

## **REVIEW**

**Dissertation on the topic: Difficult experiences in childhood and health behavior in adulthood**

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The dissertation topic developed by Mihaela Beloreshka is on the complex topic of difficult childhood experiences and their interrelationship with serious physical and mental illnesses. The doctoral student accepted this challenge and, with the support of her supervisor, followed the path of theoretical analyzes and in-depth psychological analyzes on empirical research.

The first chapter of the dissertation presents a rich overview of the development of research approaches to the assessment of childhood traumas and the construction of diagnostic models, and secondly, a rich overview of the interrelationship of these traumas with eating disorders. The doctoral student goes through her overview of the early and classical schools of psychiatry and psychoanalysis for the diagnostic assessment of childhood traumas and their negative impact on the individual's personal development and social adaptation. The part where she discusses work on post-traumatic stress is extremely valuable . where impairments affect brain structures and a wide range of problematic personality development is manifested, justifying the introduction of the new category "complicated PTSD". When the trauma acutely affects the cognitive, emotional, volitional level of the person, buffer zones against stress are damaged, which leads to pathological consequences. In a subsection on childhood trauma, the doctoral student discusses types of trauma of type 1 - when it is single, trauma of type 2 when it is from repeated exposure on extreme external events and type 3 trauma it represents an experience on multitude injuries that include violence and all occur at a vulnerable and early age . Here she discusses the modern thesis that "the body remembers," supported by modern neuroscience research . The doctoral student makes very good theoretical analyzes of scientific research by various authors, where she points out specific correlative comparisons of similarities and differences in relation to the type of childhood trauma and the subsequent pathological manifestations. Thus, she manages to deduce that " eating disorders. " figure like

independent symptom with varying or typical character which presents direct connection between chronic stress from trauma type 2 and 3 and risk from development on unhealthy nutritional behaviors ". In a separate section, Beloreshka reviews contemporary theories of chronic stress and health. Here the main emphasis is on the modern aspects of the neurobiological level, evolutionary and psycho-social development of the individual. Stress is considered not only as a separate reaction to an event, but as " generalized ". condition on safety or insecurity based on the past experience ". The modern emphasis on generalized insecurity theories is largely tied to an unconsciously perceived danger , not from stressors . The doctoral student manages to analyze them through the eyes of fixed traumatic emotional experiences and distorted cognitive beliefs, which after the end of the traumatic event, continue to maintain an active stress hormone response of cortisol , adrenaline, norepinephrine . All this provokes a serious somatic problem. Beloreshka also discusses the importance of individual differences and the tendency to perceive insecurity , which also depends on genetic predisposition and vulnerability in children's neuropsychological development, which gives rise to the chronic unconscious experience of "generalized insecurity ". In the next subsection Beloreshka again gives a good overview of modern social safety theories, analyzes of psycho -immuno -neurological evidence for the role of chronic stress in psychosomatic diseases and " epigenetic re - programming of congenital immune cells ". The thesis that modern scientific research in this area shows how " biological embedding on the stressful one response , provoked from the traumatic ones the experiences remodel the structure on the neural connectivity which from his own country can yes influence on variety from behavioral , emotional and physiological reactions like anxiety , aggression , mental flexibility and memory ". In these subsections, many modern scientific studies from different countries and authors are systematized, which Beloreshka forms in overview tables, diagrams, synthesized conclusions and recommendations.

The fourth part is a specialized overview and theoretical analysis of traumatic experiens childhood (TEC), patterns of eating behaviors and psychological characteristics. In this subsection , there are many good author's diagrams illustrating the logical psycho-somatic connection between TEC and subsequent biological, psycho-emotional , behavioral and psychosomatic diseases. Here, I want to emphasize that this wide-ranging theoretical analysis of modern scientific research, arranged in the logical interrelationship of specific TEC and the subsequent damage

to the brain, body and personal development of adolescents, across the wide spectrum of biological diseases, communication disorders and eating behavior is a true masterpiece and should be published to support psychologists, doctors, parents, social workers and health workers in understanding this very painful problem for our Bulgarian reality!

- The second chapter presents the theoretical framework of the study. Empirical research is situated and constructed within on the bio - psychosocial model to health and the pyramid on the heavy ones childhood experiences . The model is structured into five main interrelated areas. The aim of the dissertation is focused on the relationships and degree of interaction between TEC and eating behaviors and health status. 6 main hypotheses have been constructed, which make it possible to examine and analyze key areas of TEC and the subsequent disorders in personality development, functioning and health status. The research was conducted in two stages: The first stage of a qualitative pilot study is " to establish the individual ones experiences and understandings associated with severe childhood and developmental experiences on nutritional behaviors in adulthood ". Here I definitely support the chosen thesis, to put " emphasis on the individual understanding and meaning of TEC, as well as the interactions between them , which they can yes explain heterogeneity on the answer on stress , health behaviors and health status in maturity ". An author's semi -structured interview, qualitative method with 11 questions was developed based on a contemporary model examining childhood eating patterns and behaviors involving interaction with TEC. Thirteen people participated in the pilot study, the interviews were recorded, the data are transcribed , analyzed in detail and described with help on thematic analysis on the content , comparative techniques are also applied .

- The second stage is the main empirical research, to study the psychosocial correlates on severe psychological trauma in childhood and food behaviors in adulthood . In the preparation of the toolkit, there are expert assessments by health professionals and experts in the field of nutrition. 11 questionnaires specialized for the assessment of eating problems, eating behavior, emotional eating (*Teruel*

*Orthorexia Scale* , *Uncontrolled Binge Eating Questionnaire*, *Short version of a personality traits questionnaire ( revised Bulgarian version)* , *Scale for depressive symptoms, anxiety and Lovibond stress*, *Short version of the Emotional Regulation Scale (Freece)*, *Resilience Scale*, *Difficult Childhood Experiences Questionnaire*, *Multidimensional Body Attitudes Questionnaire*, *Life Satisfaction Scale*). In the main study, 722 researched individuals took part, with detailed demographic characteristics, relationships with parents, variants of dysfunction in the family environment, school and social environment. The most common TPDs are: domestic violence, emotional neglect, violence, sexual and physical abuse. Descriptive characteristics of the sample by health behavior and health status are presented.

The third chapter of the dissertation presents extremely serious, progressively complicated and deepening statistical analyses, qualitative analyzes and interpretations of the research results, arranged in a cluster sequence, in relation to the tasks and hypotheses of the research. The pilot study provides very detailed information about the relationship between the family environment and eating habits, diet and eating structure, including negative food patterns, traditional Bulgarian cuisine or purchased food, but with a dominance of unhealthy types of products, lack of parental control over unhealthy food and patterns of eating. Severe, traumatic and conflicting events experienced in childhood are described in great detail for each subject . Subsequent problems in health status and negative eating patterns and serious behavioral disorders were analyzed separately for each participant. The summarized data from the pilot study, the comparative comparison with the data of foreign researchers give Beloreshka reason to confirm his expectations " for the model on origin and development on the food behavior , consequently on heavy childhood experiences " . The data from the main empirical study begins by presenting the specialized statistical improvements of all the questionnaires, involving manipulation of the factorial weights of the statements in each factor to establish test validity and reliability as a research construct. This precise processing described and illustrated for the four eating behavior questionnaires gives me reason to encourage in future Beloreshka studies to be combined into a multidimensional test for eating disorders! The remaining scales can be combined as a specialized test battery for the psychodiagnostic assessment of

personality characteristics, severe childhood experiences, stress levels, and personality decompensation in eating disorders. Even here, I want to emphasize that the construction of this serious and broad-spectrum toolkit and its preparation for scientific specialized research is an important contribution to the dissertation, and the doctoral student and the scientific supervisor deserve admiration!

In the next part, the specific data from the empirical study are presented with the analyzes and interpretations made, described in the logical sequence of the proposed hypotheses, the established ( *one-factor dispersion analysis* ) and modern ( *post hoc test the Tukey HDS , which compares groups pairwise; multiple stepwise regression analysis* ) statistical analyzes. Again, all statistical analyzes are extremely detailed, precise and very well illustrated in tables and charts, which aids in understanding the multitude of data and analyzes, and clearly highlights essential interrelationships. At each stage of the discussion of the analyzes, Beloreshka commented separately on the results of each hypothesis and made comparative analyzes of her interpretations against data from scientific studies by foreign authors.

I note, some interesting and specific analyzes for the Bulgarian population, that TEC, mainly sexual and domestic violence, is more often registered among women, while among men it is more often bullying by peers, violence in the community and collective violence. All of them are interpreted proportionately to cultural norms and long-standing practices, often veiled in the community. In hypothesis 2, the results of the study show the highest levels of emotional, restricted eating, or uncontrolled overeating, in people with obesity. Here, Beloreshka analyzes historically the interpretations of this problem, where it was originally believed that these people could not stick to a dietary regime, due to high levels of stress, anxiety, depression or difficulties in emotion regulation, with persistent negative emotional experiences. Nowadays, the doctoral student writes, those of them who begin to suffer from a "chronic illness" to eat more unhealthily and demonstrate more orthorexic behavior, or to eat more and more emotionally and restrictedly, as well as uncontrollably overeat, stand out. . In the next stage, as a consequence, they develop severe somatic diseases, which further disturb the emotional and volitional personality and this leads to an increase in BMI. This interpretation of the dynamics and interrelationship of a mild eating disorder progressing to a severe somatic one that provokes an even more severe and pathological eating disorder is extremely important for modern psychosomatic models of eating disorders. The trends are clearly distinguished, people who do not have chronic diseases have higher values

of healthy orthorexia , while people with chronic diseases start to have orthorexia nervousness . Analyzes to distinguish healthy eating from obsessive engagement with food in orthorexia are also very serious nervousness in the Bulgarian context.

For Hypothesis 3, the discussion of analyzes and interpretations shows with statistical significance that types of TEC differentiate different eating behaviors: physical neglect , witnessing emotional or domestic abuse, personally experienced sexual violence, correspond with orthorexia nervosa , high levels of emotional , limited nutrition and out of control overeating ; peer bullying with an unhealthy diet, with more high fat and carbohydrates; sexual personal violence was the strongest predictor of binge eating episodes, and combined physical and sexual violence predicted outcomes from dissatisfaction on the body , overeating and obesity .

Of the analyzes under hypothesis 4, the generalizations that significant but weak connections only between the general number experienced violence and the emotional , limited eating and the uncontrollable overeating . Well the PhD student interpreted that " the interrelationship between the studied ones phenomena can yes be taken out from the different ones by type , intensity and scope heavy experienced in ania , where eating becomes a pattern of emotional response , but uncontrolled or over-controlled and unhealthy. The consequences of depression, stress, anxiety, the personality trait of neuroticism , lower satisfaction with life and numerous somatic diseases are clearly differentiated here ; a negative relationship was inferred between orthorexia nervousness and resilience, the assessment on the external kind , satisfaction from life , as well as personal extroversion trait . The significant one is deduced positive correlational interrelationship between the healthy nutrition and the positive evaluation only on the external appearance and consciousness like personal trait . The doctoral student managed to bring out a sustainable trend that with increasing on the psychological endurance in life difficulties everything also raises the level on concern for health and healthy ones nutritional habits . In this discussion, a comparative analysis was also made with the data of foreign authors, where specific features specific to our culture were differentiated .

To yes everything check the hypothesis for prognostic function of the described factors is conducted step by step regression analysis with the dependent variable being eating behavior, and the independent variables being the underlying operationalized factors that theoretically they can yes be predictors on the food behavior . The statistical one procedure , does and the check on elevated Hypothesis 5, a nalized are two the road on influence . These analyzes are extremely detailed

and vividly presented, with an explanation of every detail, arranged in the logic of the research model constructed from the theoretical analyses. This part of the thesis evokes sincere admiration for the skills of the PhD student, assisted by the personal research supervisor, to create a stepwise research model in complex psychological constructs and interaction, which is based on the practical experience of clinical psychologists, psychotherapists and doctors in this field. I share leading interpretations from the statistical analyses: Highest prognostic value for the unhealthy feeding there is the assessment on the external species like part from attitudes to the body which everything associated with anxiety and depression. The more pronounced disorders in orthorexia nervousness are associated with depression, anxiety, decreased endurance, negative affectivity , obsessive-compulsive attitudes and physical dysmorphic disorder , perfectionism and neuroticism , chronic exposure on diets . Specific predictors of emotional eating and cognitive restriction of eating, primarily related to personality traits (*extroversion* , *neuroticism*), and specific problems in the family and parental behavior, were derived. Conversely, the regression model and the PhD student's interpretations bring to the fore healthy orthorexia, satisfaction with body and compliance on nutritional recommendations , as well as maintenance on healthy weight, dominant personality traits conscientiousness and openness to new experience.

With each derived predictor , the doctoral student makes an interpretation of how specific TEC have adversely changed the personal development of adolescents, which is very proportional to the clinical -psychological regularities. And the specific recommendations made are in the direction of how to promote healthy orthorexia in psychological counseling and how to avoid or limit orthorexia nervousness and unhealthy eating patterns.

The analyzes presented in detail under hypothesis 6 discuss the significant effect of psychosocial correlates on eating behavior. In this part of the thesis, multiple stepwise regression analysis was applied to test the effect of psychological correlates and eating behavior, health behavior and life satisfaction. All this is reflected in graphs, where each factor is described with its components. Eight variables can significantly predict life satisfaction, and for health status, seven predictor variables have been identified . In the discussion again there are comparative analyzes with data from other authors.

**The last part is a summary and conclusion** of the dissertation analyzes and interpretations. The developed research instrument is significant for the

multidimensional structure on studies a problem . Data from the pilot study are summarized for “ the model of origin and development on the food behavior consequently on TEC. The differentiating effect are summarized on sociodemographic ones characteristics on the food behavior . The differentiator is generalized effect of TEC, their number and specificity of manifestation. Correlational and progressively more complex regression analyzes that show the interrelationships between the studied variables are extremely valuable and contributing. phenomena and influence them on the food behavior , satisfaction from life and health status . Specific analyzes show that “ tough experiences in childhood everything connect more consistent with psychological ones factors than with food behavior ”, and the greater number of TEC " are in weak positive , but consistent connections with the symptoms on stress , anxiety , depression , concern for weight , neuroticism and deterioration subjective healthy status ". The analyzes of the results for healthy eating, orthorexia and unhealthy eating, orthorexia with satisfaction with life , consciousness , self- esteem on the external kind , healthy status , as well as with the personality traits of neuroticism , emotional suppression, depression, health status, resilience , awareness, emotional regulation, life satisfaction. The PhD student, with a very good sense of realism and a sense of self-criticism, analyzes the limitations of the study and plans a future direction of research.

The scientific contribution of the dissertation was reported by Beloreshka on a methodological, empirical and practical level. Empirical research deepens the analysis of the predictive role of developmental and psycho-emotional factors character for each one from the researched nutritional behaviors , satisfaction from life and health status . She rightly believes that it is very important here to follow up with screening programs and programs for early prevention of eating disorders. The recommendations for psychological counseling and psychotherapy based on the analyzes of the results are extremely valuable for the practice.

**As a reviewer**, my assessment is that Beloreshka 's doctoral dissertation exceeds the requirements for a doctoral dissertation and to some extent meets the criteria for a major doctoral dissertation. I definitely believe that Beloreshka 's dissertation is an excellent testament to the "new generation of health psychologists" who demonstrate knowledge and skills in the field of the complex interrelationship between the modern difficult world causing frequent TEC, the assessment of medical deficiencies and the psychology of their early processing. but with already formed



skills to conduct complex scientific research that provide the specific goals and guidelines of prevention, counseling and psychotherapy.

**My personal recommendations for the doctoral student are:**

- ✓ To continue shaping multidimensional screening study with which to conduct future assessment of parents to do a generational analysis of their TEC and subsequent generational eating disorders and healthy eating patterns.
- ✓ To write a practical guide to support the accurate diagnostic assessment and interpretation of TEC, subsequent eating problems, personality deficits, and the necessary specific goals of psychotherapy.
- ✓ To publish in more professional and public journals the analyzes and recommendations to increase the culture and understanding of these very current problems in our social community.
- ✓ I suggest that the PhD student and the research supervisor make postgraduate programm based on the analyzes from the scientific research.

**Beloreshka 's doctoral dissertation represents her serious intellectual, personal maturity and formed skills for scientific research, in which I propose to the respected members of the Scientific Jury, as well as myself, to award Beloreshka the scientific and educational degree "Doctor" in science specialty:**

**3.2. Psychology , ( Psychology of health ) !**

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**Review prepared by:**

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