

# Economic Recessions and Mental Health

Subjects: Neurosciences

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In the wake of a global economic recession secondary to the COVID-19 pandemic, this entry seeks to summarize the current quantitative research on the impact of economic recessions on depression, anxiety, traumatic disorders, self-harm, and suicide.

Keywords: economic recession ; mental health ; depression ; anxiety ; trauma ; suicide ; mortality

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## 1. Introduction

Since the SARS-CoV-2 (COVID-19) pandemic was declared by the WHO on 11 March 2020, world economies have been hit by numerous unprecedented market closures, supply chain, trade, and finance interruptions leading to a global economic recession. The World Bank reported in June 2020 that the global economy would shrink by 5.2% in 2020—the deepest recession since World War II—and that economic activity among advanced economies was anticipated to shrink 7% <sup>[1]</sup>. Per capita incomes were expected to decline by 3.6%, tipping millions of people into extreme poverty with the most severe impacts in countries where the pandemic has been the most severe and there is heavy reliance on global trade, tourism, commodity exports, and external financing <sup>[1]</sup>. The Global Economic Prospects for 2020 warned of a lost decade, or more, of per-capita income gains and concern that cumulative factors, including massive public and private debt and a breakdown in education, will lead to a prolonged deterioration in economic prospects <sup>[2]</sup>. The 2021 Global Economic Prospects report predicts an expansion of 5.6% in 2021, the fastest post-recession pace in 80 years; however, global output will remain about 2% lower than pre-pandemic projections <sup>[3]</sup>. In this reality, the international community and governments around the world are looking to reboot their economies and put the recession of the COVID-19 pandemic behind us. Unfortunately, with history as our teacher, the repercussions of economic recessions are numerous, and the societal impacts are pervasive. There have been discussions throughout the pandemic about the impact of public health restrictions and the traumas of the pandemic itself on the mental health of our society; however, limited attention has been paid to the impacts of economic recessions on mental health.

Disaster mental health research has shown, over decades of research from the 1940s to the present, that following both natural and human-made disasters, specific psychological problems have been seen to occur, such as depression, anxiety, and trauma-related disorders <sup>[4][5][6]</sup>. Outcomes measured in the literature range from the presentation of increased symptoms to diagnoses of a psychiatric disorder, such as Major Depressive Disorder, Post Traumatic Stress Disorder (PTSD), or one of several anxiety disorders, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM) <sup>[4]</sup>. Per the DSM5, symptoms of Major Depressive Disorder (MDD) include persistently depressed mood, diminished interest or pleasure in activities, change in appetite or weight, changes in sleep, psychomotor agitation or retardation, fatigue, feelings of worthlessness or guilt, impaired concentration, and recurrent thoughts of death or suicide <sup>[7]</sup>. PTSD includes exposure to actual or threatened death, serious injury, or sexual violence leading to persistent symptoms of intrusion, avoidance, negative cognitions and mood, hyperarousal, and/or altered reactivity <sup>[7]</sup>. Anxiety disorders, for example Generalized Anxiety Disorder (GAD), include a state of persistent and excessive anxiety or worry that is difficult to control, associated with physical symptoms (e.g., restlessness, fatigue, muscle tension, and insomnia) and changes in cognition and mood (e.g., impaired concentration and irritability) that cause significant distress or dysfunction <sup>[7]</sup>.

While economic recession may not fit the common description of a disaster that is natural, such as earthquakes, forest fires, or floods, or human-made, such as war, terrorism, or train derailment, it certainly shares many of the consequences of such disasters, including financial loss, resource loss, housing issues or displacement, and stress <sup>[4]</sup>.

## 2. Depression

Following the 2008 global financial crisis (GFC), an increase in the prevalence of depressive symptoms and disorders was seen across most of the developed world. A pervasive increase in mental health care utilization for depressive symptoms

was seen during or following periods of economic recession [8][9][10][11]. Among outpatients, physician visits for mental health care increased among women, those with increased age, family income, health care access/coverage, and education levels in the United States of America (USA); however, visits decreased overall during the recession for both men (25%) and women (7–8%) of all ethnic backgrounds [12][13]. Psychotropic drug use increased post-recession among USA women, USA adults in the Northeast region, USA plant workers, Italian and Spanish adults, and new mental health outpatients in Canada [12][14][15][16][17][18].

Twenty-two studies reviewed the association between unemployment and depression—twenty-one of these studies found a positive relationship between these two factors. Correlation coefficients between unemployment and depressive symptoms/disorders ranged from 0.139–0.68 in two European studies [19][20]. Countries with a higher unemployment rate post-2008 GFC compared to pre-GFC had increased likelihood and severity of depressive symptoms [21][22][23]. Furthermore, the probability of chronic mental illness was found to increase with national unemployment rates during the GFC [24].

Individual-level unemployment was found to increase depressive symptom scores by 0.6–2 points or 3.18–7.33% on the Center for Epidemiologic Studies Depression Scale (CES-D) [23][25][26][27]. Job loss during the 2008 GFC was found to increase the odds of having an incident mood disorder 1.65–2.02 times in Greece and the Netherlands, 16.6% in six European countries, or 22.5% in the USA, and in particular, job loss secondary to firm closure had an increase in depressive symptoms of 28.2% in the USA and 7.5% in Europe on the CES-D [26][28][29][30][31]. Similarly, individual-level employment was found to decrease depressive symptoms across European nations and for American men during the GFC [32][33][34].

Men appear to be a particularly vulnerable group with multiple studies finding a more robust relationship between depression and unemployment for men than women [20][21][29][35][36][37][38]. Job insecurity has also been associated with increased odds of depression/depressive symptoms 1.3–1.86 times in Europe, the United Kingdom (UK), the USA, or a 33.5% increase in depressive symptoms [21][39][40]. Precarious employment was correlated with higher depressive symptoms scores on the CES-D across 21 European countries (correlation coefficient = 0.077), and a sudden decrease in workload was found to increase the probability of depressive symptoms by 8.6% [32][41][42].

Reduction in income has been associated with increases in depressive symptoms in European, South Korean, and American studies [19][25][29][30][33][43][44][45]. Reduced individual or household income has been associated with a 1.77 times increase in odds of an incident mental disorder and 1.74–2.24 times or an 11.7% increase in odds of depressive symptoms/disorder [29][30][33]. Similarly, economic distress and financial strain have been found to increase depressive symptoms by nine out of ten studies assessing these measures [25][28][39][40][46][47][48][49][50]. Reporting economic distress was associated with a 1.5-point increase on the CES-D and 1.16–1.33 times increased odds ratio of MDD [25][28][40][46][50]. Positive social support was found to be protective against the negative effects of financial stress on depression, whereas interpersonal trust was only protective against MDD (5% decreased odds) for those who had low economic distress [48][49].

Housing insecurity was a significant mediating factor in depressive symptoms associated with the 2008 GFC as assessed by seven studies [16][40][51][52][53][54][55]. They found 1.2–5.8 times higher odds of MDD associated with foreclosures, 2.11 times higher odds of depressive disorders associated with mortgage payment difficulties, and 3.7 times higher odds of MDD for those behind on their rent [40][52][53][55].

Overall, life satisfaction, perceived health, eudaimonic well-being, individual optimism, social optimism, close relationships, positive social supports, becoming married, maintaining employment, and having a higher level of education were generally found to be protective against depressive symptoms during the 2008 recession [34][43][47][56].

For people with depression at baseline, preceding the 2008 GFC, they were found to have increased risk during the recession of job loss, becoming a caregiver, or having major illness personally or in a family member [50][57]. There were also 2.2 times increased odds of financial hardship during the recession associated with a 12-month history of any mental disorder that was not significantly related to change in employment, social status, or debt levels [58].

### **3. Anxiety**

Overall levels of anxiety were found to be stable or in decline during periods of economic recession among USA and Canadian adults during the 2008 GFC and the 2015 oil recession [16][34][59]. However, among workers in particular, anxiety appears to increase during recessionary periods. In the post-recession period, an 11% increase in anxiolytic prescription was seen among USA plant workers, 7.3% increase sedative prescriptions for Portuguese men, and among workers in Spain, 69.8% of long-term sickness absence was due to anxiety disorders [14][60][61].

Studies found that during times of economic recession, both job insecurity and unemployment were associated with increased anxiety [14][30][61][62][63][64][65]. Income reduction and financial distress were not found to be consistently related to anxiety. While in the Netherlands, no association was found with incident anxiety with decreased household income and onset or recurrence of anxiety disorders across income categories during the recession, in the USA, financial strain and anxiety symptoms were found to be correlated (coefficient = 0.062), as well as in Portugal, Greece, and Spain [29][43][44][47][48][66].

In two studies on GAD, an increased odds ratio for diagnosis was seen in the USA after the 2008 GFC, associated with individuals who experienced financial impacts (odds ratio (OR) 1.3) or foreclosure (OR 1.9), as well as for people with less than college-level education (OR 1.8) [40][53]. A one standard deviation increase in financial advantage conferred 1.3 times increased risk of GAD with each negative housing impact experienced [40].

Three studies assessing symptoms of panic attacks or panic disorder were completed in the USA following the 2008 GFC [40][41][55]. They found increased odds of panic symptoms associated with experiencing a negative financial, job-related, or housing impact (OR 1.2), housing instability (OR 2.5), being behind on the mortgage or foreclosure (OR 3.7), and foreclosure in the past three years (OR 3.5) [40][55]. People who perceived job insecurity were 21.2% more likely to experience anxiety attacks compared to the job-secure, and perceived insecurity plus unemployment increased risk beyond perceived insecurity alone [41].

During previous economic recessions, becoming married, having increased occupational prestige, and a higher level of education were found to be protective against anxiety disorders [43][47], whereas interpersonal and institutional trust were not correlated significantly with GAD in whole population samples, or samples of Greek adults in 2011 with low or high levels of financial strain [43][47][49]. Negative social support was correlated with increased anxiety symptoms and positive social support limited the effects of financial stress on anxiety levels [47][48].

## **4. Trauma-Related Disorders**

Only two studies that addressed trauma-related disorders met the inclusion criteria. The first is a 2012 study of adults from Detroit, USA that found that people with a history of PTSD were at 6.2 times greater odds of foreclosure during the 2008–2010 GFC [53]. The second is a 2018 time-trend analysis of new patients assessed at mental health clinics in Fort McMurray, Canada, during the oil recession of 2015, which found that the number of new patients with trauma-related diagnoses during the recession compared to pre-recession decreased to 8.2% from 14.2% [16].

## **5. Self-Harm**

The five articles included that studied self-harm in adults related to economic recessions all found increased rates of self-harm during or following periods of recession [16][67][68][69][70]. Characteristics associated with higher rates of self-harm included unemployment or job insecurity, financial stressors, and housing insecurity [67][69]. In Ireland, episodes of self-harm among males 31% and 22% among females were beyond the expected rates if pre-recession trends had continued. This resulted in 5029 excess hospital presentations for the treatment of self-harm in men and 3833 for women in the five-year period following the 2008 GFC [70]. In community mental health clinics in Fort McMurray, Canada, new patients with a history of self-harm increased from pre-recession rates of 13.6% of new patients to 16.6% following the 2015 oil recession [16].

## **6. Suicidal Ideation or Attempt**

Of 12 studies on SI and attempts related to periods of economic recessions, two did not find a significant change in SI or attempt rates during/post-recession compared to pre-recession. Income inequality and personal economic distress has been associated with an increased risk of SI and attempts in South Korea and Greece [28][45][50]. Studies in Europe found that in the post-recession period people at higher risk of SI and attempt were unemployed, had financial hardship, low interpersonal trust, were married (53 times greater risk than unmarried), perceived a negative impact of the GFC, and had a history of suicide attempt (14.41 times risk) or MDD (97 times greater risk) [25][50][71][72][73][74][75][76][77]. The median age of people who attempt suicide increased following the GFC to middle-aged adults, particularly those approaching retirement [72][73][78].

## 7. Suicide

Across 48 studies assessing suicide mortality rates (SMR), nearly all studies found an increase in suicide rates during and following period of recession. A total of three studies in Spain, Italy, and Greece found no significant increase in SMR at a population level <sup>[79][80][81]</sup>. In a study of SMRs in the USA between 1928 and 2007, rates were found to consistently increase during recessions and decrease during expansions <sup>[82]</sup>. In some studies, a possible six month to two-year lag in increasing SMRs following the trough in economic activity has been noted <sup>[83][84][85]</sup>.

In Japan, Europe, and the Americas, male SMRs were seen to increase disproportionately to female SMRs in Spain, the Netherlands, Ireland, Eastern Europe, Italy, and across a grouping of 27 European countries <sup>[70][78][86][87][88][89][90]</sup>. Overall, the 2009 male SMR across 55 countries—27 in Europe and 18 in the Americas—was increased by 3.3% (or 5124 excess suicides) <sup>[87]</sup>. The SMR for working-aged men (25–64 years) increased by 4.2–12% in European studies, while no significant change was seen for women <sup>[87][88]</sup>. Across 18 American countries, male SMRs rose 6.4% or 3175 excess suicides following the 2008 GFC, compared to a 2.3% rise among females in the Americas <sup>[87]</sup>. Other studies in the USA found that the 2008 GFC explained 30% of the change in short- and long-term SMRs observed up to 2016 <sup>[84][90]</sup>.

During periods of crisis, certain characteristics were observed among people who completed suicide, with high levels of neuroticism increasing the risk of suicide 2.45 times and increased levels of interpersonal trust being protective against population-level suicide <sup>[91][92]</sup>. Among men, the level of education had an inverse relationship with SMRs, while no clear relationship was observed for women <sup>[90]</sup>. By age group, five studies found that people (particularly men) of working age, approaching retirement were at higher risk than other age groups <sup>[78][80][93][94][95]</sup>. Relationship status was inconsistently associated with an increased risk of suicide during a recession <sup>[80][93][95]</sup>. While mental illness remains one of the most significant risk factors for suicide during times of recession (28% to 61%), multiple studies reported no change, or a decrease in comorbid mental health diagnoses among people who died by suicide in recession times <sup>[78][93][95][96][97]</sup>.

Twenty-three studies assessed SMRs in relation to job security, financial strain, and unemployment. Of these studies, five found no population-level association between unemployment levels and SMRs in the USA, Spain, and Italy <sup>[80][98][99][100][101]</sup>. Suicide rates were found to increase with each 1% increase in male unemployment rates by 0.94–1.6% among men <sup>[87][92][102]</sup>. The effect of unemployment on SMR was greatest in European countries with the weakest unemployment protection, and across 55 developed nations, countries with a lower pre-crisis unemployment rate (<6.2%) showed a stronger correlation with male suicide rates <sup>[87][89]</sup>. In addition, each increase in \$10 spent by governments on labour market programmes decreased the effect of a 1% increase in male unemployment on SMRs by 0.026% <sup>[89]</sup>. These findings were supported by national-level studies in Australia, Belgium, England, Greece, Hungary, Spain, Sweden, and the USA <sup>[91][93][95][103][104][105][106][107][108][109][110][111][112][113]</sup>.

People employed in jobs with low occupational prestige were more likely to commit suicide than high prestige jobs, including managers and supervisors <sup>[94][114][115]</sup>. Gross domestic product (GDP), markers of economic output (ICEI), and other measures of economic activity have been found to vary counter-cyclically with suicide rates in South Korea, Spain, the USA, Greece, and Europe <sup>[81][84][100][106][115][116][117][118]</sup>.

Five studies reviewed the association between SMR and housing insecurity. Four studies in the USA following the 2008 GFC found a positive association between foreclosure rates and eviction <sup>[96][102][119][120]</sup>. A 1% increase in foreclosure rate was found to add 1.2 additional suicide deaths per 100,000 across the USA, or a 0.10 suicide rate/100,000 associated with a 1% increase in state-level foreclosure rate <sup>[119][120]</sup>. However, these rates were most significant for white men, and for those nearing retirement (ages 46–64) <sup>[102][119][120]</sup>. Real-estate owned foreclosure rate was found to be a stronger predictor than the total foreclosure rate, and 79% of suicides related to foreclosure occurred prior to the actual loss of housing with 37% within two weeks of a crisis related to eviction/foreclosure <sup>[96]</sup>. Eviction was found to increase odds of suicide 5.94 times among Swedish adults following the 2008 GFC <sup>[121]</sup>.

## 8. Special Populations: Children and Adolescents

In six studies looking at the impact of economic recession on depression children and adolescents, there was evidence of a correlation between early socioeconomic adversity and depressive symptoms seen in the UK, USA, Finland, and Sweden <sup>[122][123][124][125][126][127]</sup>. These changes are at least in part attributable to parental unemployment, household income, parental education level, parenting style, youth unemployment, and a perceived external locus of control in adolescence <sup>[122][124][125][126][127]</sup>.

Two studies addressed anxiety related to recessions in this population, finding that youth exposed to unemployment had an increased odds ratio of anxiety in middle age and that among young adults in Portugal post-recession there was an

increase in the use of prescription psychotropic drugs [60][123]. No studies were identified on trauma-related disorders among children and adolescents related to economic recession.

With regards to suicidality, one study of the pediatric population in Denmark found no effect of the GFC [128], while a USA study found that statewide job loss of 1% was related to a 2% increase in SI and a 2.2% increase in suicide plans among adolescent females and a 2.3% increase in SI, a 3.1% increase in suicide plans, and a 2% increase in suicide attempts was seen among non-Hispanic black adolescents [129]. No association was seen for adolescent males, non-Hispanic whites, or Hispanics [129]. A study focused on youth (ages 15–24) from high-income countries found that those in countries with high levels of income inequality and GDP in 2008 saw rising suicide rates among this population [130].

## 9. Special Populations: Older Adults

In eight studies of the impact of economic recessions on depressive symptoms in older adults, results were varied based on factors unique to this population. A study in the USA found that older adults had an increase in MDD diagnosis greater than the general population between 2005 and 2015, and 35.3% of respondents at a health centre in Greece reported that the economic crisis had provoked depressive symptoms [43][126]. For USA adults over 50 years, new food insecurity during the 2008 GFC was associated with 1.7 times odds of MDD compared to those who were food insecure at baseline [131]. For older adults with newly co-residential adult children during the 2008 recession in the USA, CES-D scores were seen to increase on average 0.179 points. If co-residential adult children were unemployed (vs. employed), the CES-D score increased an average of 0.522 points [132]. In addition, education, chronic disease presence, annual income, and a reduction in income >20% were not associated with levels of geriatric depression among respondents in Greece [43]. In contrast, two studies of 13 European countries found that retirement was protective against depressive symptoms, particularly for blue-collar workers in regions severely hit by the economic crisis [32][133].

Three studies were included that addressed the impacts of economic recessions on anxiety symptoms in older adults [60][64][134]. A prospective cohort study of older adults in Australia found that the economic slowdown during the GFC correlated with an increase in anxiety symptoms not explained by sociodemographic or economic factors [134]. Overall psychotropic drug use among older adults was not observed to change post-recession, but among female retirees and home makers post-recession in Spain, the odds ratio of sedative use increased 1.23 and 1.30 times, respectively [60][64].

No studies were identified addressing trauma-related disorders or self-harm among older adults related to economic recessions. In one cross-sectional study in Spain after the 2008 GFC, they found that adults aged 65 and older were more likely to report SI in the context of household financial problems than other age ranges surveyed [76].

Three studies were included that specified impacts of economic recession on suicides among older adults. One study found that for adults over age 65 a decrease in the ICEI was protective against suicide, and in another, an inverse relationship was seen between the foreclosure rate and suicides among adults over age 65 [102][116]. However, in contrast, a study in the Netherlands found a sudden increase in SMRs in 2007–2013, with a shift in the peak age group of suicides among men from 30–39 years to 60–69 years after 2008 and among women this shifted from 30–39 to 50–59 years old [78].

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