

Physical abuse in the era of financial crisis in Greece

Michael Kontos, Demetrios Moris, Spyridon Davakis, Dimitrios Schizas, Emmanouil Pikoulis, Theodoros Liakakos

1st Department of Surgery, Laikon General Hospital, National and Kapodistrian University of Athens, Athens, Greece

Contributions: (I) Conception and design: M Kontos; (II) Administrative support: E Pikoulis, T Liakakos; (III) Study materials and patients: S Davakis; (IV) Collection and assembly of data: D Moris, S Davakis, D Schizas; (V) Data analysis and interpretation: M Kontos, D Moris; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.

Correspondence to: Demetrios Moris, MD, PhD. Anastasiou Gennadiou 56, 11474, Athens, Greece. Email: dimmoris@yahoo.com.

Background: Greece is suffering an economic recession of enormous magnitude, but whether its health has deteriorated as a result, has not yet been well established. We aim to present and analyze differences in demographics and clinical distribution of patients victims of physical abuse examined at the surgical emergency room in an Academic institution in the era of financial crisis.

Methods: A retrospective database analysis of all patients that were examined to surgical emergency room (ER), between January 1st 2008 and December 31st 2014, was conducted. We only analyzed and evaluated data for the years 2008 to 2014.

Results: The number of patients being examined in the ER in 2011 was higher compared with that of 2014 and to 2008 respectively ($P < 0.05$). There was an increase of the total cases of physical abuse ($P < 0.05$). The majority of cases examined for physical abuse were men, with a constant tendency of increasing number of women abused throughout the years of crisis.

Conclusions: Financial crisis seems to have a multivariable effect on epidemiology and clinical diversity of the patients, victims of physical abuse, being examined in the ER.

Keywords: Financial crisis; emergencies; Greece; physical abuse; immigrants

Submitted Feb 11, 2017. Accepted for publication Feb 15, 2017.

doi: 10.21037/atm.2017.03.26

View this article at: <http://dx.doi.org/10.21037/atm.2017.03.26>

Introduction

Greece is currently suffering a severe financial crisis and ongoing recession due to adjustment programs in exchange for financial assistance (1-4). It is known that unemployment, job insecurity and the compromise of the individual or family income may have a negative impact on health (1-3,5). The most severely affected are middle and lower classes, mainly including immigrants and poor, due to unemployment and reduction of social benefits (6,7).

At the same time, due to its geographical location, Greece has long been the settling point for large numbers of immigrants from neighboring areas. Immigration flows begun during the 90's with the Eastern European wave and after 2000 from Middle East and North Africa with its peak reaching this summer (2016) (6). Exact numbers

are impossible to know-as many are illegal and therefore unregistered-but there are conservative estimates of 1.5 to 2 million (7).

There is an empirically observed, but still unconfirmed, attitude that immigration and poverty make an explosive mixture that leads to increasing violence and physical abuse, mainly directed from immigrants towards native population.

The aim of this report is to evaluate the prevalence of physical abuse among patients seeking emergency surgical help in a public acute hospital during the years of the crisis.

Methods

A retrospective database analysis of all patients that were

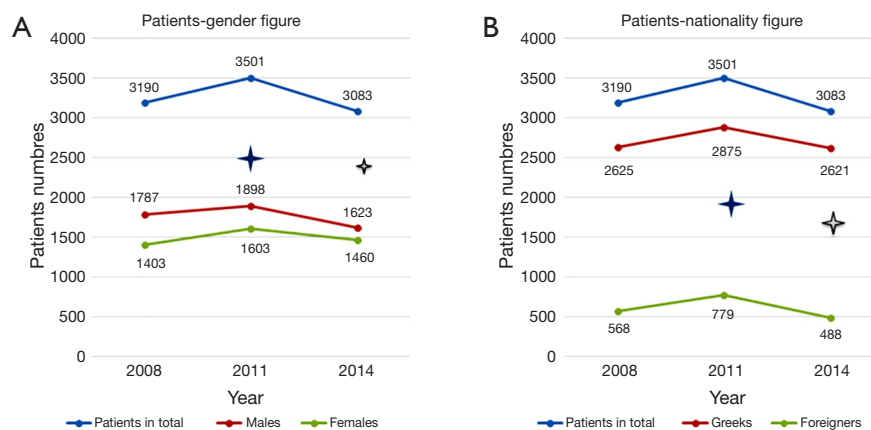


Figure 1 Population analysis. (A) Population presented by gender. X-axis refers to year and y-axis refers to number of patients. Blue and gray stars indicates statistical significance at the level of 0.05; (B) population presented by nationality. x-axis refers to year and y-axis refers to number of patients. Blue and grey stars indicates statistical significance at the level of 0.05.

examined to surgical emergency room (ER), between January 1st 2008 and December 31st 2014, was conducted. We only analyzed and evaluated data for the years 2008 to 2014. This classification was made based on the fact that the peak of financial crisis, that Greece was encountered with, was during 2011. In 2008, the need for financial support and mechanism for financial stabilization was not apparent, and the year 2014 was the end-point of the financial program with the agreement of controlled exit to the markets.

We collected data regarding standard demographic parameters, namely gender, age and ethnic origin (Greek origin-GO, Foreign origin-FO) as well as the reason for attendance/primary diagnosis. Statistical analysis attempted to correlate parameters to each other and the year examined. The main question was how financial crisis that emerged in 2008 and peaked in 2011 changed the epidemiology and clinical diversity of the victims of physical abuse examined at the Surgical Emergencies of an Academic Institution. Ethics approval (ID: 0783341) was obtained by Ethical Review Board of “Laikon” General Hospital of Athens.

Statistical analysis

Between-group comparisons were performed using Student's *t*-test and Mann-Whitney's *U* test, as appropriate. Comparisons between multiple time points were performed using Repeated Measures ANOVA test for post-hoc comparisons. Differences were considered as statistically significant if the null hypothesis could be rejected with >95% confidence ($P < 0.05$).

Results

The number of patients being examined in the ER in 2011 was higher compared with that of 2014 and to 2008 respectively ($P < 0.05$). The number of men visiting SER during the years was higher than that of women ($P < 0.05$). The majority of men reaching ER were GO, with the higher percentage of them being found in 2014, whereas in women, no statistically significant difference was found throughout the years. The number of GO being examined in the SER was higher than that of FO ($P < 0.05$) but in 2011, there was a statistically significant decrease in the percentage of GO being examined compared to that of 2008 (78.7% *vs.* 82.2%; $P < 0.05$). The number and percentage of FO was increased in 2011 (779, 21.3%) compared with these of 2008 and 2014 (568, 17.8% and 488, 15.7% respectively) (Figure 1).

The striking finding was the difference on the extent of cases of physical abuse that have been examined in ER throughout the years. More specifically, the total cases examined for physical abuse in 2008 were 20 (0.9%) whereas in 2011 the number climbed into 79 (2.2%) and in 2014, the cases of physical abuse were 48 (1.5%) ($P < 0.05$). In 2008, the majority (14/20, 70%) of them were GO whereas in 2011, the percentage fell down to 60% (48/79) and returned to reached 85% (41/48) in 2014 ($P < 0.05$). The majority of cases examined for physical abuse were men (82 *vs.* 50), with a constant tendency of increasing number of women abused throughout the years of crisis (30% in 2008, 40% in 2011, 43.8% in 2014; $P < 0.05$) (Figure 2).

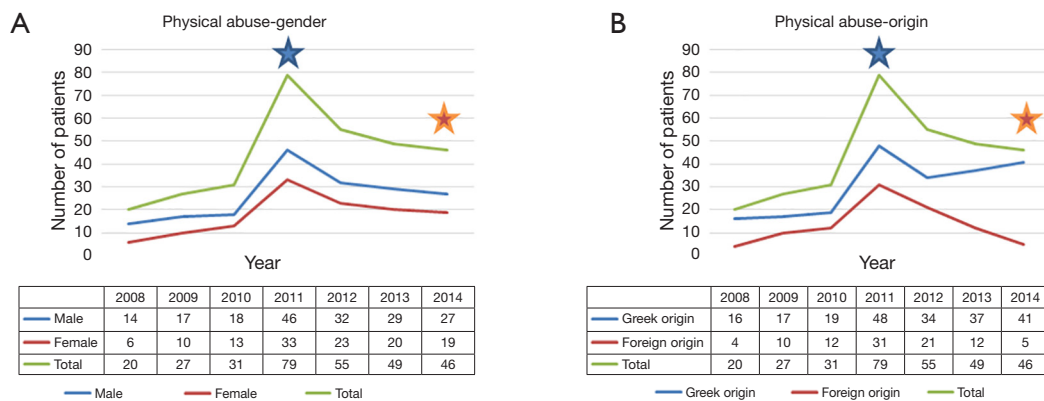


Figure 2 Physical abuse cases. (A) Physical abuse classified by gender. Green line: total number of patients victims of physical abuse, Blue line: number of male patients victims of physical abuse, Red line: number of female patients victims of physical abuse x-axis refers to year and y-axis refers to number of patients. Blue (2008–2011) and orange star (2008–2014) indicates statistical significance at the level of 0.05. No difference between 2011 and 2014 was found; (B) physical abuse classified by nationality. Green line: total number of patients victims of physical abuse; blue line: number of Greek origin patients victims of physical abuse; red line: number of Foreign origin patients victims of physical abuse. X-axis refers to year and y-axis refers to number of patients. Blue and orange stars indicates statistical significance at the level of 0.05.

Another interesting finding is that to a great extent this steep rise can be attributed to the FO male victims. We observed increases in nearly all subgroups examined but FO males were more than 4 times more likely to seek medical help for physical abuse in 2011 than in 2008: there were 7 cases in 2008 and 22 in 2011 (*Figure 2*). It is noteworthy that FO women presented hardly any changes throughout this period. All other groups showed statistically significant but moderate increases. In 2014, there was a tendency to return to the pre-crisis levels.

Discussion

Social phenomena can be difficult to explain. Our data suggest that the establishment of the financial crisis in Greece saw a rise in the reported physical abuse in almost all subgroups of the population. Whether this relationship is causal is difficult to determine. Our data demonstrate that financial crisis may have strongly contributed to the increase of the number of these cases that were examined in the ER. The majority of patients suffering physical abuse were GO males with a tendency of increasing cases in GO females. In 2011 though, FO was the group of victims with the most significant increase, whereas in 2014, GO were the most affected.

Men of FO is the most severely affected group by this rise in 2011. This can be attributed to the fact that they usually belong to lower socioeconomic layers - which have

been struck particularly hard by the crisis—and to reasons associated with the male nature (physical confrontation is more likely) or culture (women stay at home) (8,9). However, not all victims, especially victims of domestic violence, seek medical help (7,10). This may be reflected by the small reported percentage of women suffering physical abuse. The year 2011 marks the peak of the crisis and significant social unrest was seen. Unemployment and poverty are known to trigger antisocial behaviour which is obviously the cause of the finding (10). Interestingly, later in 2014, physical abuse subsides to the pre-crisis levels or even lower.

All in all, the ongoing financial crisis in Greece seems to be related with an increase in cases of physical abuse among native and immigrant populations

Acknowledgments

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: This study was approved by Ethical Review Board of “Laikon” General Hospital of Athens (ID: 0783341), and written informed consent was obtained from all patients.

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Cite this article as: Kontos M, Moris D, Davakis S, Schizas D, Pikoulis E, Liakakos T. Physical abuse in the era of financial crisis in Greece. *Ann Transl Med* 2017;5(7):155. doi: 10.21037/atm.2017.03.26