developmental milestones. At the age of three, patient was taken away from her biological mother for physical abuse and neglect reported by her maternal grandmother who subsequently became her legal guardian. Her first psychiatric admission was at age 8 and then she was transferred into a state psychiatric facility at age 9. Soon after she was transitioned into residential housing and for the next five years would be transitioned into different residential housing as her level of care increased. At age 16, she had psychological testing revealing her full IQ was 52. At the age of 21 she had a full scale IQ score of 59. As a result of her intellectual disability she was known to the Office of People with Developmental Disability (OPWDD) which had provided the patient and her family many services, including day programs for patient to attend, which she did not.

Patient is well known to our hospital since the age of eight and has had 27 psychiatric emergency department visits and three admissions in 2016 and 11 psychiatric emergency department visits and two inpatient admissions in 2017. When contacting other local hospitals, the next closest one reported in 2015 she had 85 emergency room visits and 5 psychiatric admissions and in 2016 she had 34 visits to the Emergency Room and 2 psychiatric admissions. She spent 2017 in our hospital. The decision was made for the hospital to then go to court, obtain guardianship, and help place the patient into a group home.

Patient's mother was also a psychiatric patient and there were times that physicians questioned if the mother needed hospitalization more that the daughter. Based on what the mother was reporting about her daughter's behavior determined if physicians would adjust doses or change medications. This may have contributed to the number and combinations of medications that she was on. It was only on the inpatient unit that her behavior and side effects could be observed. Patient's mother still tried to interfere, telling her daughter to report side effects to staff so that her medications could be stopped or changed. An example of this was telling staff that she was unable to urinate, to the point that she was sent to the medical floors and an indwelling urinary catheter was placed. The second time she complained of that on the inpatient unit, we placed her on constant observation and staff reported that she would urinate without any problems.

Ideally, we would have liked to maintain the patient on one antipsychotic and preferably one that has a long-acting injectable form. Due to the patient's aggression, we would consider Risperidal Consta or Abilify Maintena as they have been shown to have the greatest efficacy [19]. The patient is obese therefore Abilify Maintena would be preferable over Risperidone Consta as it has shown the least amount of weight gain [20]. Aripiprazole has also been known to improve some adverse events and since this patient is also pre-diabetic it would be better suited for her [21]. She would also benefit living in a structured setting in order to help her with her activities of daily living in order for her to be more independent. An acute inpatient psychiatric setting was not providing her with the structure, routine and occasional outings that a group home would provide her with.

DISCUSSION

Intellectually disabled children even when physically healthy and do not have co-occurring psychiatric disorders will not only require additional surveillance in order to make sure that they are not being physically or sexually abused but to make sure that their everyday needs are met. Intellectually disabled children face many challenges throughout their lives: limited access to medical care, inadequate support in school, caretaker fatigue, which can become more complicated as

they become adolescents. Interdisciplinary teams could be beneficial to meet all the different demands to improve functioning or provide skills to better adapt to the social and physical environment. These teams could be additional support than what the family offers and be helpful in identifying abuse through better communication.

It is unclear what the motivation for the patient's mother was. We can only surmise she may have been using hospital services as respite from her daughter's behavior. She would also be getting monetary gain as she has access to her daughter's disability benefits as the patient was living with her. One could say this could be malingering imposed on an another as there are cases as far back as 1593 have been cited where parents have created or exaggerated their child's condition for monetary gain; either for social security disability benefits, purposes of litigation or, as in 1593, for public exploitation [17, 22]. We see it as a form of abuse. During this admission, patient's medications have been started, stopped, titrated, and combined in various ways in order to help her impulsive behavior and minimize her side effects. She has been prescribed lithium, valproic acid, levetiracetam, aripiprazole, quetiapine, haloperidol, haloperidol decanoate, risperidone, fluoxetine, and chlorpromazine both as monotherapy and in combinations in an effort to help modify her behavior. She is currently on haloperidol, olanzapine, clozapine, levetiracetam, and clonazepam. She has had some adverse reactions to medication, requiring two admissions to the medical floor from the psychiatric unit. She has gained weight and is now obese. She has been emergently medicated and restrained multiple times due to her low frustration level and inability to comprehend what is happening.

There are other ramifications to consider, the role of the clinician becoming the protector and the dynamics of the patient and the staff during the admission. Applying for guardianship was a lengthy process and roles in the unit start to change i.e. doctor becomes parental figure, staff celebrating birthdays with cake and gifts. These may make it harder when the patient is placed in a group home.

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CINIŠKO NEPASITIKĖJIMO SKALĖS LIETUVIŠKOJI VERSIJA

LITHUANIAN VERSION OF CYNICAL DISTRUST SCALE

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SUMMARY

Introduction. Cynical distrust is defined as the negative personal beliefs about other people. It is one of hostility components, often associated with poorer lifestyle or health. Due to the lack of a validated tool, the cynical distrust in Lithuania has not been analysed so far. Therefore, the purpose of this study was to evaluate the Lithuanian version of the Cynical Distrust Scale (CDS) psychometric characteristics and its validity.

Study Material and Methods. The cross-sectional study's sample consisted of 195 in-patients with acute coronary syndrome, aged 27–89 years. The assessment took place at cardiac rehabilitation. The instrument was an anonymous questionnaire consisting of the Cynical Distrust Scale (CDS, 8 items), DS14 Negative Affectivity subscale, items about anger and hostility, Multidimensional Scale of Perceived Social Support (MSPSS), as well as clinical and demographic data. The data were analysed using univariate and bivariate methods, the factor analysis used Varimax rotation. The convergent and discriminant validity of cynical distrust were also analysed.

Results. The study revealed that the CDS scale has almost normal distribution and meets the conditions for normal distribution. The CDS scale has a high internal consistency ($\alpha = 0.83$). The average correlation of 8 items was 0.39 (varied from 0.25 to 0.51), and correlations of all items were statistically significant ($p < 0.001$). Factor analysis revealed that all 8 CDS items compose the only factor that confirms the unidimensionality of the construct. Convergent validity was evaluated in relation of the CDS scale to the anger and hostility: there was a weak positive but statistically significant correlation ($\rho = 0.159$, $p = 0.026$). Cynical distrust associated with a negative affectivity and the correlation was stronger ($r = 0.217$, $p = 0.002$). Discriminant validity was assessed regarding how the CDS scores correlate with perceived social support. The analysis revealed that these phenomena correlate weakly negatively but statistically significantly ($r = –0.207$, $p = 0.004$).

Conclusions. In summary, the Cynical Distrust Scale is valid and suitable for use in Lithuanian samples.

SANTRAUKA

Įvadas. Ciniškas nepasitikėjimas yra apibrėžiamas kaip visuma neigiamų asmens įsitikinimų kitų žmonių atžvilgiu. Tai vienas iš priešiškumo komponentų, kuris dažnai siejamas su prastesniais gyvensenos ar sveikatos rodikliais. Dėl validaus instrumento nebuvimo, Lietuvoje ciniškas nepasitikėjimas iki šiol nebuvo analizuotas. Todėl šio tyrimo tikslas buvo įvertinti Ciniško nepasitikėjimo skalės (CDS) lietuviškosios versijos psichometrines charakteristikas ir jos validumą.

Tyrimo medžiaga ir metodai. Atliktas vienmomentis tyrimas, kuriame dalyvavo 27–89 m. amžiaus asmenys ($n = 195$), patyrę ūmų koronarinį sindromą ir besigydantys reabilitacijos ligoninėje. Tyrimo instrumentas – anoniminė anketa, kurią sudarė Ciniško nepasitikėjimo skalė (CDS, 8 klausimai), DS14 skalės neigiamo afekto subskalė, klausimai apie pyktį ir priešiškumą, Daugiamatė suvokiamos socialinės paramos skalė (MSPSS), klinikiniai ir demografiniai klausimai. Duomenų analizė atlikta vienmatės ir dvimatės analizės lygmenyse, faktorių analizė atlikta taikant Varimax rotaciją. Taip pat buvo skaičiuojamas ciniško nepasitikėjimo konvergentinis ir diskriminantinis validumas.

Rezultatai. Tyrimas atskleidė, kad CDS skalė pasižymi į normalųjį skirstinį panašia reikšmių sklaida, kadangi tenkina normaliajam skirstiniui keliamas sąlygas. Taip pat nustatyta, kad CDS skalė pasižymi aukštu vidiniu suderintumu ($\alpha = 0,83$). Vidutinė 8 teiginių koreliacija siekė $r = 0,39$ (varijavo nuo 0,25 iki 0,51), o visų teiginių tarpusavio koreliacijos buvo statistiškai reikšmingos ($p < 0,001$). Faktorių analizė atskleidė, kad visi 8 CDS skalės teiginiai suformuoja vienintelį faktorių, kas patvirtina nagrinėjamo konstrukto vientisumą. Konvergentinis validumas buvo vertinamas siejant CDS skalės sumį balą su Pykčio ir priešiškumo konstrukto įverčiu: tarp šių reiškinių egzistuoja silpnai teigiama, tačiau statistiškai reikšminga koreliacija ($\rho = 0,159$, $p = 0,026$). Ciniską nepasitikėjimą siejant su neigiamu afektu, šių reiškinių koreliacija buvo stipresnė ($r = 0,217$, $p = 0,002$). Diskriminantinis validumas buvo įvertintas atsižvelgiant į tai, kaip CDS skalės balai koreliuoja su suvokiama socialine parama. Analizė atskleidė, kad šie reiškiniai tarpusavyje koreliuoja silpnai neigiamai, tačiau statistiškai reikšmingai ($r = –0,207$, $p = 0,004$).

Išvados. Apibendrinant galima teigti, kad aprašytoji nepasitikėjimo skalė yra validi ir tinkama naudoti Lietuvos imtyse.

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ĮVADAS

Žmogaus asmenybė gali būti susijusi tiek su bendru gerovės lygiu ir sveikata [1], tiek ir su mirtingumu [2]. Su prastesnėmis sveikatos išeitimis dažniausiai siejami negatyvūs asmenybės bruožai. Vienas tokių – ciniškas nepasitikėjimas (angl. *Cynical Distrust*). Šią sąvoką 1989 m. įvedė E. R. Greenglass ir J. Julkunen, kurie cinišką nepasitikėjimą apibūdino kaip vieną iš trijų priešiškumo (angl. *Hostility*) komponentų [3]. Jų teigimu, ciniškas nepasitikėjimas yra kognityvusis priešiškumo komponentas, kuomet žmogui yra būdingi neigiami įsitikinimai kitų žmonių atžvilgiu, kurie laikomi nepatikimais, nevertais pagarbos, nemoraliais ar galbūt net keliančiais pavojų [4]. Literatūroje taip pat aptinkami „ciniško priešiškumo“ (angl. *Cynical Hostility*) arba „cinizmo“, „ciniškumo“ (angl. *Cynicism*) terminai.

Vėlesni tyrimai nustatė ciniškumo sąsajas su įvairiais sveikatos rodikliais. Tarp tokių sąsajų paminėtinos kraujotakos sistemos problemos – dažnesnis hipertenzijos pasireiškimas [5-7] ir aterosklerozė [4]. Ciniškas nepasitikėjimas taip pat siejamas su metaboliniu sindromu [8], miego sutrikimais [9], psichologinėmis problemomis – neigiamu afektu [10], depresija ir nerimu bei mažiau sveika gyvensena [6]. Be to, labiau išreikštas cinizmas susijęs su prasčiau vertinama bendra sveikata [11-13] ir net mirtingumu – ilgalaikis kohortinis tyrimas Suomijoje parodė, kad stipriai išreikštas ciniškas nepasitikėjimas susijęs su didesne mirtingumo nuo kraujotakos sistemos ligų rizika [14].

Ciniškas nepasitikėjimas ir jo sąsajos su neigiamomis sveikatai pasekmėmis užsienio tyrimuose ypač stebimos tarp kraujotakos sistemos ligomis sergančių asmenų. Todėl šio tyrimo tikslas buvo įvertinti lietuviškosios Ciniško nepasitikėjimo skalės (angl. *Cynical Distrust Scale*; santr. CDS) psichometrines charakteristikas ir validumą.

METODAI

Tyrimo eiga

Tyrimas vykdytas 2017 m. balandžio–liepos mėnesiais Lietuvos sveikatos mokslų universiteto ligoninės Kauno klinikų filiale Kulautuvos reabilitacijos ligoninėje. Tyrimui atlikti buvo gautas Lietuvos sveikatos mokslų universiteto Bioetikos centro leidimas Nr. BEC-SP(M)-105. Tyrime dalyvavo ūmiu koronariniu sindromu persirgę pacientai, kuriems buvo taikyta kriterinė atranka:

1. Pacientai sulaukę 18 metų;
2. Pacientai po ūmaus koronarinio sindromo, kuriems netaikyta chirurginė intervencija;
3. Reabilitacija vykdoma ne ilgiau kaip 3 dienas;
4. Supranta, kalba ir rašo lietuvių kalba.

Šiuos tyrimo kriterijus atitiko 214 pacientų, tačiau 10 iš jų atsisakė dalyvauti tyrime, 5 skubos tvarka buvo perkelti į kitą sveikatos priežiūros įstaigą, o 4 pasižymėjo kognityvinių funkcijų sutrikimais. Taigi, iš viso įvertinime dalyvavo 195 pacientai (91 proc. kriterijus atitinkančios imties). Didžioji tiriamųjų dalis buvo vyrai (67 proc.), amžius svyravo nuo 27 iki 89 metų, vertinant pagal ūmaus koronarinio sindromo klasifikaciją, nestabilioji krūtinės angina ir miokardo infarktas buvo pasiskirstę beveik tolygiai. Pagrindinės tyrimo imties charakteristikos pateikiamos 1 lentelėje.

Lentelė 1. **Tyrimo dalyvių socialiniai-demografiniai ir klinikiniai rodikliai**

Charakteristika	n	Proc.
Amžius, metai (vidurkis±SN)	67,8 ± 11,35	
Lytis		
Moterys	64	32,8
Vyrai	131	67,2
Gyvenamoji vietovė		
Kaimas	53	27,2
Miestas	142	72,8
Šeiminė padėtis		
Vedęs/ištekėjusi	120	61,5
Nevedęs/netekėjusi	6	3,1
Išsituokęs/išsituokusi	16	8,2
Našlys/našlė	53	27,2
Išsilavinimas		
Nebaigtas vidurinis	30	15,4
Vidurinis	73	37,4
Aukštesnysis arba aukštasis	92	47,2
Diagnozė		
Miokardo infarktas	101	51,8
Nestabilioji krūtinės angina	94	48,2
ŪKS pasireiškimas		
Pirmą kartą	105	53,8
Kartotinas įvykis	90	46,2
NYHA klasė		
I	7	3,6
II	111	56,9
III	76	39,0
IV	1	0,5
Gretutinės lėtinės ligos	105	53,8
Kūno masės indeksas		
<18,5	1	0,5
18,50–24,9	41	21,0
25,00–29,9	77	39,5
≥30,0	76	39,0
ŪKS trukmė, dienos (vidurkis±SN)	19,0 ± 24,42	

NYHA – Niujorko širdies asociacija (angl. *New York Heart Association*)
ŪKS – ūmus koronarinis sindromas

INSTRUMENTAI

Ciniškas nepasitikėjimas vertintas naudojant CDS (angl. *Cynical Distrust Scale*, [3]) skalę. Šios skalės teiginiai yra faktorių analizės būdu atrinkti iš Cook-Medley priešiškumo skalės (angl. *Cook-Medley Hostility Scale;* [15]), o pastaroji sudaryta iš Minesotos daugiaprofilinio asmenybės klausimyno (angl. *Minnesota Multiphasic Personality Inventory,* santr. MMPI; [16]). Siekiant užtikrinti CDS teiginių atitikimą su lietuviškąją MMPI versija, bendradarbiaujant su Vilniaus universiteto Specialiosios psichologijos laboratorija buvo gautos tikslios lietuviškų klausimų formuluotės. Dėl MMPI klausimyno autorinių teisių apribojimų šiame straipsnyje tikslios klausimų formuluotės nėra pateiktos.

CDS skalę sudaro 8 teiginiai. Remiantis jais, vertinamas asmens požiūris į aplinkinius asmenis ir santykius tarp žmonių. Skalėje esantys teiginiai atskleidžia tam tikrus įsitikinimus apie pasitikėjimą kitais asmenimis, naudos siekimą, sąžiningumą ir pan. Originalioje MMPI klausimyno versijoje šie teiginiai yra

vertinami dichotomiškai („taip“ arba „ne“), tačiau CDS skalės autoriai siūlo naudoti Likerto skalę, pagal kurią kiekvienas teiginys vertinamas nuo 0 („visiškai nesutinku“) iki 3 („visiškai sutinku“) balų. Tokie teiginių atsakymai sudaro tinkamas prielaidas CDS skalės skirstinio normalumui ir jų validumas yra patvirtintas ankstesniuose tyrimuose, o vidinis suderintumas siekia α = 0,81 [4]. Bendras skalės balas apskaičiuojamas sumuojant atsakymų balus, kur didesnė suma rodo stipriau išreikštą ciniską nepasitikėjimą. CDS skalė subskalių neturi.

Pyktis ir priešiškumas buvo vertintas vadovaujantis Europos kardiologijos draugijos Prevencijos ir reabilitacijos asociacijos Širdies reabilitacijos komiteto pateiktomis rekomendacijomis [17]. Skalę sudaro trys klausimai, rekomenduojami taikyti vykdant masines sveikatos patikras (skryningus) kraujotakos ligomis sergantiems pacientams, taip siekiant įvertinti didesnę prastesnių sveikatos išeičių riziką. Teiginiai vertinami dichotomiškai („taip“ arba „ne“), o duomenų analizei skaičiuotas suminis teigiamų atsakymų balas, kur didesnis balas nurodo stipriau išreikštą pyktį ir priešiškumą.

Neigiamas afektas buvo įvertintas naudojant Asmenybės D tipo klausimyno (DS14, angl. *Type D Scale;* [18]) Neigiamo afekto subskalę, kurią sudaro 7 teiginiai. Aukšti šios subskalės įverčiai atspindi respondento polinkį patirti neigiamas emocijas (depresišką nuotaiką, nerimą, pyktį ir priešiškus jausmus) arba išgyvenimus. Kiekvienas skalės teiginys vertinamas nuo 0 („visiškai nesutinku“) iki 4 („visiškai sutinku“) balų, didesnė balų suma rodo stipriau išreikštą neigiamą afektą.

Suvokiamai socialinei paramai įvertinti buvo naudota Daugiamatė suvokiamos socialinės paramos skalė (angl. *Multidimensional Scale of Perceived Social Support,* santr. MSPSS; [19]). Ši skalė sudaryta iš 12 teiginių, kurie vertinami nuo 1 balo („visiškai nesutinku“) iki 7 balų („visiškai sutinku“). Šiame tyrime ir tolesnėje analizėje skaičiuotas bendras skalės vidurkis, didesnis suminis balas rodo stipresnę suvokiamą socialinę paramą.

Pagrindinės analizėje vertintų konstruktų charakteristikos pateiktos 2 lentelėje. Galima pastebėti, kad tarp tyrime dalyvavusių pacientų, vyrams buvo būdingas labiau išreikštas pyktis ir priešiškumas, o moterims – neigiamas afektas ($p < 0,05$). Be to, vyrų ir moterų skirtumai ciniško nepasitikėjimo ir pykčio bei priešiškumo požiūriu buvo beveik identiški (poveikio dydis, atitinkamai, 0,32 ir 0,31).

Analizės metodai

Vertinant klausimų vidutinę raišką buvo skaičiuojami vidurkiai ir standartiniai nuokrypiai (SN). Dviejų grupių skirtumams įvertinti taikytas Student t kriterijus, skirtumą vertinant apskaičiuotas poveikio dydis – Cohen d koeficientas.

Skirstinio normalumui įvertinti buvo taikomas Shapiro-Wilk kriterijus, kurio reikšmės $p<0,05$ rodo, kad skirstinys nėra normalusis. Be to, buvo atsižvelgiama į skirstinio asimetriškumo (angl. *skewness*) ir eksceso (angl. *kurtosis*) koeficientus, laikant, kad jų absoliučiosios reikšmės, viršijančios 1, taip pat netenkina skirstinio normalumo sąlygų. Atskirų klausimų tarpusavio sąsajos buvo apskaičiuojamos taikant Pearson koreliacijos koeficientą (r), taip pat pateikiant vidutinę skalės klausimų koreliaciją ir dispersijos koeficientą. Tolydžiųjų kintamųjų, kuriems nebūdingas normalusis skirstinys, sąsajos buvo skaičiuojamos taikant Spearman koreliaciją (ρ).

CDS skalės validumas vertintas naudojant keletą analizės metodų. Pirmiausia buvo įvertintas skalės teiginių vidinis suderintumas, apskaičiuojant Cronbach alfa koeficientą (α). Siekiant įvertinti ar skalė vientisa, buvo atlikta tiriamoji faktorių analizė, pagal kurią buvo galima įvertinti ar teiginiai sudaro vieną, ar keletą skirtingų faktorių. Duomenų tinkamumas faktorių analizei buvo vertintas atsižvelgiant į Kaiser-Meyer-Olkin (KMO) rodiklį ir Bartlett sferiškumo kriterijų. Faktorių analizė buvo atliekama taikant Varimax rotaciją.

Taip pat buvo įvertintas konstrukto validumas: konvergentinis validumas (angl. *Convergent validity*) buvo įvertintas CDS skalės suminį balą siejant su Pykčio ir priešiškumo skale bei DS14 skalės neigiamo afekto įverčiu, o diskriminantinis validumas (angl. *Discriminant validity*) – siejant su suvokiama socialine parama, kuri buvo įvertinta pagal MSPSS skalę.

REZULTATAI

Analizuojant CDS skalės skirstinio bendrąją raišką nustatyta (3 lentelė), kad jos vidurkis ir mediana buvo labai panašūs (atitinkamai, 12,6 ir 13,0). Tai yra gana arti teorinio skalės vidurkio, kuris lygus 12 (minimali reikšmė 0, maksimali – 24 balai). Vertinant skalės balų skirstinio normalumą nustatyta, kad Shapiro-Wilk kriterijaus patikimumo reikšmė buvo nepakankamai žema, kad būtų atmesta normaliojo skirstinio hipotezė ($p > 0,05$). Pastarąją taip pat patvirtino asimetriškumo ir eksceso koeficientai, kurių absoliučiosios reikšmės neviršijo 1,0. Dėl to galima teigti, kad CDS skalė iš esmės pasižymi į normalųjį skirstinį panašia reikšmių sklaida, kadangi tenkina normaliajam skirstiniui keliamas sąlygas.

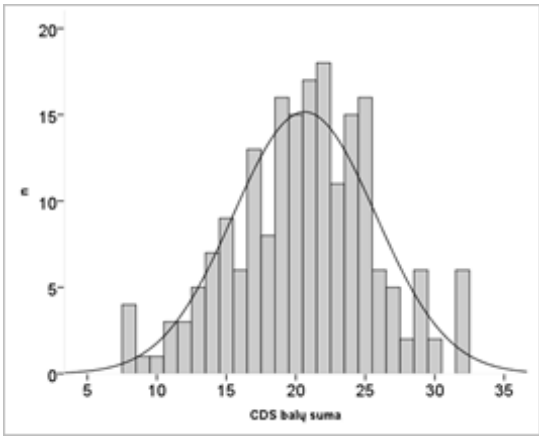
Atlikus atskirų CDS skalės teiginių tarpusavio sąsajų analizę nustatyta, kad vidutinė 8 teiginių koreliacija siekė $r = 0,39$ (varijavo nuo 0,25 iki 0,51). Atkreiptinas dėmesys, kad visų teiginių tarpusavio koreliacijos buvo statistiškai reikšmingos $p < 0,001$ lygmenyje. Sprendžiant pagal skalės teiginių vidurkius, 1–3 teiginiai buvo vidutiniškai stipriau išreikšti negu kiti, o 7 teiginys – išreikštas silpniausiai (4 lentelė). Vidutiniška atsakymų į teiginius sklaida buvo gana panaši (standartinis nuokrypis varijavo nuo 0,84 iki 1,05), nors dispersijos koeficientas skyrėsi stipriau (nuo 0,44 iki 1,01).

Lentelė 2. **Tyrime vertintų konstruktų vidinis suderintumas ir palyginimas pagal lytį**

Konstruktas	Vidinis suderintumas (α)	Vidurkis ± SN		p	d
		Moterys	Vyrai		
Ciniškas nepasitikėjimas	0,81	19,5 ± 6,10	21,2 ± 4,51	0,054	0,32
Pyktis ir priešiškumas	0,38	0,9 ± 0,96	1,2 ± 0,95	0,034	0,31
Neigiamas afektas	0,85	13,6 ± 7,39	9,9 ± 5,73	<0,001	0,56
Suvokiama socialinė parama	0,94	5,4 ± 1,71	5,8 ± 1,23	0,106	0,27

Lentelė 3. **Ciniško nepasitikėjimo skalės skirstinys ir psichometrinės charakteristikos**

Rodiklis	Reikšmė
Vidurkis	12,6
Standartinis nuokrypis	5,13
Procentiliai	
0	0
25	9
50	13
75	16
100	24
Asimetriškumo koeficientas	–0,14
Eksceso koeficientas	–0,03
Shapiro-Wilk kriterijus	
Kriterijaus reikšmė	0,99
P reikšmė	0,077



Siekiant įvertinti CDS skalės dimensiškumą, buvo atliekama tiriamoji faktorių analizė (5 lentelė). KMO rodiklis buvo 0,87, kuris atitiko rekomenduojamą >0,60 reikšmę faktorių analizei, o Bartlett kriterijaus p<0,001 taip pat parodė atitikimą faktorių analizės reikalavimams (p<0,05). Atlikus faktorių analizę paaiškėjo, kad visi 8 CDS skalės teiginiai suformuoja vienintelį faktorių, kas rodo, kad nagrinėjamas ciniško nepasitikėjimo konstruktas yra vientisas, t. y. neturi subkonstruktų, taip pat neturi teiginių, kurie galėtų būti netinkami bendrajai skalei. Šio vienintelio faktoriaus tikrinė vertė siekė 3,75 ir paaiškino 46,9 proc. suminės dispersijos. Atskirų teiginių faktorių svoriai svyravo nuo 0,56 iki 0,76, kas rodo pakankamą kiekvieno iš teiginių svarbą bendrajam CDS skalės balui.

Apžvelgiant atskirų teiginių svarbą CDS skalei taip pat buvo įvertintas menamas skalės vidinis suderintumas, jeigu būtų panaikinami atitinkami skalės teiginiai (5 lentelė). Nustatyta, kad visų teiginių įtaka vidiniam skalės suderintumui buvo teigiama, kadangi juos panaikinus Cronbach α koeficientas sumažėtų: esant 8 teiginių skalei, α siekė 0,833, o panaikinus bent vieną iš teiginių, koeficientas sumažėtų iki 0,802 (atsisakant klausimų su didžiausiais faktorių svoriais) arba 0,830 (atsisakant klausimo su mažiausiu faktoriaus svoriu). Šie rezultatai taip pat patvirtina, kad psichometriniu požiūriu skalėje nėra nereikalingų teiginių.

Vertinant CDS skalės validumą buvo pasirinkti reiškiniai konvergentiniam ir diskriminantiniam konstrukto validumui įvertinti. Konvergentinis validumas buvo vertinamas siejant CDS skalės suminį balą su Pykčio ir priešiškumo konstrukto įverčiu. Paaiškėjo, kad tarp šių reiškinių egzistuoja silpnai teigiama, tačiau statistiškai reikšminga koreliacija – vertinant CDS suminį balą kaip tolydųjį kintamąjį (ρ = 0,159, p = 0,026). Papildomai konvergentinis validumas įvertintas siejant cinišką nepasitikėjimą su neigiamu afektu – šių reiškinių koreliacija buvo stipresnė (r = 0,217, p = 0,002). Diskriminantinis validumas buvo įvertintas atsižvelgiant į tai, kaip CDS skalės balai koreliuoja su suvokiama socialine parama. Analizė atskleidė, kad šie reiškiniai tarpusavyje koreliuoja silpnai neigiamai, tačiau statistiškai reikšmingai (r = –0,207, p = 0,004).

APTARIMAS

CDS skalė sukurta dar 1989 m. [3] atrenkant teiginius iš MMPI pagrindu sudaryto Cook-Medley klausimyno ir yra taikoma užsienio tyrimuose (daugiausia – susijusiuose su sveikata ir psichologiniais ypatumais), nors iki šiol Lietuvoje ji nebuvo naudota. Todėl šio darbo tikslas buvo įvertinti CDS skalės psichometrines ypatybes siekiant įsitikinti, ar ši skalė tinkama naudoti Lietuvoje.

Žvelgiant į CDS skalės psichometrinius rezultatus mūsų tyrime galima teigti, kad ji pasižymi aukštu vidiniu suderintumu (α = 0,83), kuris yra panašus arba aukštesnis lyginant su tyrimais, atliktais kitose šalyse, pavyzdžiui, α = 0,81 Suomijoje [4] arba α = 0,77 Italijoje [10]. Kalbant apie atskirus skalės teiginius panašu, kad skirtingos šalys pasižymi nevienodais ypatumais: jei mūsų tyrime labiausiai išreikšti buvo 1–3 teiginiai, tai Italijoje – 3 ir 5 teiginiai, o 1 teiginys buvo išreikštas silpniausiai [10]. Tai gali būti paaiškinama socialiniais ir kultūriniais šalių ypatumais. Apskritai, duomenų

Lentelė 4. **Ciniško nepasitikėjimo skalės teiginių vidurkiai ir tarpusavio koreliacijos**

Teiginio nr.	Vidurkis±SN	Dispersijos koeficientas	#1	#2	#3	#4	#5	#6	#7	#8
#1	2,0 ± 0,90	0,45	1,00	0,47	0,50	0,40	0,26	0,32	0,25	0,51
#2	1,9 ± 0,84	0,44	0,47	1,00	0,46	0,46	0,31	0,30	0,30	0,39
#3	1,9 ± 0,85	0,44	0,50	0,46	1,00	0,45	0,31	0,41	0,34	0,48
#4	1,5 ± 1,05	0,70	0,40	0,46	0,45	1,00	0,37	0,42	0,48	0,49
#5	1,3 ± 1,03	0,81	0,26	0,31	0,31	0,37	1,00	0,36	0,31	0,31
#6	1,5 ± 0,98	0,64	0,32	0,30	0,41	0,42	0,36	1,00	0,33	0,42
#7	1,0 ± 0,97	1,01	0,25	0,30	0,34	0,48	0,31	0,33	1,00	0,51
#8	1,5 ± 0,92	0,60	0,51	0,39	0,48	0,49	0,31	0,42	0,51	1,00

* visų teiginių koreliacijos p < 0,001

Lentelė 5. **Ciniško nepasitikėjimo skalės teiginių faktorinės ir psichometrinės charakteristikos**

Teiginio nr.	Faktoriaus svoris	α *
#1	0,68	0,82
#2	0,68	0,82
#3	0,73	0,81
#4	0,75	0,80
#5	0,56	0,83
#6	0,64	0,82
#7	0,64	0,82
#8	0,76	0,80

* α – Cronbach α koeficientas skalėje panaikinus atitinkamą teiginį

analizė vertinant atskirus skalės teiginius gana aiškiai parodė, kad nėra pagrindo kvestionuoti klausimų reikalingumo: atmetus bet kurį iš 8 teiginių skalės vidinis suderintumas sumažėtų. Be to, visi klausimai suformuoja vieną faktorių, o kiekvienas teiginys turi pakankamai didelį faktoriaus svorį, todėl svarstyti subskalių galimybę nėra pakankamai pagrindo. Nors skalės teiginiai koreliuoja 0,25–0,51 ribose, tačiau turinio požiūriu jie yra pakankamai skirtingi ir nedubliuoja vienas kito.

Kalbant apie ciniško nepasitikėjimo konstrukto validumą šiame tyrime buvo pasirinkti keli kintamieji konvergentiniam ir diskriminantiniam validumui nustatyti. Rezultatai atskleidė, kad nagrinėjant sąlyginai panašius reiškinius (konvergentinis validumas), ciniškas nepasitikėjimas statistiškai patikimai, bet silpnai koreliavo su pykčiu ir priešiškumu bei neigiamu afektu. Koreliacijos lygmuo siekė maždaug 0,15–0,20, kas yra panašu kaip ir kituose tyrimuose Italijoje (neigiamas afektas r = 0,19; [10]), Suomijoje (į save nukreiptas pyktis r = 0,20; [4]) ir Vokietijoje (neurotiškumas r = 0,22; [13]). Vertinant diskriminantinį validumą koreliacijų lygmuo buvo panašus – Lietuvoje nustatyta, kad ciniškas nepasitikėjimas neigiamai koreliuoja su socialine parama (r = –0,21) ir šie rezultatai sutampa su ankstesnių tyrėjų darbais JAV (r = –0,33; [20]) ir Suomijoje (r = –0,21; [11]). Pastebėtina, kad ciniškumas ne tik neigiamai koreliuoja su socialine parama, tačiau esant silpnai išreikštam cinizmui, žmogui suteikiama socialinė parama sąlygoja silpnesnę kraujotakos sistemos reakciją į stresą [21]. Tokie rezultatai gali iš dalies paaiškinti, kodėl cinizmas siejasi su neigiamomis išeitimis sergant kraujotakos sistemos ligomis.

Šiame tyrime buvo nustatyta, kad CDS skalės skirstinys nors ir nėra tiksliai normalusis, tačiau atitinka esmines Gauso dėsnio prielaidas. Tai atskleidžia, kad CDS skalės balus analizėje galima naudoti kaip tolydų kintamąjį, ir jeigu nėra apribojimų iš kitų kintamųjų – taikyti parametrinius metodus tiek dvimatėje, tiek regresinėje analizėje. Tačiau galima pastebėti, kad nepaisant to, kai kuriuose užsienio tyrimuose CDS skalės suminiai balai yra pergrupuojami į dvi grupes (pagal medianą; [7]), taip pat tris [12] ar keturias [14] rangines kategorijas. Toks pergrupavimas sudaro papildomas analizės galimybes tais atvejais, jei kai kurie tyrimo kintamieji neatitinka parametrinių prielaidų, tačiau tai apriboja rezultatų palyginimą skirtinguose tyrimuose.

Nors mūsų tyrimo imtis buvo kardiologiniai pacientai, tačiau galima manyti, kad ciniško nepasitikėjimo požiūriu tai atspindi ir bendrąją populiaciją. Tokia prielaida galima dėl to, kad mūsų tyrime vidutinė ciniško nepasitikėjimo raiška (12,6 balo) buvo labai artima teoriniam skalės vidurkiui; labai panašus ciniško nepasitikėjimo vidurkis (12,7 balo) buvo nustatytas ir reprezentatyvioje vidutinio amžiaus vyrų imtyje Suomijoje [14]. Apibendrinant galima teigti, kad aprašytoji ciniško nepasitikėjimo skalė yra validi naudoti ir Lietuvos imtyse.

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Savižudybės krizę išgyvenančių asmenų psichosocialinis vertinimas ir savisaugos plano sudarymas

Lietuva savižudybių skaičiumi Europoje pirmauja, o visame pasaulyje užima penktą vietą. Šiuo metu savižudybių rodiklis Lietuvoje beveik 3 kartus didesnis nei Europos Sąjungos valstybių vidurkis. Bendrieji skaičiai rodo, kad kiekvieną metų dieną Lietuvoje nusižudo daugiau nei du žmonės. Per pastaruosius dvidešimt metų mažėja santykinis savižudybių skaičius Lietuvoje – nuo daugiau nei 45 iki maždaug 26 atvejų 100 tūkst. gyventojų, tačiau išlieka dideli netolygumai tiek tarp lyčių (vyrai nusižudo penkis kartus dažniau nei moterys), tiek ir tarp miesto bei kaimo gyventojų (beveik du kartus daugiau nusižudo kaimo gyventojų). Didžiausias savižudybių rodiklis išlieka mažose, šalies periferijoje esančiose savivaldybėse. Nuo 2010 m. palyginus savižudybių ir mirčių, kai ketinimas nepatikslintas, skaičius nustatyta, kad tiek savižudybių, tiek ir mirčių, kai ketinimas nepatikslintas, skaičius mažėja, tačiau jų santykis išlieka nemažas – trys savižudybės tenka vienam atvejui, kai ketinimas nepatikslintas.

Psichikos sveikatos priežiūros specialistai savo kasdieniame darbe susiduria su iššūkiu užtikrinti ankstyvą galimų savižudybių atpažinimą ir kompleksinės pagalbos suteikimą. Siekiant įgyvendinti kvalifikuotos ir struktūruotos pagalbą teikimą, Sveikatos apsaugos ministerija patvirtino savižudybės krizę išgyvenančių asmenų psichosocialinio vertinimo tvarkos aprašą (toliau – Aprašas). Šis aprašas nustato psichosocialinio vertinimo paslaugų organizavimą ir teikimo reikalavimus asmens sveikatos priežiūros įstaigose asmenims su savižudybės rizika.

Paties psichosocialinio vertinimo tikslas – bendradarbiaujant su asmeniu, įvertinti galimą savižudybės krizę ir asmens aplinką, susitarti ir parengti tolimesnės pagalbos, mažinančios savižudybės riziką, asmeniui planą.

Parengė doc. dr. Vesta Steiblienė

Savižudybės krizę išgyvenančių asmenų
psichosocialinio vertinimo tvarkos aprašo
1 priedas

(Savižudybės krizę išgyvenančių asmenų psichosocialinio vertinimo aprašo forma)

SAVIŽUDYBĖS KRIZĘ IŠGYVENANČIŲ ASMENŲ PSICHOSOCIALINIO VERTINIMO APRAŠAS

1. Asmens vardas, pavardė

2. Psichosocialinio vertinimo data, laikas

3. Kontaktas vertinimo metu ☐ Bendradarbiaujantis ☐ Nebendradarbiaujantis
(kiek galima pasitikėti vertinimo rezultatais, ar nenoriai atsiskleidžia, ar atsiribojęs)

A dalis: Dabartinė situacija

4. Paskutinis iki kreipimosi į asmens sveikatos priežiūros įstaigą tyčinio žalojimosi atvejis:

4.1. Data.....

4.2. Aplinkybės: .....

4.3. Sukelta grėsmė gyvybei: .....

4.4. Tyčinio žalojimosi būdas: .....

4.5. Planas: neplanuotas / iš anksto apsvarstytas būdas / detaliai suplanuotas

4.6. Pasiruošimas savižudybei: nebuvo / tik atsisveikinimo laiškas / detalesnis pasiruošimas

4.7. Tikslas nusižudyti: buvo / nebuvo / neaišku

4.8. Reakcija į tyčinį susižalojimą: gailisi / pyksta, kad išgelbėtas / kita

5. Dabartinės savižudiškos mintys / ketinimai:

5.1. Kiek laiko paskutiniu metu svarsto apie savižudybę?

5.2. Pagrindiniai postūmiai savižudybei

6. Dabartinė būsena:

6.1. Pagrindiniai stresoriai

6.2. Vyraujantys jausmai (ypač neviltis, vienišumas, ažitacija, pyktis, gėda, pažeminimas, savęs kaltinimas)

6.3. Kliedesiai / haliucinacijos, jų pobūdis

7. Ar asmens saugumui užtikrinti reikia intensyvaus stebėjimo (visą parą)? *Rekomenduotina, jei pažymėtas vienas ar daugiau iš toliau nurodytų variantų*	☐ Taip (pereiti prie C dalies)	Ne

☐ Tyčinis žalojimasis su aiškiai įvardytu ketinimu numirti, planavimu, pasiruošimu savižudybei, asmuo nusivylęs, kad išliko gyvas

☐ Dabartinis ketinimas nusižudyti (išsakomas, numanomas iš būsenos)

☐ Asmuo negali kontroliuoti savižudybės minčių, atsakyti už savo veiksmus

☐ Kliedesiai, haliucinacijos

☐ Kita (detalizuoti):.....

B dalis: Rizikos ir apsauginiai veiksniai

8. Ankstesnė su savižudybėmis susijusi patirtis:

8.1. Buvo (-ę) tyčinio žalojimosi atvejis (-ų) (skaičius.....)

8.2. Žalojosi per paskutinius 3 mėn. ☐ *Taip* ☐ *Ne*

8.2.1. Kokiais būdais?.....

8.2.2. Kada paskutinį kartą žalojosi?.....

8.3. Ankstesnis žalojimosi:

8.3.1. Būdas.....

8.3.2. Kūno dalis (-ys), kurios buvo žalojamos.....

8.4. Turi artimųjų, kurie nusižudė.....

8.5. Turi artimųjų, kurie tyčia žalojosi, bandė nusižudyti.....

8.6. Kaip vertina savęs žalojimąsi / ankstesnius žalojimosi atvejus.....

9. Polinkis į rizikingą elgesį ir psichoaktyviųjų medžiagų vartojimas:

9.1. Piktnaudžiavimas / priklausomybė psichoaktyviosiomis medžiagomis (nurodyti, kokiomis)

9.2. Impulsų kontrolės problemos (polinkis rizikingai elgtis, kai paveiktas jausmų)

9.3. Ankstesnis agresyvus elgesys

10. Kiti bendri rizikos veiksniai:

10.1. Izoliacija, vienišumas (-a)

10.2. Išsiskyręs (-usi)

10.3. Darbo neturėjimas

10.4. Finansiniai sunkumai

10.5. Socialinės paramos stoka

10.6. Netektys

10.7. Diskriminacija

10.8. Patirtas smurtas (seksualinis, fizinis, emocinis, nepriežiūra)

10.9. Lėtinės ligos, skausmas

10.10. Kita (įrašyti):

11. Apsauginiai veiksniai

11.1. Išsako priežastis gyventi

11.2. Dalyvavimas gydymo programoje (pvz., lankosi pas psichikos sveikatos priežiūros specialistą)

11.3. Šeimos / artimųjų parama

11.4. Jaučiasi įsipareigojęs šeimai ar kitiems artimiesiems

11.5. Įsitraukęs į darbinę veiklą / mokyklos gyvenimą

11.6. Kita psichosocialinė parama (veiklos grupės, draugai)

11.7. Savižudybei prieštaraujantys religiniai įsitikinimai

11.8. Kita:

12. Ar yra poreikis hospitalizacijai stacionarines antrinio ir (ar) tretinio lygio psichiatrijos paslaugas teikiančioje ASPĮ? *Rekomenduotina, jei pažymėtas vienas ar daugiau iš toliau nurodytų variantų*	☐ Taip	☐ Ne

☐ Dabartinė būsena reikalauja atidesnio vertinimo

☐ Reikalingas būsenos stebėjimas parenkant gydymą

☐ Menki apsauginiai veiksniai ir aukšti bendri rizikos veiksniai

☐ Ankstesni bandymai nusižudyti ir dabartinis psichosocialinės pagalbos planas nepakankamas

☐ Piktnaudžiavimas / priklausomybė psichoaktyviosiomis medžiagomis

☐ Impulsyvumas

☐ Kita (detalizuoti):.....

C dalis: Pagalbos teikimo plano aptarimas

13. Asmens kontaktinis telefonas ir elektroninio pašto adresas	14. Pastabos dėl susisiekimo su asmeniu

15. Ankstesnė pagalba (pvz., psichofarmakologija, psichoterapija, konsultavimas, kita):

15.1. Ar anksčiau kreipėsi pagalbos?.....

15.2. Ar pagalba buvo veiksminga?.....

15.3. Hospitalizacijos psichikos sveikatos priežiūros profilio stacionare per paskutinius 12 mėn. skaičius.....

16. Aptartas tolesnės pagalbos asmeniui teikimo planas:

☐ Sutarta tolesnė pagalba: asmens psichikos sveikatos centre / siuntimas gydytis stacionare / kita (įrašyti).....

☐ Užtikrintas aplinkos saugumas / pašalintos savižudybės priemonės

☐ Į saugumo užtikrinimą įtraukti artimieji

17. Su tolesne pagalba asmuo:

☐ Sutinka, motyvuotas

☐ Nesutinka, atsisako tolesnės pagalbos (*Kaip mėginta skatinti motyvaciją?*)

18. Situacija ir tolimesnės pagalbos asmeniui teikimo planas aptartas su šiais artimaisiais (jų vardai, pavardės ir kontaktiniai telefonai):

19. Jei asmuo nepilnametis, kiek tėvai / globėjai gali bendradarbiauti gydyme:

19.1. Įsitraukę, gali palydėti į konsultacijas;

19.2. Bendradarbiavimas svyruojantis, abejoja gydymo reikalingumu;

19.3. Atsiriboję, nėra galimybių bendradarbiauti.

20. Rekomendacijos, pastebėjimai

21. Informuota	☐ Pirminės asmens sveikatos priežiūros įstaiga ☐ Vaiko teisių apsaugos tarnyba ☐ Kita (nurodyti).....	
22. Vertinimą atliko	(vardas, pavardė, pareigos)	(parašas)

Savižudybės krizę išgyvenančių asmenų
psichosocialinio vertinimo tvarkos aprašo
2 priedas

(Asmens savisaugos plano forma)

ASMENS SAVISAUGOS PLANAS

Asmens vardas, pavardė, saugos plano užpildymo data _____

1. Mano tolesnės pagalbos planas:
1.1. _____
1.2. _____
1.3. _____

2. Įspėjamieji mano savižudybės krizės ženklai (mintys, vaizdiniai, nuotaika, situacijos, elgesys):
2.1. _____
2.2. _____
2.3. _____

3. Mano saugumo planas siekiant išvengti savižudybės krizės:

3.1. Ką darysiu, kad ištverčiau sunkų periodą?
3.1.1._____
3.1.2._____
3.1.3._____

3.2. Artimieji, kurie man gali padėti:
3.2.1. Vardas, pavardė, ryšys _____Tel._____
3.2.2. Vardas, pavardė, ryšys _____Tel._____
3.2.3. Vardas, pavardė, ryšys _____Tel._____

3.3. Kur galiu kreiptis:
3.3.1. Telefoninės pagalbos linija tel. _____
3.3.2. Mano psichikos sveikatos centras (skubi / nemokama pagalba) _____
3.3.3. Priėmimo skyrius _____
3.3.4. Gydytojas _____
3.3.5. Greitoji medicinos pagalba _____

4. Kaip pasirūpinti aplinkos saugumu (pašalinti galimas savižudybės priemones ir kt.):
_____
_____

5. Dėl ko man verta gyventi:
_____

Asmuo (parašas): _____
Specialistas (vardas, pavardė, parašas): _____

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Juliaus moksliniai darbai buvo įvertinti Europos Neuropsichofarmakologijos kolegijos (angl. *European College of Neuropsychopharmacology,* ECNP) (2013), LSMU mokslo fondo (2013), Tarptautinės smegenų tyrimų organizacijos (angl. *International Brain Research Organization*) (2014), Amerikos klinikinės neuropsichologijos akademijos (angl. *American Academy of Clinical Neuropsychology*) (2015), Pasaulinės biologinės psichiatrijos draugijų federacijos (angl. *World Federation of Societies of Biological Psychiatry*) (2017). Studijos dalinai finansuotos Lietuvos mokslo tarybos.

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ĮVADAS

Išeminė širdies liga (IŠL) yra viena dažniausių mirties priežasčių pasaulyje. Manoma, kad ši liga išliks dažniausia mirties priežastimi ateinančius 20 metų. Remiantis 2015 m. duomenimis, išsivysčiusiose pasaulio šalyse IŠL yra ne tik dažniausia mirties priežastis, bet kartu su smegenų kraujotakos sutrikimais sudaro vieną trečiąją visų mirčių.

Bendri smegenų kraujotakos sutrikimų ir IŠL rizikos veiksniai: amžius, lytis (vyriškoji lytis >45 m., moteriškoji lytis >55 m.), šeimos nariai sergantys širdies ligomis. Bendri modifikuojami rizikos veiksniai yra padidėjusi žemo tankio lipoproteinų cholesterolio koncentracija, arterinė hipertenzija (AH), cukrinis diabetas, rūkymas, nutukimas, mažas fizinis aktyvumas, neveiklumas, metabolinis sindromas, protinis distresas, depresija, nesaikingas alkoholio vartojimas. Pastaraisiais metais kalbama ir apie netradicinius rizikos veiksnius: didelio jautrumo C-reaktyvųjį baltymą (dj-CRB), lipoproteinus, homocistiną, mažo tankio LDL-C daleles, fibrinogeną.

Didžiausias bendras IŠL ir smegenų kraujagyslių sutrikimo veiksnys yra aterosklerozė. Nustatyta, kad veiksniai susiję su aterosklerozės formavimusi, tokie kaip AH, cukrinis diabetas arba rūkymas prisideda prie kognityvinių funkcijų blogėjimo ir demencijos rizikos. Buvęs miokardo infarktas (MI) gali penkis kartus padidinti demencijos riziką.

MOKSLINIS NAUJUMAS

Moksliniai tyrimai pateikia duomenis apie kognityvinių funkcijų ir depresijos, nerimo, D tipo asmenybės, nuovargio charakteristikų, endokrininių ir klinikinių biologinių žymenų sąsajas, tačiau dar nepakankamai ištirta, ar šios sąsajos yra universalios, būdingos ir širdies ligomis sergantiems pacientams. Tikimasi, kad bus išsiaiškinta, kaip IŠL sergančių pacientų kognityvinių funkcijų blogėjimas siejasi su depresijos, nerimo, D tipo asmenybės, nuovargio charakteristikomis, endokrininiais ir klinikiniais biologiniais žymenimis.

Radus sąsajas, bus galima prognozuoti, kaip konkretūs psichologiniai veiksniai, endokrininiai bei klinikiniai biologiniai žymenys gali veikti kognityvines funkcijas ir atitinkamai planuoti gydymo metodus šioms funkcijoms gerinti. Papildomi tyrimai bus reikalingi norint patikrinti gydymo intervencijų, orientuotų į kognityvinių funkcijų gerinimą, veiksmingumą.

TIKSLAS

Nustatyti sergančiųjų IŠL ir patyrusių ūminius išeminius įvykius, kognityvinių funkcijų, protinio distreso, nuovargio, vaistų vartojimo, skydliaukės hormonų ir klinikinių biologinių žymenų sąsajas.

UŽDAVINIAI

1. Ištirti sąsają tarp kognityvinių funkcijų ir depresijos, nerimo simptomų sunkumo, D tipo asmenybės, nepriklausomai nuo socialinių ir demografinių veiksnių (amžiaus, lyties, išsilavinimo), taip pat klinikinių IŠL sunkumo rodiklių (New York Širdies Asociacijos (angl. *New York Heart Association, NYHA*) funkcinės klasės, kairiojo skilvelio išstūmio frakcijos, IF).

2. Ištirti IŠL pacientų kognityvinių funkcijų, nuovargio bei fizinio pajėgumo sąsają.

3. Ištirti sąsają tarp β1-selektyvių beta blokatorių (BB) vartojimo ir kognityvinių funkcijų.

4. Nustatyti, ar klinikiniai biologiniai žymenys, tokie kaip skydliaukės hormonai, laisvasis trijodtironinas ir trijodtironinas (lT3, T3), N-terminalinis pro-B-tipo natriuretinis peptidas (NT-pro-BNP), dj-CRB veikia sergančiųjų IŠL kognityvines funkcijas.

IŠVADOS

1. Depresija, nerimas ir D tipo asmenybė yra susijusi su blogesnėmis kognityvinėmis funkcijomis nepriklausomai nuo IŠL sunkumo bei socialinių ir demografinių charakteristikų.

2. Subjektyvus protinio nuovargio patyrimas, o ne fizinis pajėgumas, susijęs su kognityvinėmis funkcijomis.

3. β1-selektyvių BB vartojimas susijęs su prastesniu atsitiktiniu išmokimu nepriklausomai nuo socialinių ir demografinių charakteristikų, IŠL sunkumo, nerimo ir depresijos simptomų.

4. Žemesnės lT3 ir aukštesnės NT-pro-BNP koncentracijos susijusios su blogesnėmis sergančiųjų IŠL kognityvinėmis funkcijomis.