

**Journal Pre-proof**

## **Gambling in adolescents during the financial crisis in Greece**

**Assimina P. Paleologou,<sup>1,2</sup> Helen Lazaratou,<sup>3</sup> Dimitris K. Anagnostopoulos,<sup>2</sup> Afroditi Trimpouki,<sup>4</sup> Marina Economou,<sup>1</sup> Melpomeni Malliori,<sup>1</sup> Charalampos Papageorgiou<sup>1</sup>**

**DOI:** <https://doi.org/10.22365/jpsych.2021.006>

**To appear in:** Psychiatriki Journal

**Received date:** 9 August 2020

**Accepted date:** 14 November 2020

**Please cite this article as:** Assimina P. Paleologou,<sup>1,2</sup> Helen Lazaratou,<sup>3</sup> Dimitris K. Anagnostopoulos,<sup>2</sup> Afroditi Trimpouki,<sup>4</sup> Marina Economou,<sup>1</sup> Melpomeni Malliori,<sup>1</sup> Charalampos Papageorgiou,<sup>1</sup> Gambling in adolescents during the financial crisis in Greece, Psychiatriki (2021), doi: <https://doi.org/10.22365/jpsych.2021.006>

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published during the production process, errors, may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## RESEARCH ARTICLE

### Gambling in adolescents during the financial crisis in Greece

Assimina P. Paleologou,<sup>1,2</sup> Helen Lazaratou,<sup>3</sup> Dimitris K. Anagnostopoulos,<sup>2</sup> Afroditi Trimpouki,<sup>4</sup> Marina Economou,<sup>1</sup> Melpomeni Malliori,<sup>1</sup> Charalampos Papageorgiou<sup>1</sup>

<sup>1</sup>First Department of Psychiatry, Medical School, National and Kapodistrian University of Athens, Athens, Greece

<sup>2</sup>Department of Child Psychiatry, Medical School, National and Kapodistrian University of Athens, Athens, Greece

<sup>3</sup>Byron Kessariani Community Mental Health Centre, Medical School, National and Kapodistrian University of Athens, Athens, Greece

<sup>4</sup>Substitution Treatment Unit, Organisation Against Drugs (OKANA,) General Hospital of Kalamata, Kalamata, Greece

**ARTICLE HISTORY:** Received 9 August 2020 / Revised 17 October 2020 / Published Online 17 March 2021

#### ABSTRACT

Problem gambling emerges as a serious and ever growing problem of modern societies, largely affecting adolescents as well. The etiology of gambling disorder is complex and multifaceted as it is governed by multiple and interrelated factors. In this context and in light of the pervasive financial crisis in Greece, we conducted a study in order to explore adolescents' gambling involvement in Athens region and also to identify the socio-economic characteristics of adolescents who have engaged into gambling activities. Students were recruited from a sample of schools in Athens area. For the assessment of gambling involvement in adolescents, the Diagnostic and Statistical Manual of Mental Disorders-IV Multiple Response Adapted for Juveniles Questionnaire (DSM-IV-MR-J) was administered. Additional self-constructed questions enquired about students' socio-demographic and economic characteristics. Our results indicate that adolescents that had problem with gambling or had at least one pathological item on DSM were more likely to be boys and to have been born in a country other than Greece. Additionally, the proportion of those having at least one pathological item on DSM was greater in those with low school grades. The lack of food in the household due to inability of providing food during the last month was significantly associated with both having problem with gambling and having at least one pathological item on DSM. Furthermore, having been worried that there would not be enough food during the last month and having been fed with a restrained variety of food due to lack of recourses were associated with at least one pathological item on DSM. These findings are congruent with the literature suggesting that youth living under poverty often resort to gambling. In conclusion, our results point out the adverse effects of the financial crisis on the development of problem gambling in adolescents within the Greek society. Problem gambling may have developed in response to the ubiquitous insecurity characterizing the Greek society during this rough time period. Interventions should prioritize endowing adolescents with the necessary coping skills for dealing with daily obstacles or life adversities productively and without losing their self-control.

**KEYWORDS:** problem gambling, financial crisis, poverty, adolescents

**Corresponding Author:** Assimina P. Paleologou, Hellenic Centre for Mental Health and Research, 77 Notara str., 18535, Piraeus, Greece. Email: [mina.palaiologou@yahoo.gr](mailto:mina.palaiologou@yahoo.gr)

## Introduction

Adolescent problem gambling has emerged as a pressing public health issue and concern worldwide.<sup>1</sup> According to the American Psychiatric Association,<sup>2</sup> gambling disorder is defined as a persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress. Gambling is a popular activity among adolescents worldwide and 0.2-12.3% of youth meet criteria for problem gambling. Gambling behavior among adolescents, constitutes a problem in Europe and in Greece.<sup>3</sup> The etiology of gambling disorder is complex and multifaceted as it is governed by a complex set of interrelated factors. The interaction between bio-psycho-social determinants, including cognitive and behavioral components, social, genetic and familial influences is crucial and should be taken into consideration.<sup>4</sup>

Adolescents with gambling-related problems experience a wide range of negative consequences on their physical and mental health, their financial and legal status and their family and interpersonal relationships.<sup>5</sup> Adolescents who meet criteria for pathological gambling display higher rates of emotional symptoms, conduct problems, attention/hyperactivity and social dysfunction.<sup>6</sup> Most of research on gambling problems among adolescents and young adult has been focused on measuring prevalence. Research on the social nature of gambling and on the influence of environmental and cultural settings remains scarce.

Socioeconomic inequality has an increasing impact on adolescent health.<sup>7</sup> Social factors strongly affect adolescents' health. The strongest determinants of adolescent health worldwide are national wealth, income inequality, and access to education.<sup>8,9,10</sup> At an individual level, studies have indicated that adolescents who report poorer health status and poorer health behaviors (e.g., substance use) live often in areas of high unemployment and come from low family affluence.<sup>11</sup> People who face financial poverty are more likely to take risks, including gambling, in an endeavor to overcome daily stresses and to reduce negative affect. Gambling is deemed as an easy way to gain money.<sup>12</sup>

The European Psychiatric Association (EPA) guidance paper mention the consequences of economic crises in Europe: unemployment, indebtedness, precarious working conditions, inequalities, lack of social connectedness, and housing instability influence mental health. Male gender and stigmatized populations could be particularly at risk.<sup>13</sup> The effects of the declining financial conditions on mental health include depression, anxiety, substance abuse, suicide and psychological distress. Already vulnerable population groups, such as people with mental disorders, children, migrants, uneducated, ethnic minorities, or socially/economically deprived demonstrate these particularly negative outcomes. Specific factors, such as unemployment, debts, or housing instability, may play an important role in the onset or persistence of mental disorders or behavioral problems.<sup>11,12,14,15,16,17</sup>

Since 2009 Greece has experienced a grave and enduring financial crisis, which has impinged on children's and adolescents' mental health.<sup>14,15</sup> Many factors such as job insecurity, unemployment, increasing social inequalities, poverty, social exclusion (especially for vulnerable groups in society), the inability to control one's own life, and uncertainty about the future have led the majority of the Greek population to conditions of experiencing deep psychological pain and distress.<sup>16,17</sup> Gross domestic product has fallen, the income and employment have decreased, and the public health and welfare sectors have been affected.<sup>15</sup> There is evidence suggesting a link between financial crises and vulnerability to various forms of addictions including gambling disorder.<sup>18,19</sup>

A cross-sectional survey was carried out in Greece to explore socio-economic and demographic differences among gamblers with a special interest in the influence of the recession. Low to zero income was found to constitute a risk factor for the development of a gambling disorder. Having started gambling during the recession increased the possibility of having gambling related problems.<sup>18</sup> A similar survey has not been conducted within an adolescent population before.

Against this background, the present study sought to explore adolescents' gambling involvement within the Athens region and to identify the socio-economic characteristics of adolescents who had engaged into the gambling activities.

## **Material and method**

### **Sample**

A total of 339 students was recruited from 6 schools in Athens area. A random sample of public schools was selected from the pertinent list of the Ministry of Education. In each school unit, a random sample of classrooms was chosen.

### **Assessment**

The following personal and family data were recorded: gender, age, nationality, living arrangement (both parents, one parent, neither parent), parental involvement with gambling activities, (yes-no), type of school (public, private). For the assessment of gambling involvement in adolescents, the Diagnostic and Statistical Manual of Mental Disorders-IV Multiple Response Adapted for Juveniles Questionnaire (DSM-IV-MR-J) was employed.<sup>20</sup> This is a self-report questionnaire consisting of 12 items (9 categories) which tap the pertinent DSM-IV<sup>21</sup> criteria for problem gambling (PG) in adolescents. The majority of items are rated on a four-point scale: (a) never, (b) once or twice, (c) sometimes and (d) often. However, answers are transformed into binary responses (presence-absence of the criterion). A positive answer to more than 4 categories corresponds to the presence of problem gambling. The DSM's clinical description of gambling disorders has been diversified from DSM-IV-TR to DSM-5 in order to achieve higher classification accuracy and to minimize the false negative rate. Specifically, the inclusionary criteria were reduced to 4 out of 9 (instead of 5 out of 10), with the engagement into illegal activities as a means to finance gambling being eliminated.<sup>22</sup> This questionnaire, which has been extensively used in studies exploring PG in adolescents,<sup>23,24,25</sup> assesses a number of important variables related to PG: progression and preoccupation, tolerance, withdrawal and loss of control, escape, chasing, lies and deception, illegal activities and family/school disruption.<sup>20</sup> The instrument was used for the first time in Greece in a cross-sectional study conducted by the First Department of Psychiatry in the University of Athens.<sup>26</sup>

### **Procedure**

Data were collected in the form of a self-report questionnaire during one school hour. The research was approved by the Ministry of Education. For this study, approval was also obtained by the Eginition Hospital Ethics Committee. Informed consent was obtained from parents prior to participation in the study. Members of the research team visited each school in order to inform the School Principal, the staff and the Parents' Association about the project. In agreement with the School Principal they entered the classrooms and introduced themselves and the study to the students, while they distributed the informed consent forms. One week after the first visit, members of the research team visited the classrooms for a second time, in order to administer the questionnaires to the students who had previously provided a signed informed consent for participation by their parents.

### **Statistical analysis**

The Chi-square and the Fisher's exact tests were used for comparisons. Multiple stepwise logistic regression analysis was used (p for removal was set at 0.1 and p for entry was set at .05) in order to find independent factors associated with having problem with gambling and having at least one pathological item on DSM. Odds ratios (OR) with 95% confidence intervals (95% CI) were computed from the results of the logistic regression analyses. Gender, age, nationality, place of birth, living with both parents, last year's school grades, worrying that there would be not enough food in their home, being fed with restrained variety of food due to lack of resources and having complete lack of food in their household due to inability of providing food in any way, were used as independent variables. All reported p values are two-tailed. Statistical significance was set at  $p < 0.05$  and analyses were conducted using SPSS statistical software (version 19.0).

## Results

The sample consisted of 141 boys and 198 girls, 53.7% of whom were 16 years old. Sample characteristics are presented in Table 1. The majority of them were Greek (89.4%) and 82.3% lived with both parents. During last month 8.6% of the sample stated that they had been worried that there would not be enough food in their home, while 7.1% stated that there was a limited variety of food in their household due to lack of resources. Ten adolescents (2.9%) remarked that during the last month there had been a time when there was no food at all in their household due to financial hardship.

Univariate associations of having problem with gambling and of having at least one pathological item on DSM with demographics and economic crisis related characteristics are also shown in Table 1. Adolescents that had problem with gambling or had at least one pathological item on DSM were more likely to be boys. Also, there were more likely to have been born in countries other than Greece. A significantly lower proportion of participants having problem with gambling was found among adolescents with Greek nationality. Additionally, the proportion of those having at least one pathological item on DSM was greater in those with low school grades. The existence of a time during the last month, when there was no food at all in the household due to financial was significantly associated with both having problem with gambling and having at least one pathological item on DSM. Furthermore, having been worried that there would not be enough food in their home during the last month and having been fed with a limited variety of foods due to lack of resources was associated with greater proportions of having at least one pathological item on DSM.

In the multiple logistic regression analysis with a stepwise method and the presence of problem with gambling as dependent variable (Table 2), it was found that gender, place of birth and the existence of a time during the last month when there was no food at all in the household due to financial hardship were independently associated with problem gambling. Specifically, girls were less likely to have problem with gambling, while those that had been born in another country and those who recounted a time during the last month with no food at all in their household had 27.56 and 15.57 times respectively, greater odds for having problem with gambling. Multiple logistic regression analysis for having at least one pathological item on DSM revealed again a significant association with gender and place of birth (Table 3). Additionally, having been worried that there would not be enough food in their home was found to be associated with 2.94 times greater likelihood for having at least one pathological item on DSM.

## Discussion

Existing evidence indicates the presence of pathological gambling in adolescents despite the differences among assessment instruments and timeframes. There is wide variation in problem gambling prevalence rates across different countries. In Europe, 0.2-12.3% of youth

meet criteria for problem gambling. In North America problem gambling prevalence rates range from 2.1 to 2.6%<sup>3,27</sup>.

In Greece, the prevalence of problem gambling in adolescents in the greater area of Athens is 5.6%, according to a study conducted by the First Department of Psychiatry in the University of Athens.<sup>26</sup> Additionally, findings from two other studies assessing internet addictive behaviors have documented that the prevalence of engagement into internet gaming and/or gambling behaviors was 15.1% while 37.2% of adolescents reported having had some experience with internet gambling. Moreover, 4.1% of the participants were classified as problem gamblers.<sup>28,29</sup>

The primary aim of the present study was to advance knowledge on adolescent gambling research by examining the association between sociodemographic correlates of adolescent gambling in a sample of adolescent students living in Athens. Our results indicate a significant link between the existence of a time with complete lack of food in the household due to inability of providing food in any way during the last month and both having problem with gambling and having at least one pathological item on DSM. Additionally, a greater proportion of pathological gamblers was found among adolescents who reported frequent concern over the availability of food in the household.

These results are congruent with the literature suggesting that youth living under poverty, often results to gambling.<sup>3</sup> Adolescents who face financial difficulties may view gambling as a possible solution to a dead-end created by the financial hardship and/or they try to escape reality. Findings from the United States, England, Australia and Canada provide further support to the claim that poverty serves as an important risk factor for problem gambling. Prevalence rates are higher in populations living in poverty as compared to the general population.<sup>30,31</sup> More specifically, previous studies have indicated that the strength of association between anxiety disorders and problem gambling varied as a function of one's income. Specifically, people with anxiety disorders had more severe gambling problems if they had lower socioeconomic status.<sup>32,33</sup> Adolescents who perceive their financial family situation as low are more likely to become risk gamblers than those who perceive it as medium/high.<sup>34</sup> According to a study that investigated problem gambling among a Canadian homeless youth sample, the percentage of youth who exhibited gambling-related risk behavior was 12,6%.<sup>35</sup> Findings from a large-scale Italian representative survey stressed the importance of structural determinants in adolescent gambling, with prevalence rates being higher among adolescents who lived in more disadvantaged regions in Italy.<sup>36</sup>

Our results also indicate that adolescent problem gamblers were more likely to have been born in a country other than Greece. A significantly lower proportion of participants having problem with gambling was found among adolescents with Greek nationality and there was a significant association of the place of birth with problem gambling. High prevalence of gambling disorder has been found among racial and ethnic minorities in previous studies held in various countries.<sup>37</sup> Greece, during the last years has been a central host country for immigrants. For the refugees, the living conditions in Greece are poor and they experience changes both at an individual and family level. Economic crisis in combination with migrant crisis expose adolescents to multiple sources of stressors.<sup>38,39</sup>

Refugees confront not only poverty but also racism. There is evidence that discrimination constitutes a risk factor for problem gambling too.<sup>40</sup> Economic and migrant crises are two contexts that may interact in a collaborative way. Therefore, it may be assumed that trauma and negative incidents in life constitute the mediating factor between the economic recession, the refugee/immigration crisis and problem gambling. There are actually many reports in the international bibliography connecting problem gambling with traumatic life incidents.<sup>41,42,43,44</sup> Within the context of financial insecurity and immigration crises, gambling could constitute a pathological solution.

In conclusion, on the grounds of these results, there is indication about the adverse effects of the financial crisis on the development of problem gambling in adolescents within the Greek society. Concomitantly, it should not be overlooked that the financial crisis promotes feelings of uncertainty and insecurity. Such feelings impinge on individual and social group adult behaviors, resulting in the establishment of an adverse environment for the psychological and emotional development of adolescents. Adolescents' worries about the sufficiency of food in the household showed a clear link with problem gambling, supporting the view that problem gambling may have developed in response to the ubiquitous insecurity characterizing the Greek society.

In this regard, any intervention aiming to reduce this rate should concentrate on raising awareness about pathological gambling in people who surround adolescents (e.g. parents, teachers) as well as in people who work at venues where adolescents may engage into gambling activities. At the same time, interventions should prioritize endowing adolescents with the necessary coping skills for dealing with daily obstacles or life adversities productively and without losing their self-control.

## References

1. St-Pierre R, Derevensky JL. Youth Gambling behavior: Novel Approaches to Prevention and Intervention. *Curr Addict Rep* 2016, 3:157-164, doi: 10.1007/s40429-016-0104-0
2. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. American Psychiatric Publishing, Arlington, VA, 2013, doi:10.1176/appi.books.9780890425596
3. Blinn-Pike L, Worthy LS, Jonkman JN. Adolescent gambling: A review of an emerging field of research. *J Adolesc Health* 2010, 47:223-236, doi:10.1016/j.jadohealth.2010.05.003
4. Messerlian C, Derevensky J, Gupta R. Youth Gambling problems: a public health perspective. *Health Promot Int* 2005, 20:69–79, doi: 10.1093/heapro/dah509
5. Derevensky JL. Youth Gambling: Some current misconceptions. *Austin J Psychiatry Behav Sci* 2015, 2:1039. Available from <https://austinpublishinggroup.com/psychiatry-behavioral-sciences/fulltext/ajpbs-v2-id1039.php>
6. Paleologou A, Lazaratou H, Anagnostopoulos D, Economou M, Malliori M, Papadimitriou G, et al. Problem gambling and concurrent emotional/behavioral problems among Greek adolescents. *Turk Pediatri Ars* 2019, 54:166–172, doi: 10.14744/TurkPediatriArs.2019.56254
7. Elgar FJ, Pfortner TK, Moor I, De Clercq B, Stevens GW, Currie C. Socioeconomic inequalities in adolescent health 2020-20210: A time-series analysis of 34 countries participating in the Health Behaviour in School-aged Children Study. *Lancet* 2015, 385:2088-2095, doi: 10.1016/S0140-6736(14)61460-4
8. Viner RM, Ozer EM, Denny S, Marmot M, Resnick M, Fatusi A, et al. Adolescence and the social determinants of health. *Lancet* 2012, 379:1641–1652, doi: 10.1016/S0140-6736(12)60149-4
9. Henkel D, Zemlin U. Social Inequality and Substance Use and Problematic Gambling Among Adolescent and Young Adults: A Review of Epidemiological Surveys in Germany. *Curr Drug Abuse Rev* 2016, 9:26-48, PMID:26647784
10. Molinaro S, Canale N, Vieno A, Lenzi M, Siciliano V, Gori M, et al. Country and individual –level determinants of problematic gambling in adolescence: a multi –level cross national comparison. *Addiction* 2014, 109:2089-97, doi: org/10.1111/add.12719
11. ElgarFJ, Roberts C, Parry-Langdon N, Boyce W. Income inequality and alcohol use: a multilevel analysis of drinking and drunkenness in adolescents in 34 countries. *Eur JPublic Health*2005, 15:245–250, doi: 10.1093/eurpub/cki093

12. Williams RJ, Rehm J, Stevens RM. *The social and economic impacts of gambling*. Lethbridge, Canadian Consortium for Gambling Research, 2011
13. Martin-Carrasco M, Evans-Lacko S, Dom G, Christodoulou NG, Samochowiec J, González-Fraile E, et al. Guidance on mental health and economic crises in Europe. *Eur Arch Psychiatry Clin Neurosci* 2016, 266:89–124, doi: 10.1007/s00406-016-0681-x EPA
14. Anagnostopoulos DC, Soumaki E. The state of child and adolescent psychiatry in Greece during the international financial crisis: a brief report. *Eur Child Adolesc Psychiatry* 2013, 22:131–134, doi:10.1007/s00787-013-03777-y
15. Hellenic Statistical Authority. *Unemployment rate at 23.6in 3<sup>rd</sup> Quarter of 2016*. Piraeus: Hellenic Statistical Authority, 2016. Available from [www.statistics.gr/the-greek-economy](http://www.statistics.gr/the-greek-economy)
16. Kentikelenis A, Karanikolos M, Papanicolas I, Basu S, McKee M, Stuckler D. Health effects of financial crisis: omens of a Greek tragedy. *Lancet* 2011, 378: 1457–1458, doi: 10.1016/S0140-6736(11)61556-0
17. Triantafyllou K, Angeletopoulou C. IMF and European co-workers attack public health in Greece. *Lancet* 2011, 278:1459–1460, doi: 10.1016/S0140-6736(11)61639-5
18. Economou M, Souliotis K, Malliori M, Peppou LE, Kontoangelos K, Lazaratou H, et al. Problem Gambling in Greece: Prevalence and Risk Factors During the Financial Crisis. *J Gamb Stud* 2019, 35(4):1193-1210, doi: 10.1007/s10899-019-09843-2
19. Dom G, Samochowiec J, Evans-Lacko S, Wahlbeck K, Van Hal G, McDaid D. The Impact of the 2008 Economic Crisis on Substance Use Patterns in the Countries of the European Union. *Int J Environ Res Public Health* 2016, 13: 122, doi: 10.3390/ijerph13010122
20. Fisher SE. Developing the DSM-IV-MR-J criteria to identify adolescent problem gambling in non clinical populations. *J Gamb Stud* 2000, 16: 253–273, PMID:14634315
21. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. Fourth Edition-Test Revision. American Psychiatric Association, Washington, DC: 2000
22. Yau YH, Potenza MN. Gambling disorder and other behavioral addictions: recognition and treatment. *Harv Rev Psychiatry* 2015, 23:134-46, doi:10.1097/HRP.0000000000000051.
23. Calado F, Alexandre J, Griffiths MD. Validation of the Portuguese DSM-IV-MR-J. *Int J Ment Health Addict* 2016, 14:1096–1106, doi: 10.1007/s11469-016-9708-9
24. Castrén S, Grainger M, Lahti T, Alho H, Salonen AH. At-risk and problem gambling among adolescents: a convenience sample of first-year junior high school students in Finland. *Subst Abuse Treat Prev Policy* 2015, 10:9, doi: 10.1186/s13011-015-0003-8
25. Stinchfield R. A Critical review of adolescent problem gambling assessment instruments. *Int J Adolesc Med Health* 2010, 22:77-93, PMID: 20491419
26. Anagnostopoulos DC, Lazaratou H, Paleologou MP, Peppou LE, Economou M, Malliori M, et al. Adolescent gambling in greater Athens area: a cross-sectional study. *Soc Psychiatry Psychiatr Epidemiol* 2017, 52: 1345–1351, doi: 10.1007/s00127-017-1431-8
27. Calado F, Alexandre J, Griffiths MD. Prevalence of Adolescent Problem Gambling: A Systematic Review of Recent Research. *J Gamb Stud* 2017, 33: 397–424, doi:10.1007/s10899-016-9627-5
28. Tsitsika A, Janikian M, Tzavela EC, Schoenmakers TM, Olafsson K, et al. *Internet use and internet addictive behaviour among European adolescents: a cross-sectional study*, 2013. Available from [www.nivel.nl/nl/publicaties/1002689](http://www.nivel.nl/nl/publicaties/1002689)
29. Floros GD, Siomos K, Fisoun V, Geroukalis D. Adolescent online gambling: The impact of parental practices and correlates with online activities. *J Gamb Studies* 2013, 29:131–150, doi: 10.1007/s10899-011-9291-8

30. Holdsworth L, Tiyce M. Exploring the hidden nature of gambling problems among people who are homeless. *Australian Social Work* 2012, 65:474-489, doi:10.1080/0312407X.2012.689309
31. Sharman S, Dreyer J, Clark L, Bowden-Jones H. Down and out in London: addictive behaviors in homelessness. *J Behav Addict* 2016, 5:318–324, doi:10.1556/2006.5.2016.037
32. Van der Maas M. Problem gambling, anxiety and poverty: An examination of the relationship between poor mental health and gambling problems across socio-economic status. *International Gambler Stud* 2016, 16:281-295, doi:10.1080/14459795.2016.1172651
33. Sanacora RL, Whiting SW, Hoff RA, Potenza MN. Relationships between problem-gambling severity and psychopathology as moderated by income. *J Behav Addict* 2016, 5:429-438, doi: 10.1556/2006.5.2016.045
34. Canale N, Vieno A, ter Bogt T, Pastore M, Siciliano V, Molinaro S. Adolescent gambling-oriented attitudes mediate the relationship between perceived parental knowledge and adolescent gambling: Implications for prevention. *Prev Sci* 2016, 17:970-980, doi: 10.1007/s11121-016-0683-y
35. Dufour M, Roy E, Boivin JF, Boudreau JF, Robert M. Correlates of at-risk gambling behaviors of homeless youth. *J Addiction Res Ther* 2014, S10:007, doi: 10.4172/2155-6105.S10-007
36. Canale N, Vieno A, Lenzi M, Griffiths MD, Borraccino A, Lazzari G, et al. Income inequality and adolescent gambling severity: Findings from large-scale Italian representative survey. *Front Psychol* 2017, 8:1318, doi: 10.3389/fpsyg.2017.01318
37. Alegría AA, Petry NM, Hasin DS, Liu S-M, Grant BF, Blanco C. Disordered gambling among racial and ethnic groups in the US: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *CNS Spectr* 2009, 14: 132–142, PMID: 19407710
38. Anagnostopoulos DC, Giannakopoulos G, Christodoulou NG. The synergy of the refugee crisis and the financial crisis in Greece: Impact on mental health. *Int J Soc Psychiatry* 2017, 63:352-358 doi:10.1177/0020764017700444
39. Giannakopoulos G, Anagnostopoulos DC. Child health, the refugees crisis, and economic recession in Greece. *Lancet* 2016, 387(10025):1271, doi: 10.1016/S0140-6736(16)30016-2
40. Currie CL, Wild TC, Schopflocher DP, Laing L, Veugelers P, Parlee B. Racial discrimination, post traumatic stress, and gambling problems among urban Aboriginal adults in Canada. *J Gambler Stud* 2013, 29:393-415, doi: 10.1007/s10899-012-9323-z
41. Horak NS, Eagle G, Stein DJ, Lochner C. Gambling Disorder and Childhood Trauma: A Complex Association. *J Gambler Stud* 2020, doi: 10.1007/s10899-020-09983-w
42. Roberts A, Sharman S, Coid J, Murphy R, Bowden-Jones H, Cowlshaw S, et al. Gambling and negative life events in a nationally representative sample of UK men. *Addict Behav* 2017, 75:95-102, doi: 10.1016/j.addbeh.2017.07.002
43. Storr CL, Lee GP, Derevensky JL, Jalongo NS, Martins SS. Gambling and adverse life events among urban adolescents. *J Gambler Stud* 2012, 28:325-36, doi: 10.1007/s10899-011-9254
44. Miller KK, Brown CR, Shramko M, Svetaz MV. Applying Trauma-Informed Practices to the Care of Refugee and Immigrant Youth: 10 Clinical Pearls. *Children (Basel)* 2019, 6:94, doi: 10.3390/children6080094

## APPENDIX

### Ερωτηματολόγιο DSM-IV-MR-J

Παρακαλώ σημείωσε με " X " σε κάθε ερώτηση.

1. Κατά τον τελευταίο χρόνο πόσο συχνά έπιασες τον εαυτό σου να σκέφτεται τον τζόγο ή να προγραμματίζει να τζογάρει;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

2. Κατά την διάρκεια του τελευταίου χρόνου, ένοιωσες την ανάγκη να τζογάρεις με όλο και περισσότερα χρήματα για να αποκτήσεις το ποσό που θα σε συναρπάσει;

Ναι    Όχι

3. Κατά τον τελευταίο χρόνο ξόδεψες για τον τζόγο πολύ περισσότερο από το ποσό που είχες προγραμματίσει να ξοδέψεις;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

4. Κατά τον τελευταίο χρόνο ένωσες άσχημα ή αγανάκτησες όταν προσπαθούσες να διακόψεις/σταματήσεις τον τζόγο;

Ποτέ      Μία ή δύο φορές      Μερικές φορές      Συχνά      Ποτέ δεν προσπάθησα να διακόψω

5. Κατά τον τελευταίο χρόνο πόσο συχνά ο τζόγος σε βοήθησε στο να ξεφύγεις από προβλήματα ή από το να αισθάνεσαι άσχημα;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

6. Κατά τον τελευταίο χρόνο, αφού έχασες χρήματα, ξαναπήγες την επόμενη ημέρα για να προσπαθήσεις να ξανακερδίσεις τα χρήματα που έχασες την προηγούμενη;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

7. Κατά τον τελευταίο χρόνο, ο τζόγος σε οδήγησε ποτέ στο να λες ψέματα στην οικογένειά σου;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

8. Κατά τον τελευταίο χρόνο, πήρες ποτέ χρήματα από τα ακόλουθα χωρίς άδεια, για να τα ξοδέψεις στον τζόγο: χρήματα για φαγητό στο σχολείο ή χρήματα εισιτηρίου; Χρήματα της οικογένειάς σου; Χρήματα από άτομα εκτός της οικογένειάς σου;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

9. Κατά τον τελευταίο χρόνο σε οδήγησε ποτέ ο τζόγος: σε καβγάδες με την οικογένειά σου, με φίλους ή με άλλους; Στο να κάνεις απουσία στο σχολείο;

Ποτέ                      Μία ή δύο φορές                      Μερικές φορές                      Συχνά

**Table 1.** Sample characteristics and their association with having problem with gambling and with having at least one pathological item on DSM.

	Total sample (N=339; 100%) N (%)	Problem Gambler		p	At least one pathological item on DSM		p
		No (N=326; 96.2%) N (%)	Yes (N=13; 3.8%) N (%)		No (N=288; 85.0%) N (%)	Yes (N=51; 15.0%) N (%)	
Gender							
Boys	141 (41.6)	129 (91.5)	12 (8.5)	<0.001*	105 (74.5)	36 (25.5)	<0.001*
Girls	198 (58.4)	197 (99.5)	1 (0.5)		183 (92.4)	15 (7.6)	
Age							
16	182 (53.7)	176 (96.7)	6 (3.3)	0.5798*	159 (87.4)	23 (12.6)	0.182*
17-19	157 (46.3)	150 (95.5)	7 (4.5)		129 (82.2)	28 (17.8)	
Nationality							
Greek	303 (89.4)	295 (97.4)	8 (2.6)	0.007**	260 (85.8)	43 (14.2)	0.203*
Other	36 (10.6)	31 (86.1)	5 (13.9)		28 (77.8)	8 (22.2)	
Place of birth							
Greece	325 (95.9)	316 (97.2)	9 (2.8)	0.001**	279 (85.8)	46 (14.2)	0.044**
Other country	14 (4.1)	10 (71.4)	4 (28.6)		9 (64.3)	5 (35.7)	
Living with both parents?							
No	60 (17.7)	56 (93.3)	4 (6.7)	0.257**	50 (83.3)	10 (16.7)	0.698*
Yes	279 (82.3)	270 (96.8)	9 (3.2)		238 (85.3)	41 (14.7)	
Last year's school grades							
Fail/ Fair/ Pass	23 (6.8)	20 (87.0)	3 (13.0)	0.053**	16 (69.6)	7 (30.4)	0.041*
Good/ Very good	208 (61.4)	200 (96.2)	8 (3.8)		175 (84.1)	33 (15.9)	
Excellent	108 (31.9)	106 (98.1)	2 (1.9)		97 (89.8)	11 (10.2)	

During last month, did you worry that there would be not enough food in your home?

No	310 (91.4)	300 (96.8)	10 (3.2)	0.090**	268 (86.5)	42 (13.5)	0.025**
Yes	29 (8.6)	26 (89.7)	3 (10.3)		20 (69.0)	9 (31.0)	
If yes, how often did it happen?							
Rarely	16 (55.2)	15 (93.8)	1 (6.3)	0.573**	12 (75.0)	4 (25.0)	0.688**
Sometimes/ Often	13 (44.8)	11 (84.6)	2 (15.4)		8 (61.5)	5 (38.5)	

During last month, did you or anyone else were fed with restrained variety of food due to lack of resources?

No	315 (92.9)	304 (96.5)	11 (3.5)	0.233**	272 (86.3)	43 (13.7)	0.016**
Yes	24 (7.1)	22 (91.7)	2 (8.3)		16 (66.7)	8 (33.3)	
If yes, how often did it happen?							
Rarely	18 (75.0)	17 (94.4)	1 (5.6)	0.446**	13 (72.2)	5 (27.8)	0.362**
Sometimes/ Often	6 (25.0)	5 (83.3)	1 (16.7)		3 (50.0)	3 (50.0)	

During last month, was there a time with complete lack of food in your household due to inability of providing food in any way?

No	329 (97.1)	318 (96.7)	11 (3.3)	0.050**	282 (85.7)	47 (14.3)	0.048**
Yes	10 (2.9)	8 (80.0)	2 (20.0)		6 (60.0)	4 (40.0)	
If yes, how often did it happen?							
Rarely	5 (50.0)	4 (80.0)	1 (20.0)	1.000**	3 (60.0)	2 (40.0)	1.000**
Sometimes/ Often	5 (50.0)	4 (80.0)	1 (20.0)		3 (60.0)	2 (40.0)	

Note: \*Pearson's chi square test; \*\*Fisher's exact test

**Table 2.** Results from multiple logistic regression analysis in a stepwise method with dependent variable the presence of problem with gambling

	$\beta$	SE	OR (95% CI)*	p
Gender				
Boys			1.00**	
Girls	-3.25	1.10	0.04 (0.004 - 0.33)	0.003
Place of birth				
Greece			1.00	
Other country	3.32	0.85	27.56 (5.22 - 145.63)	<0.001
During last month, was there a time with complete lack of food in your household due to inability of providing food in any way?				
No			1.00	

Yes	2.75	1.01	15.57 (2.16 - 112.07)	0.006
-----	------	------	-----------------------	-------

Note:  $R^2=0.34$ ;  $\chi^2(3)=33.76$ ;  $p<0.001$

\*Odds ratio (95% Confidence interval) \*\* indicates reference category

**Table 3.** Results from multiple logistic regression analysis in a stepwise method with dependent variable having at least one pathological item on DSM

	$\beta$	SE	OR (95% CI)*	p
Gender				
Boys			1.00**	
Girls	-1.47	0.34	0.23 (0.12 - 0.45)	<0.001
Place of birth				
Greece			1.00	
Other country	1.28	0.61	3.61 (1.09 - 11.96)	0.036
During last month, did you worry that there would be not enough food in your home?				
No			1.00	
Yes	1.08	0.46	2.94 (1.20 - 7.22)	0.018

Note:  $R^2=0.15$ ;  $\chi^2(3)=29.79$ ;  $p<0.001$

\*Odds ratio (95% Confidence interval) \*\* indicates reference category

## ΕΡΕΥΝΗΤΙΚΗ ΕΡΓΑΣΙΑ

### Στοιχηματοπαιξία στην εφηβεία και οικονομική κρίση στην Ελλάδα

Ασημίνα Π. Παλαιολόγου,<sup>1,2</sup> Ελένη Λαζαράτου,<sup>3</sup> Δημήτριος Κ. Αναγνωστόπουλος,<sup>2</sup>  
Αφροδίτη Τριμπούκη,<sup>4</sup> Μαρίνα Οικονόμου,<sup>1</sup> Μελπομένη Μαλλιώρη,<sup>1</sup>  
Χαράλαμπος Παπαγεωργίου<sup>1</sup>

<sup>1</sup>Α΄ Ψυχιατρική Κλινική, Ιατρική σχολή, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, Αθήνα

<sup>2</sup>Παιδοψυχιατρική Κλινική, Ιατρική Σχολή, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, Αθήνα

<sup>3</sup>Κοινοτικό Κέντρο Ψυχικής Υγιεινής Βύρωνα-Καισαριανής, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, Αθήνα

<sup>4</sup>Μονάδα Υποκατάστασης, Οργανισμός Κατά των Ναρκωτικών (ΟΚΑΝΑ), Γενικό Νοσοκομείο Καλαμάτας, Καλαμάτα

**ΙΣΤΟΡΙΚΟ ΑΡΘΡΟΥ:** Παραλήφθηκε 9 Αυγούστου 2020 / Αναθεωρήθηκε 17 Οκτωβρίου 2021 / Δημοσιεύθηκε Διαδικτυακά 17 Μαρτίου 2021

#### ΠΕΡΙΛΗΨΗ

Η προβληματική στοιχηματοπαιξία αποτελεί ένα σοβαρό και διαρκώς επιδεινούμενο πρόβλημα των σύγχρονων δυτικών κοινωνιών. Το πρόβλημα δυστυχώς είναι υπαρκτό και στον εφηβικό πληθυσμό. Η αιτιοπαθογένεια της διαταραχής τζόγου είναι σύνθετη καθώς πολλοί και αλληλοδιαπλεκόμενοι παράγοντες, συμπεριλαμβανομένων των κοινωνικο-οικονομικών παραγόντων, μπορεί να συμβάλλουν στη γένεση της.

Σε αυτό το πλαίσιο και δεδομένης της οικονομικής κρίσης στην Ελλάδα κατά τα τελευταία έτη, πραγματοποιήσαμε μια μελέτη προκειμένου να διερευνήσουμε την ενασχόληση με τον τζόγο στην ευρύτερη περιοχή της Αττικής, αλλά και να εντοπίσουμε πιθανές συσχετίσεις με τα κοινωνικο-οικονομικά χαρακτηριστικά των εφήβων που εμπλέκονται με δραστηριότητες τζόγου.

Συγκεντρώσαμε δείγμα μαθητών σχολείων από την ευρύτερη περιοχή της Αττικής. Για τη διερεύνηση της ενασχόλησης με τον τζόγο χορηγήσαμε το πολλαπλών απαντήσεων διαγνωστικό και στατιστικό εγχειρίδιο ψυχικών διαταραχών IV, διαμορφωμένο για τους νέους: DSM-IV-MR-J. Επιπλέον αντλήσαμε πληροφορίες για τα κοινωνικο-δημογραφικά και οικονομικά χαρακτηριστικά του δείγματος.

Σύμφωνα με τα αποτελέσματά μας, οι έφηβοι που βρέθηκαν με τουλάχιστον ένα κριτήριο τζόγου σύμφωνα με το DSM, ήταν πιο πιθανόν να είναι αγόρια και πιο πιθανόν να είναι αλλοδαποί. Επίσης, το ποσοστό των εφήβων με τουλάχιστον ένα κριτήριο στο DSM ήταν μεγαλύτερο στους εφήβους που είχαν χαμηλές σχολικές επιδόσεις.

Η έλλειψη φαγητού στο νοικοκυριό του εφήβου, λόγω της οικονομικής αδυναμίας της οικογένειας να προμηθεύσει το σπίτι με φαγητό, σχετιζόταν σημαντικά τόσο με τον προβληματικό τζόγο, όσο και με την ύπαρξη τουλάχιστον ενός κριτηρίου διαταραχής τζόγου στο DSM. Επιπρόσθετα, η ανησυχία σε σχέση με την επάρκεια του φαγητού στο νοικοκυριό κατά τον τελευταίο μήνα λόγω των οικονομικών δυσκολιών της οικογένειας, σχετιζόταν επίσης με την ύπαρξη τουλάχιστον ενός κριτηρίου διαταραχής τζόγου στο DSM.

Τα παραπάνω αποτελέσματα αναδεικνύουν ότι οι έφηβοι που ζουν υπό το καθεστώς της φτώχειας, συχνά έχουν ενασχόληση με τον τζόγο. Το εύρημα αυτό είναι συμβατό και με τη διεθνή βιβλιογραφία.

Συμπερασματικά, σύμφωνα με τα αποτελέσματα της παρούσας έρευνας, η οικονομική κρίση επηρεάζει σημαντικά την ανάπτυξη του προβληματικού τζόγου στους Έλληνες εφήβους. Η στοιχηματοπαιξία μπορεί να αποτελεί μία διέξοδο απέναντι στην ανασφάλεια που χαρακτηρίζει την Ελληνική κοινωνία κατά τη διάρκεια της δύσκολης αυτής περιόδου της οικονομικής κρίσης.

Είναι σημαντικό να δρομολογηθούν παρεμβάσεις στους εφήβους, που να δίνουν προτεραιότητα στην ανάπτυξη δεξιοτήτων αντιμετώπισης των δυσκολιών κατά τρόπο παραγωγικό ώστε να μην χάνουν τον αυτο-έλεγχό τους και να μην οδηγούνται στην εξάρτηση.

**ΛΕΞΕΙΣ ΕΥΡΕΤΗΡΙΟΥ:** προβληματική στοιχηματοπαιξία, οικονομική κρίση, φτώχεια, εφηβεία

**Επιμελητής συγγραφέας:** Ασημίνα Π. Παλαιολόγου, Ελληνικό Κέντρο Ψυχικής Υγιεινής και Ερευνών, Νοταρά 77, 18535, Πειραιάς, Ελλάδα. Email: [mina.palaiologou@yahoo.gr](mailto:mina.palaiologou@yahoo.gr)

Journal Pre-proof