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## Suicidal ideation and suicide attempts in Greece during the economic crisis: an update

The current financial crisis has exerted untoward effects on the mental health of the population worldwide, in the form of increasing prevalence rates of affective disorders and suicide<sup>1</sup>. Greece is among the countries most severely hit by the crisis and has thus attracted global attention with regard to the social and health-related repercussions of the economic downturn. In particular, throughout the years of recession, unemployment rates rocketed from 7.8% in 2008 to 9.6% in 2009, 12.7% in 2010, 17.9% in 2011, 24.5% in 2012, 27.5% in 2013 and 26.5% in 2014<sup>2</sup>. At the same time, the proportion of the population at risk of poverty or social exclusion rose from 28.1% in 2008 to 35.7% in 2013 and 36% in 2014<sup>3</sup>.

Nonetheless, the impact of the recession on suicides has been a highly contentious issue in the country. Recently, a 30-year interrupted time series analysis on the influence of austerity- and prosperity-related events on suicide rates in the period 1983-2012 found a rise in total suicides by 35.7% after the introduction of new austerity measures in June 2011<sup>4</sup>. In a similar vein, another ecological study reported an increase in suicides by 35% between 2010 and 2012, with unemployment bearing a strong correlation with suicide mortality especially among working age men<sup>5</sup>.

A series of nationwide surveys conducted by our research team has arrived at similar conclusions, confirming a significant rise in the one-month prevalence of suicidal ideation (from 5.2% in 2009 to 6.7% in 2011) as well as suicide attempt (from 1.1% in 2009 to 1.5% in 2011)<sup>6</sup>. In the same report, people suffering from major depression, married individuals, people experiencing financial strain, people with low levels of interpersonal trust and individuals with a history of suicide attempt were at elevated odds of manifesting suicidality symptoms<sup>6</sup>.

In this frame, another cross-sectional study was implemented in 2013 in order to monitor the impact of the recession on suicidality as well as to identify at-risk population subgroups. A random and representative sample of 2,188 people participated in the study. Information about the occurrence of major depression, suicidal ideation and suicidal attempt during the past month was assessed with the pertinent modules of the Structured Clinical Interview for DSM-IV Axis Disorders<sup>7</sup>. Participants' degree of economic hardship was measured by the Index of Personal Economic Distress<sup>8</sup>, while their levels of interpersonal trust was assessed by the germane questions of the European Social Survey<sup>9</sup>.

Comparative results from surveys demonstrate that one-month prevalence of suicidal ideation has declined in 2013: 2.4% in 2008, 5.2% in 2009, 6.7% in 2011 and 2.6% in 2013 ( $p < 0.05$ ). Similar findings were observed for one-month prevalence of suicidal attempt: 0.6% in 2008, 1.1% in 2009, 1.5% in 2011 and 0.9% in 2013 ( $p < 0.05$ ).

Regarding the risk and protective factors for suicidality, a different pattern of results emerges for suicidal ideation and suicidal attempt. The presence of major depression (adjusted OR = 12.35, 95% CI: 6.34-24.08,  $p < 0.01$ ), a previous suicide attempt (adjusted OR = 5.54, 95% CI: 2.19-14.00,  $p < 0.01$ ), unemployment (adjusted OR = 2.55, 95% CI: 1.04-4.34,  $p < 0.05$ ) and economic hardship (adjusted OR = 1.07, 95% CI: 1.01-1.14,  $p < 0.05$ ) were found to increase the odds of manifesting suicidal thoughts. With regard to suicide attempt, the presence of major depression remained the strongest risk factor (adjusted OR = 8.02, 95% CI: 2.67-24.14,  $p < 0.01$ ), followed by previous suicide attempt (adjusted OR = 5.22, 95% CI: 1.44-18.94,  $p < 0.05$ ) and low levels of interpersonal trust (adjusted OR = 3.84, 95% CI: 1.17-5.81,  $p < 0.05$ ).

From the above-mentioned results, it is clear that the prevalence of suicidal ideation and suicidal attempt has returned to pre-crisis levels in Greece. This is consistent with the view that suicidal acts may reflect an acute response to an economic crisis<sup>10</sup>, as evidenced by the surge in suicides after the outset of the recession in South Korea in 1998 and their subsequent decline<sup>11</sup>.

Concerning the risk factors for suicidal ideation and attempt, the differences illustrate the multifaceted nature of suicidality, which is better conceptualized as lying on a spectrum from ideation to act, with different factors playing a prominent role in each step of the spectrum. The presence of major depression and previous suicide attempt increase the odds of manifesting suicidality symptoms throughout the whole spectrum, in line with other studies corroborating their strength of association<sup>12</sup>, even amid recession.

Although suicidality rates have decreased in Greece, depression is still on the rise<sup>13</sup> and the socio-economic climate in the country remains unstable. There is imperative need for tailored public health interventions, including labour market and debt relief programmes, as well as for enhancing the social capital of the population<sup>14</sup>. From the clinical standpoint, timely screening of suicidal history and suicidal symptoms, effective

treatment of major depression, and capitalizing upon a patient's social networks should become a priority.

Marina Economou<sup>1,2</sup>, Elias Angelopoulos<sup>1,2</sup>, Lily E. Peppou<sup>1</sup>, Kyriakos Souliotis<sup>3,4</sup>, Costas Stefanis<sup>1</sup>

<sup>1</sup>University Mental Health Research Institute, Athens, Greece; <sup>2</sup>First Department of Psychiatry, Medical School, National and Kapodistrian University of Athens, Eginition Hospital, Athens, Greece; <sup>3</sup>Faculty of Social and Political Sciences, University of Peloponnese, Corinth, Greece; <sup>4</sup>Centre for Health Services Research, Department of Hygiene, Epidemiology and Medical Statistics, Medical School, National & Kapodistrian University, Athens, Greece

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## New analytic strategies help answer the controversial question of whether alliance is therapeutic in itself

The association between alliance (at a given point in time or aggregated across several sessions) and outcome is one of the most consistent findings in psychotherapy research<sup>1,2</sup>. However, the mechanism underlying this association is one of the most controversial. Some theorists and researchers believe that alliance is therapeutic in itself; others argue that it is a by-product of effective treatment or of a trait-like patient ability to benefit from treatment<sup>3,4</sup>. For many years, the debate has been confined mainly to the domain of theory. Recently, several studies have applied advanced analytic strategies to explore the mechanism behind the alliance-outcome association.

The argument that alliance is simply a by-product of successful treatment has been previously addressed by studies controlling for early symptomatic change when examining the ability of alliance to predict outcome. Some of these studies suggest that alliance is indeed a by-product of early symptomatic change, while others indicate that it can predict outcome even after controlling for that change<sup>1</sup>. However, previous studies treated alliance as a static variable, and ignored the fact it can change across treatment, which may have contributed to the mixed results. Recent studies used statistical methods such as autoregressive cross-lagged modeling to examine whether alliance levels precede symptomatic levels, session by session over the entire course of treatment. The findings show that alliance indeed precedes symptom reduction over the course of treatment in both psychotherapy<sup>5-7</sup> and psychopharmacotherapy<sup>8</sup>, suggesting that it is a true predictor of outcome.

The other challenge to the argument that alliance is therapeutic is the proposition that alliance is a by-product of a patient's general trait-like ability to benefit from treatment. Individuals who are more capable of forming strong and satisfying relationships with others may also have a better chance

of forming a strong and satisfying alliance with their therapist. Alliance cannot be said to be therapeutic in itself if it is a trait-like characteristic of the patient. Recently developed detrending and centering methods<sup>9</sup> have made it possible to explore empirically the theoretical distinction between the state-like and trait-like components of alliance and determine which of the two predicts outcome. Studies show that patients' pre-treatment interpersonal characteristics can predict alliance as it develops across treatment<sup>10</sup> and that the alliance trait-like component can significantly predict outcome<sup>7,11</sup>. However, studies also suggest that state-like changes in alliance over treatment can have a significant effect on outcome<sup>5,7,11</sup>.

If state-like changes in alliance can bring about therapeutic change, manipulating these characteristics is expected to influence outcome. One recent study has examined this question empirically, randomizing patients to either a feedback condition, in which therapists received feedback on the alliance to assist them in strengthening its state-like component, or to a control condition in which no feedback was provided. The study found a greater effect of the state-like component of alliance on outcome in the feedback condition<sup>7</sup>, suggesting that the effect of this component of alliance on outcome can indeed be manipulated. Furthermore, another recent study suggests that when therapists detect poor alliance with their patients, and have sufficient time to work on strengthening the state-like component of alliance, this component is associated with a better outcome<sup>12</sup>.

The groundbreaking methodologies recently applied in psychotherapy research bring new insights to our understanding of the question of whether alliance is therapeutic. These methodologies are poised to play a critical role in future research, focusing on diverse populations and therapeutic orientations,