

## **REVIEW**

by Prof. Valeri Stoilov Stoyanov, Doctor of Sciences,

about a dissertation on:

**"PSYCHOLOGICAL ASPECTS OF GAMBLING BEHAVIOR"**

to acquire

educational and scientific degree

"doctor"

Field of higher education

3. Social, economic and legal sciences,

professional direction 3.2. Psychology (Medical Psychology)

by Petya Dimitrova Petkova

The review was developed on the basis of protocol No. 1/ 21.08.2024 of a meeting of the Scientific Jury, determined by order No. R-109-271/ 05.08.2024 of the Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna.

Varna, 2024

## **I. General presentation of the dissertation work, topicality of the topic and research results.**

The topic of doctoral dissertation of Petya Petkova is undoubtedly current and socially significant. As she herself emphasizes in the introduction to the work, in the last decade, an incredible growth in the spread of various types of gambling games and the number of people involved in gambling in general has been observed in our country. Even if it is supposedly economically justified, the phenomenon creates significant negative impacts on public health and the well-being of gambling practitioners and their families. In turn, this is associated, especially considering the number of gambling addicts, with serious losses of human resources and human capital, which ultimately causes serious economic damage to the country and calls into question the entire expediency of the existence of such economic entities, such as gambling companies. Of course, this problem is in the field of economic analysis and expediency and political will of the solvers of socio-economic problems. Examining the problem from a psychological point of view, however, implies an analysis of «consumer behavior» in the direction of gambling and the corresponding psychological mechanisms and structures that condition this behavior. This is precisely the goal that Petya Petkova sets for herself, namely «...identification and analysis of the factors that will define a behavior as gambling» (p. 8).

The author of the dissertation finds the achievement of the stated goal through the analysis of a theoretical model that integrates biological theories, personality theories and cognitive theories explaining the specifics of gambling behavior, synthesizing his own model of the investigated phenomenon and constructing a screening methodology for evaluating gambling behavior.

The well-defined topicality of the problem in the introduction of the dissertation work and the possible ways to penetrate into the essence of the studied phenomenon finds its adequate realization in the unfolded content, structurally built as follows: introduction; two chapters, the first of which presents a theoretical overview of the problem, and the second - empirical research methodology, discussion of results, conclusions, limitations and future directions, bibliography and appendices. The description of the doctoral student's own empirical research and analysis of the results takes up half of the volume of work, which I consider to be appropriate and I believe that this is how his contribution to the scientific enrichment of the researched problem can be more clearly differentiated.

The text of the dissertation is spread over 148 pages of computer printout, of which 5 pages are appendices. A remarkable number of 272 literary sources were used, of which 34 are in Cyrillic and the rest in Latin. Most of them are from the last 10-15 years.

In the first part of the first chapter, Petya Petkova presents a brief historical retrospective on the emergence of gambling as a social phenomenon, the influence of culture on the tolerance and development of gambling and past attempts to study the phenomenon. The analysis of the amplitude of influence of culture on the spread of gambling is particularly impressive. It ranges from complete abstinence in some Muslim societies, to widespread in North America, European societies and in China. The tolerance of gambling advertising in different cultures is also different.

Today, the possibilities of spreading gambling are multiplied by the presence of the Internet and social networks. However, what is still unclear and related to this phenomenon is the concept of explaining gambling addiction compared to explaining alcohol and opiate addiction.

Proceeding from the above fact, the doctoral student in the second part of the first chapter "Factors influencing gambling" presents a consistent analysis of the influence of factors of the environment, the mental regulation of individual activity, incl. the influence of genetic factors, neurobiological



mechanisms and demographic factors. The doctoral student rightly concludes (p. 20) that genetic factors can only be a prerequisite, can be a necessary condition, but not sufficient for the development of gambling behavior and subsequent gambling addiction. Whether gambling addiction will occur «...depends on a number of social and psychological factors...».

In the third part of the first chapter «Deviance in gambling and clinical criteria», the doctoral student devotes to the clarification of the conceptual field related to the studied phenomenon. The author of the paper clarifies concepts such as pathological gambling behavior, which has its clinical dimensions, etc. gambling addiction with its subclinical dimensions. Addiction is described as a compulsive, insurmountable need to gamble, in which a person loses touch with social life and there is a complete "immersion" in gambling, in which "...a person ceases to respond adequately to real life and ignores vital responsibilities and problems." (p. 29). Gambling behavior is logically shown to be a more general concept than gambling addiction. Dependence is preceded by the use of gambling services, through subsequent abuse, in order to reach at one point, as a result of the persistence shown, a loss of control over the use of personal resources - time and money in order to benefit from the "gambling" service. In this regard, the doctoral student, starting from the psychological logic to explain the phenomenon, is looking for a model that will give an explanation of which personal characteristics determine the transition through these phases of emergence and development of gambling behavior, until its degeneracy into addiction. In this regard, the stages of addiction and the clinical criteria for its assessment are analyzed based on research to date. An attempt has been made to explain gambling behavior in relation to accentuations of character and attachment style. Some interrelationships are outlined, but as the author of the dissertation emphasizes, the research results are still inhomogeneous and controversial.

In the fourth part of the first chapter, the emphasis is on the personality as a second-order regulator with its inherent generalized expectations. In this regard, the explanatory potential of social learning, motivational, attitudinal, planned behavior and risk theory theories for gambling behavior was investigated.

In the fifth, last part of the first chapter «Emotional regulators and affective behavior» the relationship between the affective regulation of activity and gambling behavior is considered. In this regard, analyzes of stimulus conditioning - classical and operant - and the explanatory possibilities of the two models for gambling behavior are offered. The constructs "sensation seeking" and "impulsivity" were analyzed, as well as results of research by other authors on the influence of these personality characteristics on gambling behavior.

The theoretical part ends with conclusions that present the main theses of the doctoral student and outline the model for the own empirical research presented in the second part of the dissertation work. The basic premise is that neither the personality itself can be the basis for explaining gambling behavior, nor the social environment through a person's exposure to different situations. The explanation can be found in the complex interrelationship between the two factors - personality and social situations.

*The theoretical part of the dissertation shows the in-depth understanding of the problem by the doctoral student, its interdisciplinary understanding and the ability to critically evaluate the existing theoretical models and the results of empirical research on topics related to the dissertation, as well as the possibility of their application for the specific purposes of the present study. An impressive number of literary sources have been processed, which have been used correctly.*

*The theoretical overview ends with adequate conclusions and a generally outlined model of the doctoral student's own empirical research. It relates to one of the identified deficits in the subject*



*area of the study – a homogeneous explanatory model for gambling behavior in order to create tools to identify nascent and developing gambling behavior that may develop into gambling addiction.*

In the second chapter of the dissertation research, the methodology of the doctoral student's own empirical research is presented. A significant research goal is stated, the achievement of which implies the construction and validation of a screening methodology for the assessment of gambling behavior.

The objective is decomposed into six research tasks. Five logical hypotheses from a scientific point of view are formulated, which are empirically verifiable.

A battery of: Marvin Zuckerman's Sensation Seeking Scale (SSS) was used to collect the empirical information; Schubert's methodology for diagnosing level of readiness for risk (PSK); author's scale - Scale for screening gambling behavior, as well as a survey part for collecting individual-demographic data.

The author's scale for the doctoral student is presented in this part of the dissertation. Its purpose is not a diagnostic conclusion, "...but an early identification of persons who are at risk of escalation and accompanying financial, psychosocial and behavioral problems, including - deviant behavior" (p. 78). The methodology includes 14 items that are answered on a four-point Likert scale - yes, rather yes, rather no, no. The scale was created on the basis of a model that assumes that gambling behavior is based on certain attitudes and subjective norms, characteristics of behavioral control, impulsivity, risk propensity, attachment patterns, specific motivation and sensation seeking.

To verify the scale, its validation and check of construct validity and external validity, an empirical study was conducted with 242 subjects. The subjects were divided into three groups. The first group includes students from two Varna universities. In the second group are persons hospitalized at the St. Marina Hospital - the city of Varna, in the drug addiction clinic and persons who visit the Gambling Addicts Anonymous group. The third group of subjects completed the online battery of methods. There are 193 persons without gambling addiction, and 49 persons with addiction.

A set of appropriate statistical filters were used to process the empirical information – descriptive statistics, correlation analysis, factor analysis, ROC curves of the variables, Cronbach's Alpha to assess internal consistency of scales. The statistical processing of the results was carried out with the statistical program package "SPSS - 22".

To assess the construct validity, the doctoral student compared the frequency distribution in the different groups for the individual items, both according to the author's scale and according to Marvin Zuckerman's sensation-seeking scale and Schubert's risk-readiness diagnostic methodology. There is a significant difference between the two groups, which is in favor of a more pronounced performance in the group of addicts according to individual indicators. The author scale has high correlational interrelationships with Zuckerman and Schubert's methodologies. These comparisons and correlational interrelationships are a sign of validity of the author's methodology.

The results of the research with the screening methodology shows addicts with a pronounced greater trust in luck, the belief that those who don't take risks don't win, they like games that bring adrenaline, they are impulsive, they would go to extremes to achieve a desired goal, they are not defined as cautious and balanced and have a hard time coping with social norms and demands.

The analysis made with ROC (Receiver Operating Characteristic Analysis) curves of the variables shows sensitivity regarding the two groups - the addicts and those who are not. In other words, the ROC curve shows, in general, the classification abilities of a given test, which in the case of the

author's scale are very good. The factor analysis of the scale, after rotation, shows that it contains 4 latent factors that explain the dependent behavior.

*I consider the model proposed by the doctoral student for the empirical research as optimal for achieving the goal of the dissertation work.*

*In general, the empirical research is appropriately planned and conducted on the basis of the doctoral student's own model, logically synthesized from the theoretical analyses.*

*Empirical information is appropriately statistically processed. Qualitative analyzes are commensurate with the empirical results obtained.*

*The dissertation has scientific and scientific-applied contributions, in an up-to-date field of human knowledge and clinical practice.*

*The abstract fully reflects the content of the dissertation work.*

*The main results of the dissertation research are presented to the scientific community and interested audiences at scientific conferences and in renowned Bulgarian scientific journals.*

*I have not detected any plagiarism by the doctoral student. Literary sources are used correctly.*

## **II. Scientific and scientific-applied contributions**

The dissertation gives reason to accept the doctoral student's self-assessment of the scientific and scientific-applied contributions. Undeniably, a conceptual model of gambling behavior has been presented, and sensitive indicators have been extracted in the form of personal characteristics for the development of a screening methodology. One was developed by the doctoral student, and procedures were applied to test its validity and sensitivity to indicators of gambling behavior.

Methodology is an economical, convenient and valid psychological tool for screening research.

## **III. Notes and recommendations**

The theoretical part of the dissertation largely has the qualities of a compendium on the problems of gambling behavior, which on the one hand bypasses the requirement for a theoretical part of a dissertation, and on the other - there are repetitions of the same topics in the different parts of the first chapter, which creates some difficulty in the orientation of what the doctoral student is stepping on to develop his own empirical research and achieve the goal. My recommendation in this regard is that, in the future, when developing monographic works, the theoretical part should have a higher degree of generalization of the main theses and analyses. For example, the thesis that a person's behavior is determined by the interaction between personality and social situations may be leading in explaining gambling behavior. On this basis, the analyzes can be concentrated around the personal regulation of the activity and the factors that influence this regulation and the role of the social environment in this regard.

I have the following question for the doctoral student: How could the four latent factors of the author's methodology, obtained when rotating the matrix within the factor analysis, be explained? Who are they and what do they reflect, ultimately what do they explain?



Taking into account the value of the dissertation work and the results achieved, I recommend that it be published as a monograph, of course after further reworking the theoretical part, summarizing and compressing it into "larger units", as well as refining the presentation of the doctoral student's own empirical research and supplementing it with explanations of the factor structure of the scale.

#### IV. Conclusion

The presented dissertation work is a complete and up-to-date study in a significant area of knowledge about man, his experiences and behavior. It has the characteristics of a monographic work. The scientific contributions are of a theoretical and applied-practical nature.

My overall evaluation of the work is positive, and this gives me the reason to recommend to the respected members of the scientific jury, with full conviction, to vote for the award of the educational and scientific degree "Doctor", field of higher education 3. Social, economic and legal sciences, professional direction 3.2. Psychology (Medical Psychology) of Petya Dimitrova Petkova.

09/25/2024

City of Varna

Reviewer:

Заличено на основание чл. 5,  
§1, б. „В“ от Регламент (ЕС)  
2016/679

Prof. Valeri Stoyanov, D.Sc.