



Higher degree of dysfunctional attitudes and beliefs and higher scores of frustration intolerance in women with unsuccessful weight loss

Veća izraženost disfunkcionalnih stavova i uverenja i veća netolerancija frustracije kod žena sa neuspešnim gubitkom telesne mase

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Abstract

Background/Aim. Obesity is a chronic and relapsing condition, and since recently, it has been considered a global epidemic. Current guidelines for tripartite treatment of obesity emphasize a program of lifestyle modifications such as medical nutrition therapy, aerobic exercise, and behavioral intervention. The aim of the study was to evaluate whether specific psychological factors (general attitudes and beliefs and frustration tolerance) could be predictors of successful weight loss, i.e., factors that can be further addressed as part of the integrated therapy approach. **Methods.** A total of 84 consecutive overweight and obese female participants who were apparently healthy and homogeneous in age, level of education, and marital or employment status were prescribed the same medical nutrition therapy protocol as a single six-month therapeutic intervention. Prior to starting the therapy, the General Attitude and Belief Scale (GABS) and the Frustration Discomfort Scale (FDS) were administered. The participants were divided into two groups: successful (group A) and unsuccessful (group B). Group A, or the successful group [with the mean body mass index (BMI) $\pm$ standard deviation (SD) of 24.1 ± 5.81 kg/m²],

consisted of 40 participants who have reached the corresponding loss, i.e., they lost $\geq 10\%$ of the starting body weight (BW). Group B, or the unsuccessful group (with the mean BMI $\pm$ SD of 28.51 ± 2.74 kg/m²), consisted of 44 participants who have not reached the corresponding loss, i.e., they lost $< 10\%$ of the starting BW. **Results.** Participants in group B had significantly higher scores ($p < 0.05$) on the GABS subscales for the Need for Approval, Need for Comfort, and Other Downing. A statistically significant difference between groups ($p < 0.05$) was shown for FDS subscales of Emotional Intolerance, Entitlement, and Achievement Frustration. **Conclusion.** Results of our study showed that participants who were unsuccessful in medical nutrition therapy had a higher degree of dysfunctional attitudes and beliefs and higher scores of frustration intolerance when compared to successful participants. The recommendation, based on our results, would be to include psychotherapeutic techniques in the integrative obesity treatment, aimed at cognitive changes and increasing frustration tolerance.

Key words:
obesity; prognosis; psychology; surveys and questionnaires.

Apstrakt

Uvod/Cilj. Gojaznost je hronično i relapsirajuće oboljenje, a od skoro se smatra i globalnom epidemijom. U trenutnim smernicama za trojno lečenje gojaznosti ističe se program modifikacije životnog stila koji obuhvata medicinsku nutritivnu terapiju, aerobne vežbe i bihejvioralnu intervenciju. Cilj rada bio je da se proceni da li specifični psihološki faktori (opšti stavovi i uverenja i tolerancija na frustraciju) mogu biti prediktori uspešnog gubitka telesne mase, odnosno faktori na koje je moguće uticati u integrativnom terapijskom pristupu. **Metode.** Ukupno 84 konsektivne predgojazne i gojazne

ispitanice, bez pridruženih bolesti ili stanja, homogene po godinama, obrazovanju, bračnom i profesionalnom statusu, dobile su jednak program medicinske nutritivne terapije, kao jedinu terapijsku intervenciju tokom šest meseci. Pre početka lečenja primenjene su Skala opštih stavova i uverenja (*General Attitude and Belief Scale* – GABS) i Upitnik frustracione netolerancije (*Frustration Discomfort Scale* – FDS). Ispitanice su podeljene u dve grupe: uspešnu (grupa A) i neuspešnu (grupa B). Grupa A, odnosno uspešna grupa [ispitanice sa srednjom vrednošću indeksa telesne mase (ITM) $\pm$ standardna devijacija (SD) $24,1 \pm 5,81$ kg/m²] sastojala se od 40 ispitanica koje su dostigle odgovarajući gubitak, tj.

izgubile $\geq 10\%$ početne telesne mase (TM). Grupa B, odnosno neuspešna grupa (ispitanice sa srednjom vrednošću ITM $\pm$ SD $28,51 \pm 2,74$ kg/m²) sastojala od 44 ispitanice koje nisu dostigle odgovarajući gubitak, tj. izgubile su $< 10\%$ početne TM. **Rezultati.** Ispitanice u grupi B imale su značajno više skorove ($p < 0,05$) na subskalama GABS Potreba za priznanjem, Potreba za komforom i Obezvređivanje drugih osoba. Statistički značajna razlika između grupa ($p < 0,05$) pokazana je za FDS subskale Emocionalna netolerancija, Pravednost i Frustracije vezane za postignuća. **Zaključak.** Rezultati našeg istraživanja su

pokazali da su ispitanice koje su bile neuspešne u sprovođenju medicinske nutritivne terapije imale viši nivo disfunkcionalnih stavova i uverenja i više skorove frustracione netolerancije u poređenju sa onima koje su bile uspešne u tome. Preporuka, bazirana na našim rezultatima, mogla bi biti da se u integrativni model lečenja gojaznosti uključe i psihoterapijske tehnike, usmerene na kognitivne promene i povećanje tolerancije na frustraciju.

Ključne reči:
gojaznost; prognoza; psihologija; ankete i upitnici.

Introduction

Obesity is a chronic and relapsing condition defined as excess body fat in the body with body mass index (BMI) ≥ 30 kg/m² and is considered a global epidemic. It is associated with multiple comorbidities and requires long-term medical management¹⁻⁴. Intrinsic factors that lead to obesity are now meeting with an increasingly obesogenic environment⁴. With a current trend of increasing morbidity and mortality due to obesity, life expectancy could decrease for the first time in modern history^{1, 5}. Other than the well-known physical disorders, there are many mental disorders, such as mood disorders, anxiety, and major depression commonly associated with obesity^{3, 4}. There is substantial evidence of a bidirectional relationship between depressive disorders and obesity³. Obesity has been shown to reduce self-esteem, negatively impact quality of life, increase social anxiety, and promote avoidance behaviors⁶. The stigma surrounding obesity also has a considerable effect on educational, professional, social, and healthcare aspects of life⁷.

The current guidelines^{8, 9} for the treatment of overweight (BMI 25.0–29.9 kg/m²) and obesity (BMI ≥ 30.0 kg/m²) emphasize a program of lifestyle modifications for all individuals with a BMI index of 30 kg/m² and above or 25 kg/m² plus two weight attributed co-morbidities. Lifestyle modification is tripartite treatment with weight loss and consequent weight management being the core of every treatment program⁹. Calorie-restricted diet therapy^{2, 8, 9} is the foundation of weight loss treatment as energy deficit is needed for weight loss. The second part of the treatment is aerobic exercise¹⁰ along with the promotion of active leisure time and reduction of sedentary lifestyle. Last but not least, the aim of behavioral intervention is to facilitate the achievement of therapeutic goals of lower energy intake and higher energy expenditure. It is suggested that the education of obese individuals leads to recognition and modification of environmental stimuli and consequent food intake, therefore resulting in a change in dietary habits and level of physical activity. The intervention is accompanied by reinforcement of specific tasks like goal-setting and problem-solving strategies¹¹.

A neutral energy balance is required to restore weight gain and is a key factor in the long-term success of lifestyle modification treatment¹². The set point theory suggests that some biological factors drive a person to overeat in order to maintain/regain their weight¹³. It is not easy to resist the urge to (over)eat in today's extremely obesogenic environment with easy-to-get palatable calorie-rich food that also promotes a sedentary lifestyle.

However, the plethora of studies^{12, 14} suggests that many obese individuals are able to achieve and maintain weight loss through lifestyle modifications. It can be hypothesized that one of the possible answers for the individual differences in the results of lifestyle modifications in obesity treatment could be the specific cognitive mechanisms involved¹⁵. Therefore, the new treatments addressing cognitive mechanisms are evolving¹⁶⁻¹⁹ and enhancing the tripartite lifestyle modification programs. Another possible answer could be that the more individualized approach takes into consideration psychiatric conditions, personality traits, or other psychological factors such as frustration tolerance that obese individuals do or do not possess¹⁵. This paper is a continuation of our previous research²⁰ in determining psychiatric and specific psychological factors that contribute to failure or success in weight loss treatment. Thus, the aim of this study was to further evaluate whether specific psychological factors (general attitudes and beliefs and frustration tolerance) could be the predictors of successful weight loss, i.e., factors that can be addressed in an integrated therapy approach.

Methods

In our previous paper²⁰, we explained in detail the selection of participants, anthropometric measurements, and medical nutrition therapy protocol of this prospective cohort study with two measurements. The sample size was based on the need to detect the connection between changes in the BMI in the six-month intervention time and the scores on the instruments used. The required minimum for a statistical significance level of 0.05 and statistical power of 0.8 was 84 participants. In summary, 84 consecutive overweight/obese female participants who were apparently healthy and homogenous in age, level of education, and marital or employment status were administered the same medical nutrition therapy protocol. After six months of calorie-restricted conventional diet therapy as the only therapeutic intervention, the participants were divided into two groups regarding the outcome: the successful group, further referred to as group A, and the unsuccessful group, or group B. Group A consisted of 40 (48%) participants who lost $\geq 10\%$ of starting body weight (BW) (BMI 24.1 ± 5.81 kg/m²), and group B included 44 (52%) participants who lost $< 10\%$ of starting BW (BMI 28.51 ± 2.74 kg/m²). The research protocol was approved by the Ethics Committee, University Clinical Center of Serbia, Belgrade, Serbia (reference No. 10/2, from November 19, 2015) prior to data collection.

Psychopathology measures

To rule out possible psychiatric co-morbidities, all participants were interviewed by the same investigator with a standard psychiatric interview before participating in the study.

Two self-administered questionnaires were used for the purpose of the research. Participants had 60 min in a quiet place to fill out the following questionnaires: the 55-item General Attitude and Belief Scale (GABS 55)²¹ and the Frustration Discomfort Scale (FDS)²². Both self-assessment questionnaires were validated in the language of the studied population and are listed in the Repository of Psychological Instruments in Serbian²³ (appendices 1 and 2).

GABS was used to assess basic rational and irrational beliefs that may influence the course and outcome of obesity. GABS 55 has parallel sets of rational and irrational statements. The statements were formulated to include irrational cognitive processes (e.g., demandingness, devaluation, general self-esteem, low frustration tolerance) and three additional domains: achievement, recognition, and comfort. Fifty-five statements are divided into seven subscales. The subscales include general attitudes and beliefs and statements referring to attitudes and beliefs at the time of assessment. The seven subscales are the following: Rationality, which consists of nine statements referring to rational/cognitive processes such as achievement, approval, fairness, and comfort; Self-downing, which consists of nine questions with the commonality being negative self-reporting and negative reporting of self in light of negative circumstances; Need for Achievement, which consists of nine questions referring to demandingness, intimidation, and low tolerance of frustrations, bearing in mind that all the items are focused on achievement; Demand for Fairness, which consists of nine questions that assess the fairness or consideration of a person's treatment by other people; Other Downing, which consists of three questions that measure negative assessment of other people; Need for Comfort, which consists of nine questions contrasting the importance of comfort apropos discomfort; Need for Approval, which consists of seven questions referring to the acceptance and likewise disapproval of the approval of others. Items are rated on a five-

point scale of distress (ranging from “does not apply” to “completely applies to me”).

FDS is a multidimensional instrument based on a theory^{24,25} that posits frustration intolerance as one of the two main causes of psychological disorders. This scale was used to assess possible intolerance or low tolerance of frustration, which could be the reason for the failure of the obesity therapy. It consists of 28 questions, i.e., four subscales of seven questions. Subscale 1 – Emotional Intolerance, including intolerance of emotional distress. Items include beliefs regarding the uncertainty, controllability, and aversiveness of emotion. Subscale 2 – Entitlement, including fairness and gratification. It is represented as the belief that one's desires must be met and that other people should indulge and not frustrate those desires. Subscale 3 – Discomfort Intolerance, including intolerance of difficulties, refers to the attitude that life should be easy, comfortable, and free of hassle. Subscale 4 – Achievement Frustration, including intolerance of thwarted goals with items aimed at assessing the intolerance of frustration, as opposed to loss of self-worth, following achievement goal failure. The questions refer to the time immediately before the assessment and are scored on a five-point distress scale (ranging from “not at all” to “fully existent”).

Statistical analysis

Statistical data analysis was performed using IBM SPSS Statistics 22 (IBM Corporation, Armonk, NY, USA). Results were presented as mean $\pm$ standard deviation (SD), and the Mann-Whitney *U* test was used. All *p*-values less than 0.05 were considered significant.

Results

Average scores of particular domains obtained from the GABS 55 questionnaire are presented in Table 1. Results indicate that both groups had similar scores in the Rationality subscale only. Participants in group B had higher scores in all other subscales, particularly in the subscales Need for Approval, Demand for Fairness, and Other downing; the difference was statistically significant ($p < 0.05$).

Table 1

Rational and irrational beliefs				
GABS 55 subscales	All participants (n = 84)	Group A (n = 40)	Group B (n = 44)	<i>p</i>
Rationality	30.01 $\pm$ 7.57 (9, 45)	30.00 $\pm$ 8.17 (9, 45)	30.02 $\pm$ 7.08 (9, 37)	0.989
Self-Downing	17.08 $\pm$ 4.73 (9, 30)	16.47 $\pm$ 4.09 (9, 27)	17.64 $\pm$ 4.55 (11, 30)	0.264
Need for Achievement	22.30 $\pm$ 7.78 (9, 45)	20.90 $\pm$ 8.81 (9, 45)	23.57 $\pm$ 6.56 (9, 37)	0.117
Need for Approval	15.87 $\pm$ 5.51 (7, 34)	14.55 $\pm$ 5.08 (7, 24)	17.07 $\pm$ 5.74 (7, 34)	< 0.05
Need for Comfort	21.77 $\pm$ 6.65 (9, 39)	20.33 $\pm$ 6.99 (9, 34)	23.09 $\pm$ 6.11 (10, 39)	0.056
Demand for Fairness	22.25 $\pm$ 7.3 (9, 42)	20.22 $\pm$ 7.12 (9, 33)	24.09 $\pm$ 7.05 (12, 42)	< 0.05
Other-Downing	6.62 $\pm$ 2.74 (3, 14)	5.98 $\pm$ 2.82 (3, 14)	7.20 $\pm$ 2.56 (3, 13)	< 0.05

GABS 55 – General Attitude and Belief Scale 55-item.

All values are given as mean $\pm$ standard deviation (minimum, maximum).

Table 2

Tolerance to frustration				
FDS subscales	All participants (n = 84)	Group A (n = 40)	Group B (n = 44)	<i>p</i>
Emotional Intolerance	16.48 ± 5.38 (7, 34)	14.40 ± 4.88 (7, 24)	18.36 ± 5.15 (10, 34)	< 0.05
Entitlement	17.58 ± 5.49 (7, 31)	15.53 ± 4.67 (7, 23)	19.45 ± 5.56 (9, 31)	< 0.05
Discomfort Intolerance	17.46 ± 5.87 (7, 30)	16.22 ± 5.61 (7, 28)	18.59 ± 5.93 (7, 30)	0.065
Achievement Frustration	18.04 ± 5.69 (7, 33)	16.60 ± 5.85 (7, 31)	19.34 ± 5.27 (9, 33)	< 0.05

FDS – Frustration Discomfort Scale.

All values are given as mean ± standard deviation (minimum, maximum).

The average scores of particular domains obtained from the FDS questionnaire are presented in Table 2. A statistically significant difference between groups ($p < 0.05$) was shown for FDS subscales of Emotional Intolerance, Entitlement, and Achievement Frustration. Participants from group B also had higher scores on the Discomfort Intolerance subscale.

Discussion

Lifestyle modification is considered to be a very demanding form of pre-obesity and obesity therapy. There is evidence that coping difficulties include food deprivation, suffering from hunger, feelings of dissatisfaction, nervousness, tension, anxiety, fear of failure, and many other factors that need to be overcome for obesity therapy to be successful^{3, 24, 25}. Our study showed that participants which have not reached the corresponding BW loss had a quantitatively higher degree of expression of dysfunctional attitudes and beliefs and a lower degree of expression of rational ones as measured by GABS 55. Almost all these results were present on most subscales of the applied instrument.

Analysis of subscale 4, related to the need for approval, i.e., receiving or not receiving approval or recognition from others^{21, 26}, shows that participants from group B had more pronounced irrational beliefs. This subscale includes statements such as “It is terrible when someone treats me without enough respect” or “It is terrible when someone important to me does not like me”. The expression of such beliefs indicates a strong need for support and recognition in situations that can be difficult and demanding. Considering that the six-month program of medical nutrition therapy is difficult and demanding, the absence of an expected level of approval could be an important factor contributing to the failure to meet therapy goals.

Subscale 5 (like the FDS questionnaire) measures the need for comfort relating to the ease of living^{21, 26}. Participants with strong demands for comfort will have difficulties in maintaining normal functioning when faced with life circumstances that imply discomfort. The same can be expected in situations involving adhering to demanding therapy procedures^{27, 28}. Therefore, it is not unexpected that the scores for unsuccessful participants are close to or statistically significantly higher than the scores of the successful ones. An example of these phenomena would be statement number 17:

“Daily problems, difficulties, or limitations annoy me terribly”. In the demanding situation of a six-month therapy process, participants with such irrational beliefs had serious difficulties and distress that hindered them further in achieving the goals.

Subscale 6 refers to the demand for fairness^{21, 26}, i.e., the imperative that other people treat the individual with consideration and fairness. The characteristic rational thinking within this group is the following statement: “It is important to me that people are fair to me, but I see that they do not have to be”. Such rational attitudes and beliefs are less present in subjects with unsuccessful medical nutrition therapy. This means that in situations where there is no positive reinforcement from others, it will be easy to give up on long-term proclaimed goals, such as adhering to medical nutrition therapy.

The last subscale of the applied questionnaire refers to other downing^{21, 26}, with the scores significantly higher in group B. This increase in scores indicates that in frustrating circumstances, these kinds of irrational attitudes and beliefs will lead to dysfunctional behavior, i.e., non-compliance with therapy advice.

In recent years, a more individual and refined approach to obesity therapy has been in development, focusing on concomitant cognitive change. Behavioral approach and therapy as a part of lifestyle modification are being “upgraded”, shifting the focus to cognitive change and more individualized treatment^{16, 19}.

Results of basic research show the importance of cognitive processes in regulating (un)healthy eating habits¹⁵. A significant association is found in the results of clinical research as well²⁹. Specific cognitive factors relating to lifestyle modification treatment are identified in different studies^{18, 19}. Higher expected one-year BW reduction at the start of treatment^{30, 31}, starting motivation for treatment based on appearance³¹, personal reference of BW seen as acceptable or disappointing³², and dissatisfaction with treatment weight¹⁵ are all considered to be some of the cognitive factors linked to treatment discontinuation. Participants from group B had a quantitatively higher degree of expression of dysfunctional attitudes and beliefs, and our results of general cognitive factors are in concordance with the specific ones. We were unable to compare them to other general cognitive factors measured by GABS 55 since we were unable to find any available and relevant published results.

The ability to tolerate frustration was measured by the FDS questionnaire^{22, 24}, based on the theory that frustration intolerance is a multidimensional concept. FDS subscale scores point out the specifics of reduced frustration tolerance in the group of unsuccessful participants. The Entitlement subscale refers to the need and indispensable requirement that desires be fulfilled and that other people help them without thwarting them^{22, 24, 27}. Facets of this subscale (correctness and urgency of gratification) and their higher score in the women from group B indicate that they have a stronger perception of injustice and the impossibility of achieving gratification compared to the women from group A. This cognitive structure negatively affects the implementation of the required treatment and does not lead to quick gratification^{27, 28}. In addition, the need for immediate gratification (as part of frustration intolerance) without receiving a quick and “fair” reward (which is not possible in the case of this type of treatment) is a significant factor that can contribute to the failure of treatment.

The Emotional Intolerance subscale and its elevated scores in women with unsuccessful outcomes indicate that they had a hard time bearing with negative affectivity, especially anxiety that occurred during the treatment. The above result speaks in favor of the fact that they could not adequately tolerate emotional distress as a consequence of implementing a restrictive diet. Emotional intolerance reflects the belief that emotional distress cannot be tolerated and must be avoided and controlled, along with the reduction of uncertainty^{22, 24}. This is achieved by shifting priorities from distant goals to immediate affective regulation³³. Therefore, it can be assumed that to avoid negative effects and their consequences, participants did not adhere adequately to the treatment protocol. All of the above indicates that during the treatment, it would be necessary to include psychotherapeutic techniques that would contribute to accepting negative affect and increasing emotional control. The Discomfort Intolerance subscale describes the demand for an easy and comfortable life^{22, 24}. Nevertheless, in our study, the statistical analysis indicates that the comparison of subjects with successfully and unsuccessfully implemented medical nutrition therapy does not reach a statistically significant level. However, due to the existence of a difference in arithmetic means, it can be said that this factor is more pronounced in group B. An increase in scores on the Discomfort Intolerance subscale indicates that the respondents are more inclined to achieve short-term satisfaction at the expense of long-term goals^{22, 24, 33}. In the case of our research, this would mean that long-term goal, i.e., weight loss, is subordinated to short-term goals that include ease and comfort. Subordinating long-term goals to short-term ones leads to inadequate implementation and/or discontinuation of therapy when faced with difficulties. The last subscale relates to Achievement Frustration. It implies the need and demand for a perfect result that does not suffer deviations and oscillations^{22, 24, 34}. As the scores on this subscale were also significantly higher in the unsuccessful group of participants, this indicates that they probably had a problem during the course of the treat-

ment, which necessarily implies oscillations in motivation and the achievement of short-term goals – “that every day of every month of the duration of the treatment, I must lose weight and that I must not give up even occasionally”. Knowing the demands of medical nutrition therapy^{3, 22-24} and occasional oscillations in reaching goals, it is clear that this factor can negatively affect the overall outcome of the treatment, i.e., lead to premature termination of therapy. Given that this is, to our knowledge, the first study that examined frustration intolerance using the FDS questionnaire in subjects who were undergoing medical nutrition therapy, we gave our opinions relating to the results we obtained. These opinions are based on the basic concepts of the Rational Emotive Behavior Therapy theory^{22, 24, 35, 36} and the settings of the instrument used to measure frustration intolerance^{24, 25}.

This study has some limitations. First, we have not divided overweight and obese women into separate groups. However, some research data confirm the same weight loss in overweight and obese women during the same treatment period¹⁰. Secondly, this discussion is more theoretical because, to our knowledge, there have been no exact studies with published results using the specific questionnaires we applied that we could refer to for confirmation and guidance in this unexplored area of research.

Conclusion

Results of our studies show that participants who were unsuccessful in medical nutrition therapy had quantitatively higher degrees of irrational attitudes and beliefs and higher scores of frustration intolerance when compared to participants who were successful in medical nutrition therapy. They had significantly higher scores on the subscales of Emotional Intolerance, Entitlement, and Achievement Frustration and a higher score on the Discomfort Intolerance subscale. The participants from unsuccessful group had significantly higher scores on the subscales Need for Approval, Demand for Fairness, Other-Downing, Self-downing, Need for Achievement, and Need for Comfort when compared to successful group.

Therefore, based on our results, the inclusion of psychotherapy techniques in the integrative treatment of obesity can be recommended in order to promote cognitive change and increase frustration tolerance. The second refers to increasing the ability to delay gratification, the ability to accept and endure negative affectivity, especially anxiety and the overall discomfort that accompanies it, the ability to tolerate difficulties and efforts, and, finally, the ability to overcome perfectionism related to achieving daily goals during the treatment.

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R E F E R E N C E S

1. *American Medical Association House of Delegates*. Recognition of obesity as a disease. Resolution 420 (A-13) [Internet]. National Public Radio; 2013 [accessed 2023 July 15; cited on 2024 Jan 19]. Available from: <https://media.npr.org/documents/2013/jun/ama-resolution-obesity.pdf>
2. Obesity: preventing and managing the global epidemic. Report of a WHO consultation. *World Health Organ Tech Rep Ser* 2000; 894: i-xii, 1–253.
3. Mannan M, Mamun A, Doi S, Clavarino A. Prospective associations between depression and obesity for adolescent males and females – A systematic review and meta-analysis of longitudinal studies. *PLoS One* 2016; 11(6): e0157240.
4. Lazarus E, Ortiz-Pujols S. Increasing clinical awareness of obesity as a serious, chronic, relapsing, and treatable disease. *Am J Manag Care* 2022; 28(15 Suppl): S271–8.
5. Olshansky SJ, Passaro DJ, Hershow RC, Layden J, Carnes BA, Brody J, et al. A potential decline in life expectancy in the United States in the 21st century. *N Engl J Med* 2005; 352(11): 1138–45.
6. Rozjabek H, Fastenau J, LaPrade A, Sternbach N. Adult obesity and health-related quality of life, patient activation, work productivity, and weight loss behaviors in the United States. *Diabetes Metab Syndr Obes* 2020; 13: 2049–55.
7. Rubino F, Publ RM, Cummings DE, Eckel RH, Ryan DH, Mechanick JL, et al. Joint international consensus statement for ending stigma of obesity. *Nat Med* 2020; 26(4): 485–97.
8. Cornier MA. A review of current guidelines for the treatment of obesity. *Am J Manag Care* 2022; 28(15 Suppl): S288–96.
9. Chopra S, Malhotra A, Ranjan P, Vikram NK, Singh N. Lifestyle-related advice in the management of obesity: A step-wise approach. *J Educ Health Promot* 2020; 9: 239.
10. Redman LM, Heilbronn LK, Martin CK, Alfonso A, Smith SR, Ravussin E. Effect of calorie restriction with or without exercise on body composition and fat distribution. *J Clin Endocrinol Metab* 2007; 92(3): 865–72.
11. McGuire MT, Wing RR, Klem ML, Hill JO. Behavioral strategies of individuals who have maintained long-term weight losses. *Obes Res* 1999; 7(4): 334–41.
12. Look AHEAD Research Group. Eight-year weight losses with an intensive lifestyle intervention: the look AHEAD study. *Obesity* (Silver Spring) 2014; 22(1): 5–13.
13. Keesey RE, Hirvonen MD. Body weight set-points: determination and adjustment. *J Nutr* 1997; 127(9): 1875S–83S.
14. Lemstra M, Bird Y, Nwankwo C, Rogers M, Moraros J. Weight loss intervention adherence and factors promoting adherence: a meta-analysis. *Patient Prefer Adherence* 2016; 10: 1547–59.
15. Jansen A, Houben K, Roefs A. A cognitive profile of obesity and its translation into new interventions. *Front Psychol* 2015; 6: 1807.
16. Dalle Grave R, Calugi S, Marchesini G. The influence of cognitive factors in the treatment of obesity: Lessons from the QUOVADIS study. *Behav Res Ther* 2014; 63: 157–61.
17. Fabricatore AN. Behavior therapy and cognitive-behavioral therapy of obesity: is there a difference? *J Am Diet Assoc* 2007; 107(1): 92–9.
18. Cooper Z, Fairburn CG. A new cognitive behavioral approach to the treatment of obesity. *Behav Res Ther* 2001; 39(5): 499–511.
19. Dalle Grave R, Sartirana M, Calugi S. Personalized cognitive-behavioural therapy for obesity (CBT-OB): theory, strategies and procedures. *BioPsychoSocial Med* 2020; 14(1): 5.
20. Tepšić Ostojić V, Ristić-Medić D, Mraović T, Bukumirić Z, Vasiljević N, Latas M. General psychopathology and impulsivity as pre-treatment predictors of medical nutrition therapy outcome in overweight and obese women. *Vojnosanit Pregl* 2019; 75(11): 1103–9.
21. Bernard ME. Validation of the general attitude and belief scale. *J Ration Emot Cogn Behav Ther* 1998; 16(3): 183–96.
22. Harrington N. The Frustration Discomfort Scale: development and psychometric properties. *Clin Psychol Psychother* 2005; 12(5): 374–87.
23. *Repopsi*. Repository of psychological instruments in Serbian [Internet]. [cited 2024 Jan 19]. Available from: <https://www.rcpopsi.fbg.ac.rs/en>
24. Harrington N. Frustration intolerance as a multidimensional concept. *J Ration Emot Cogn Behav Ther* 2007; 25(3): 191–211.
25. Silva I. Importance of emotional regulation in obesity and weight loss treatment. *Fractal Rev Psicol* 2015; 27(3): 286–90.
26. Bernard ME. Dispute Irrational Beliefs and Teach Rational Beliefs: An Interview with Albert Ellis. *J Ration Emot Cogn Behav Ther* 2009; 27(1): 66–76.
27. Martin RC, Dahlen ER. Irrational beliefs and the experience and expression of anger. *J Ration Emot Cogn Behav Ther* 2004; 22(1): 3–20.
28. Takahashi M, Fujihara T. Self-control and choice in humans: Effects of type, amount, and delay of reinforcers. *Learn Motiv* 1995; 26(2): 183–202.
29. Dalle Grave R, Sartirana M, El Ghoch M, Calugi S. Treatment Overview. In: Dalle Grave R, Sartirana M, El Ghoch M, Calugi S, editors. *Treating Obesity with Personalized Cognitive Behavioral Therapy*. NY: Springer, Cham; 2018. pp. 13–26.
30. Ferster CB, Nurnberger JL, Levitt EB. The control of eating. 1962. *Obes Res* 1996; 4(4): 401–10.
31. Bandura A. Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall; 1986. p. 617.
32. Beck AT, Rush AJ, Shaw BF, Emery G. Cognitive therapy of depression: a treatment manual. NY: Guilford Press; 1979. p. 425.
33. Tice DM, Bratslavsky E, Baumeister RF. Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *J Pers and Soc Psychol* 2001; 80(1): 53–67.
34. DiBartolo PM, Frost RO, Chang P, LaSota M, Grills AE. Shedding light on the relationship between personal standards and psychopathology: The case for contingent self-worth. *J Ration Emot Cogn Behav Ther* 2004; 22(4): 241–54.
35. De Botton A. The consolations of philosophy. London: Penguin; 2000. p. 197.
36. Ellis A. Discomfort anxiety: A new cognitive behavioral construct. *Rational Living* 1980; 15(1): 25–30.

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Appendix 1

Upitnik opštih stavova i uverenja – skala GABS 55

Pažljivo pročitajte svaku tvrdnju i zaokružite broj pored tvrdnje koji najbolje pokazuje stepen u kojem se slažete sa navedenom tvrdnjom

		nimalo	malo	umereno	prilično	izrazito, snažno
1	Kada se u teškim životnim situacijama osećam loše ne doživljam to kao užas, već nastavljam dalje sa životom.	1	2	3	4	5
2	Ubeđena sam da bih bila bezvredna osoba ako bih loše uradila stvari koje su mi značajne u životu.	1	2	3	4	5
3	Ne mogu da podnesem kada ne uspem u nekim važnim stvarima i neizdrživ mi je osećaj promašenosti.	1	2	3	4	5
4	Ne mogu podneti kada su drugi ljudi prema meni neuviđavni i kada me tretiraju nepravedno.	1	2	3	4	5
5	Stanja nelagodnosti, napetosti ili nervoze su mi neizdrživa i ne mogu da podnesem kada se tako osećam.	1	2	3	4	5
6	Ne mogu podneti kada se ne dopadam ljudima koji su meni značajni.	1	2	3	4	5
7	Ja vredim kao osoba čak i ako ne uradim dobro stvari koje su mi važne.	1	2	3	4	5
8	Kada se osećam neugodno, napeto ili nervozno mislim da je to dokaz moje bezvrednosti.	1	2	3	4	5
9	Ako mi se desi da ne uradim dobro stvari koje su mi značajne, doživljam to kao pravu katastrofu.	1	2	3	4	5
10	Užasno je i grozno kada me ljudi iz mog okruženja tretiraju nepravedno.	1	2	3	4	5
11	Ne mogu da podnesem i neizdrživa su mi neka loša osećanja i unutrašnja stanja.	1	2	3	4	5
12	Strašno je kada se nekome ko mi je značajan ne dopadam.	1	2	3	4	5
13	Iako želim da uspem u onome što mi je važno, uviđam da ne moram nužno uspeti u tim stvarima.	1	2	3	4	5
14	Ako se ne dopadnem nekome ko mi je važan, to znači da sam ja nedopadljiva osoba.	1	2	3	4	5
15	Ja moram dobro uraditi ono što mi je važno i neću prihvatiti ako to ne uradim dobro.	1	2	3	4	5
16	Ljudi moraju biti pravedni prema meni i ne prihvatam njihovu nepravednost.	1	2	3	4	5
17	Užasno me nerviraju svakodnevni problemi, teškoće ili ograničenja.	1	2	3	4	5
18	Kada me neko tretira neuviđavno pomislim kako to pokazuje koliko loših i nepopravljivih ljudi ima na ovom svetu.	1	2	3	4	5
19	Prihvatam sebe i osećam se kao vredno ljudsko biće i onda kada me odbaci neko ko mi je značajan.	1	2	3	4	5
20	Ako ne uradim dobro stvari koje su mi jako važne, mislim da je glavni razlog moja lična neadekvatnost.	1	2	3	4	5
21	Užasno je kada čovek ne uradi dobro neke važne stvari u životu.	1	2	3	4	5
22	Grozno je kada me neko tretira bez dovoljno uvažavanja.	1	2	3	4	5
23	Neophodno mi je da imam lep život i ne mogu da prihvatim kada mi život nije dovoljno lep i prijatan.	1	2	3	4	5
24	Mislim da moram uvek da se dopadnem ljudima i jako teško bih prihvatila da se nekome ne dopadnem.	1	2	3	4	5
25	Ne volim kada me neko tretira bez uvažavanja, ali mogu to podneti.	1	2	3	4	5
26	Ako me odbaci neko ko mi je značajan, to znači da sam ja bezvredna osoba.	1	2	3	4	5
27	Ne mogu da podnesem kada ne uradim dobro stvari koje su mi važne.	1	2	3	4	5
28	Ne mogu da podnesem kada me ljudi ne tretiraju onako kako zaslužujem.	1	2	3	4	5
29	Neophodno mi je da imam smiren život i ne mogu da prihvatim životne teškoće.	1	2	3	4	5
30	Verujem da su ljudi koji me tretiraju nepravedno bezvredni i loši ljudi.	1	2	3	4	5
31	Šteta je ako se ne dopadam nekome ko se meni dopada, ali to nije strašno.	1	2	3	4	5
32	Ako me ne vole ljudi koji su mi značajni to pokazuje koliko sam bezvredna.	1	2	3	4	5
33	Od suštinske je važnosti da neke stvari u životu uradim dobro i stoga ih moram raditi dobro.	1	2	3	4	5
34	Moram biti poštovana i uvažavana i ne mogu da prihvatim nepoštovanje.	1	2	3	4	5
35	Užasno je kad čovek ima neprilike u životu i kada je zbog toga opterećen.	1	2	3	4	5
36	Ne bih podnela da me ne voli ili ne prihvata neko ko mi je značajan.	1	2	3	4	5
37	Mogu dobro da podnesem kada sam opterećena životnim problemima.	1	2	3	4	5
38	Ne bih vredela kao osoba ako bih imala više neuspeha u životu.	1	2	3	4	5
39	Nepodnošljiva mi je pomisao na neuspeh u nekim značajnim stvarima.	1	2	3	4	5
40	Grozno je kada je neko prema meni neuviđavan.	1	2	3	4	5
41	Mislim da je užasno kada se osećam loše, utučeno, napeto ili nervozno.	1	2	3	4	5
42	Od suštinske mi je važnosti da me vole i prihvataju ljudi koji su mi značajni.	1	2	3	4	5

		nimalo	malo	umereno	prilično	izrazito, snažno
43	Važno mi je da su ljudi prema meni pravedni, ali uviđam da ne moraju biti.	1	2	3	4	5
44	Kada u životu naidem na teškoće ili imam neke probleme mislim da sam ja kriva i da to dokazuje koliko sam loša.	1	2	3	4	5
45	Za mene je prava katastrofa ako doživim neuspeh u važnim stvarima.	1	2	3	4	5
46	Ne mogu da podnesem kada me ljudi ne poštuju.	1	2	3	4	5
47	Ne mogu da podnesem kada naidem na životne teškoće ili neprilike.	1	2	3	4	5
48	Neophodno mi je da budem prihvaćena i voljena od ljudi do kojih mi je stalo.	1	2	3	4	5
49	Želim da budem prihvaćena od ljudi do kojih mi je stalo, ali uviđam da ljudi ne moraju da me prihvataju samo zato što ja to želim.	1	2	3	4	5
50	Kada imam probleme i neugodnosti u životu mislim da manje vredim kao osoba.	1	2	3	4	5
51	Moram biti uspešna u stvarima koje su mi važne i ne prihvatom neuspehe.	1	2	3	4	5
52	Najvažnije mi je da me ljudi oko mene uvažavaju i poštuju.	1	2	3	4	5
53	Ne smem dozvoliti da se osećam utučeno ili nervozno i mislim da ne mogu prihvatiti loša osećanja.	1	2	3	4	5
54	Neizdrživo mi je ako me neko ko mi je značajan ne voli ili odbacuje.	1	2	3	4	5
55	Ako se ljudi prema meni ponašaju bez poštovanja to pokazuje koliko su loši.	1	2	3	4	5

GABS 55 – General Attitude and Belief Scale 55-item

Appendix 2

Upitnik frustracione netolerancije

Pred vama se nalaze neke uobičajene misli i uverenja koje ljudi mogu da imaju kada su uznemireni ili frustrirani. Pročitajte svaku tvrdnju i ocenite koliko dobro ona opisuje vaša uverenja u ovim situacijama. Koristite skalu u sledećem značenju: odsutno-1; blago-2; umereno-3; jako-4; veoma jako-5.

		odsutno	blago	umereno	jako	veoma jako
1	Moram naći najlakši način da rešim problem, ne mogu da izdržim da se mučim.	1	2	3	4	5
2	Ne mogu da podnesem kada moram da čekam na stvari koje želim <u>odmah</u> .	1	2	3	4	5
3	Apsolutno moram da se oslobodim uznemiravajućih osećanja što brže, ne mogu da izdržim kada ona traju.	1	2	3	4	5
4	Ne mogu da podnesem da budem sprečena da ostvarim svoj puni potencijal.	1	2	3	4	5
5	Ne mogu da podnesem da radim zadatke koji mi se čine suviše teškim.	1	2	3	4	5
6	Ne mogu da podnesem kada se ljudi ponašaju protivno mojim željama.	1	2	3	4	5
7	Ne bih mogla da podnesem osećaj da gubim razum.	1	2	3	4	5
8	Ne mogu da podnesem frustraciju kada ne ostvarim svoje ciljeve.	1	2	3	4	5
9	Ne mogu da podnesem da radim nešto kada nisam za to raspoložena.	1	2	3	4	5
10	Ne mogu da podnesem ukoliko drugi ljudi stanu na put onome što želim.	1	2	3	4	5
11	Ne mogu da podnesem određene misli.	1	2	3	4	5
12	Ne mogu da tolerišem snižavanje sopstvenih standarda čak i kada bi to bilo korisno.	1	2	3	4	5
13	Ne mogu da podnesem kada moram da se teram da radim.	1	2	3	4	5
14	Ne mogu da podnesem kada me uzimaju „zdravo za gotovo“.	1	2	3	4	5
15	Ne mogu da izdržim situacije u kojima bih mogla da se osetim uznemireno.	1	2	3	4	5
16	Ne mogu da podnesem da završim sa poslom ukoliko nisam u potpunosti zadovoljna time kako sam ga obavila.	1	2	3	4	5
17	Ne mogu da izdržim opterećenje kada moram da uradim nešto <u>odmah</u> .	1	2	3	4	5
18	Ne mogu da podnesem kada moram da se povinujem zahtevima drugih.	1	2	3	4	5
19	Ne mogu da izdržim uznemirujuća osećanja.	1	2	3	4	5
20	Ne mogu da podnesem da radim nešto ukoliko nisam u stanju da to uradim dobro.	1	2	3	4	5
21	Ne mogu da izdržim da radim stvari koje zahtevaju dosta napora i muke.	1	2	3	4	5
22	Ne mogu da podnesem kada ja moram da se menjam, a drugi su u krivu.	1	2	3	4	5
23	Ne mogu da nastavim sa svojim životom, ili da budem srećna, ako se stvari ne promene.	1	2	3	4	5
24	Ne mogu da podnesem osećaj da nisam na visini nekog zadatka.	1	2	3	4	5
25	Ne mogu da podnesem kada moram da istrajavam u zadacima koji mi ne prijaju.	1	2	3	4	5
26	Ne mogu da podnesem kritiku, naročito onda kada znam da sam u pravu.	1	2	3	4	5
27	Ne mogu da podnesem da izgubim kontrolu nad svojim osećanjima.	1	2	3	4	5
28	Ne mogu da podnesem nikakav pad sopstvene samokontrole.	1	2	3	4	5