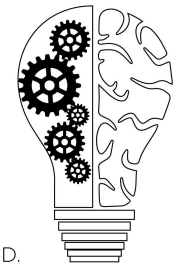
Episode 081: The Link Between Unemployment, Depression and Suicide in the COVID-19 Pandemic

Lauren Geoffrion, Matt Hagele, David Puder, M.D.



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There are no conflicts of interest for this episode.

As the economy continues to shut down during COVID-19, people are growing more concerned about work and finances. Even if the virus is miraculously contained in the next few months, the economy will still be reeling from the damage of the lockdown.

As psychiatrists, we are concerned about the increases in mental illness from the lack of employment and potential increase in suicides. We've begun to look at past studies on the links between economic disaster and the subsequent rates of depression and suicide, and what we might be able to do to help.

The Past: The Link Between Unemployment and Depression

In one study, unemployment increased the odds of depression 3x in adults aged 18-25 years. Nearly 12% of the *entire* population was depressed, with 23% unemployment. When analyzed, **the amount of unemployed adults was significantly higher than the amount of employed adults among the depressed group**. (McGee and Thompson 2015)

Survey results from 356,599 Americans in 2013 showed that **the longer a person is unemployed, the greater the chance they have of developing depression.** Nearly 20% of those unemployed for over a year stated that they currently had or were being treated for depression at the time of the study. (Crabtree 2014)

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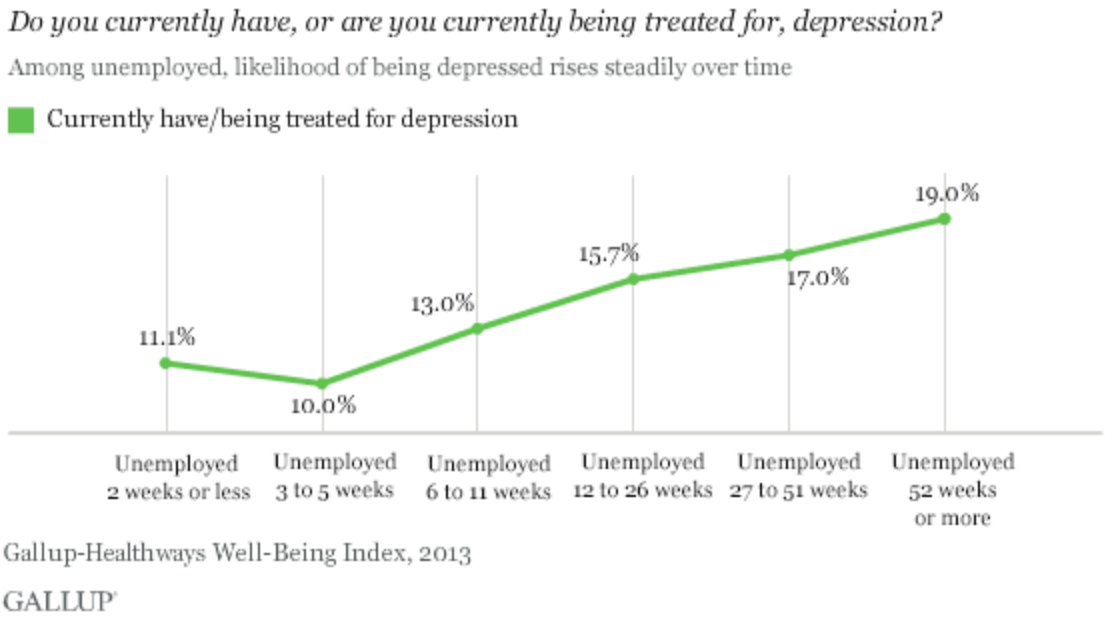

Economic downturn can lead to long term depression and continued unemployment because of that depression.

In another study, people suffering from depression had a higher likelihood of becoming jobless or shouldering a reduction in family income within 5 years of the initial survey. 5115 adults aged 18-30 years old were polled for depression, then followed up after 5 years to assess their success in the work arena. **Those with depression at the outset had a 60% increased adjusted odds of subsequent unemployment, and 90% increased odds of decreased family income in 5 years.** (Whooley, Kiefe, and Chesney (2002))

The Institute for Work and Health (IWH) issued a briefing considering the impact of unemployment on mental health. Based off the findings from Murphy and Athanasou's metaanalysis in 1999, in which 14 out of 16 studies showed a significant negative association between unemployment and mental health, Institute for Work and Health Unemployment Briefing (2009) proposes several possibilities for the association:

- Decreased standard of living

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- Decreased security of income
- Stigma
- Loss of self-esteem
- Loss of social contacts (from work)

In a Graetz study, employed people reported fewer health disorders than unemployed people, but the highest levels of health risk were with dissatisfied workers, and the lowest were with satisfied workers. This study looked at general health using the General Health Questionnaire (GHQ), not just mental health. They traced health changes over time, in a variety of groups with a variety of labour market experiences. (Graetz (1993))

A large meta-analysis of unemployed persons showed **more distress** than employed persons with an overall effect size of **0.51 (an increase in ½ a standard deviation in distress measure)**. Intervention programs for unemployed people were found to be fairly effective against the unemployment-related distress with a modest effect size **-0.35**. (Paul and Moser (2009))

Looking at these studies (and foregoing others with similar results) we find a strong case for the link between unemployment and depression, with there being **a greater risk the longer a person is unemployed**. The sense of purposelessness, hopelessness, and loss of social connections associated with the loss of a job can be devastating to a person's self-image.

As we saw in Paul and Moser's study, the negative effect size (d=0.51) of unemployment is nearly equal to the positive effect size we see for antidepressants or short term therapy in treatment of depression. Thus, a sustained job loss could significantly set back any progress a person has made in combating his existing depression, or push a depression-naive patient into the throws of more severe pathology.

The Past: The Link Between Unemployment and Suicide

The VA: From Science to Practice: The Effect of Unemployment on Suicide Risk looked at several studies. In the US, they found that unemployment poses a greater risk for suicide with a person's increasing age. With longer periods of unemployment, risk of suicide increases and **peaks with the first 5 years. Increased suicide rates were found among men who were unemployed when national unemployment rates are falling**, however lower suicide rates were found when national unemployment rates are rising. This suggests that during a national crisis, people are less likely to blame themselves for their joblessness.

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Studies show that we don't need to worry about mental health *as much* during the initial layoffs of an economic downturn, as we do about those who remain unemployed when the rest of the world starts to go back to work. That's when feelings of depression kick into higher gear.

Additionally, even if a person is employed, a lack of job security increased their odds of having suicidal ideation. **Social support and good unemployment benefits served as protective factors against suicidal ideation.**

The Blakely, Collings, and Atkinson 2003 from New Zealand collected data from a 2.04 million person census. It counted deaths by suicide in their population within 3 years of their national census. **Unemployed people were 2-3x more likely to commit suicide** than those who were employed at the time of the census. Of all the factors considered, only labor force status and marital status (being unmarried) were strong predictors of suicide; even socioeconomic status was not significant.

Table 1 Age adjusted odds ratios (95% confidence intervals) of suicide by marital status and socioeconomic factors among 1.65 million 25–64 year olds

	Women			Men		
	Deaths	Number	OR (95% CI)	Deaths	Number	OR (95% CI)
25–44 years						
Marital status						
Married	33	334032	1	117	303861	1
Not married	36	187746	1.95 (1.21, 3.16)	147	203112	1.93 (1.49, 2.48)
Highest qualification						
Tertiary	21	126651	1.08 (0.58, 1.99)	36	108255	0.52 (0.35, 0.77)
Trade	9	83733	0.78 (0.36, 1.71)	81	144417	0.86 (0.64, 1.17)
School	21	150255	0.93 (0.50 ,1.73)	54	106836	0.78 (0.56, 1.09)
Nil	24	153249	1	90	139158	1
Labour force status						
Employed	33	318537	1	162	415785	1
Unemployed	9	30801	2.42 (1.06, 5.49)	36	38490	2.35 (1.64, 3.38)
Non-active	30	172434	1.87 (1.13, 3.10)	63	52689	3.07 (2.30, 4.11)

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The Kim and Cho (2017) study showed that unstable employment, or "low level of employment protection" showed an increased effect on suicide rates, whereas unemployment itself showed no difference. The authors attribute this difference to their inclusion of students, housekeepers, part-time workers, and those who have given up seeking jobs in their counts, and assert that other studies have had a systemic bias by excluding these populations. While we cannot dismiss all other studies for the findings in this one, it is interesting to consider the factor of **unstable employment** in an individual's mental health.

Unemployment appears to increase the odds of suicide 2-3x about the same amount as it increases the odds of depression.

However, from the VA publication, we saw that suicide rates in young men were not only effected by unemployment, **but also the *environment* of economic success surrounding them**. This may have some relation to the principles we see at work in the relationship between the Gini coefficient (a measure of inequality, on a scale of 0-1 where inequality is greatest at 1) and the incidence of homicide. Many studies show a strong correlation between the Gini coefficient and violence, one in particular showed a 1% increase in the Gini coefficient to be associated with a 1.5% increase in the homicide rate in the short run, but the Gini coefficient tends to have a lagging effect on rates of violence (Fajnzylber, Lederman 2002).

In simple terms, as inequality increases, violence increases. Here we see a higher rate of self-inflicted violence (suicide) when the a person's job status is less equal with their counterparts. Peer comparison is one factor contributing to the increase of suicides following the loss of a job.

The Past: The Effects of the Great Recession of 2007/2008 on Mental Health

Looking at data specifically after the Great Recession, this article found that long-term (>52 weeks) unemployment was significantly correlated with large negative effects on mental health. This can be explained in part by unemployment, or loss of a job, leading to incomplete psychosocial development, feelings of helplessness from perceived lack of control, or failure to obtain non-monetary benefits of work (social connection/purpose). These effects were seen to be greater in minorities, specifically Black and Latino individuals. (Goldsmith and Diette (2012))

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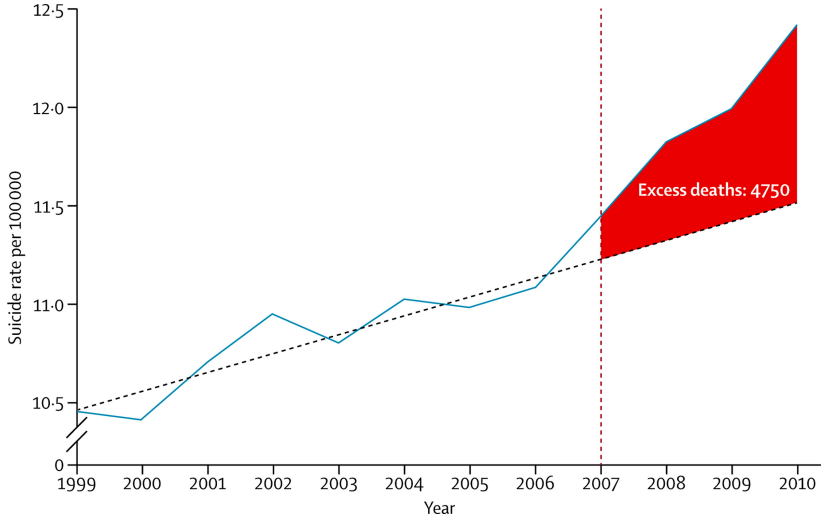
This Haiken (2014) Forbes article references data from The Lancet by Reeves (2012), showing that there were an estimated 4750 excess suicide deaths in the US after the Great Recession over the 3 years following it.



We can see that men were 4x more likely to commit suicide than women. Also, the majority of deaths by suicide were amongst people already suffering from depression (as is usually the case), and antidepressant prescriptions spiked at the same time. Haiken comments that not all countries saw this same rise in suicide rates, but that **the exorbiant rise could be prevented by greater social support for people affected through goverment "return to work" programs and psychological interventions.**

Looking at data from England from 2008-2010, Barr (2012) found a 10% increase in unemployment was significantly associated with the parallel 1.4% increase in male suicides.

Broadening the scope to all of Europe in 2008, Stuckler (2011) found that countries with most severe financial downturns had the greatest rise in suicides (Greece at 17% and Ireland at 13%). At the other end of the spectrum, countries like Austria appeared to have protective labor market policies and strong social support networks that ended up giving them a net *decrease* in suicides despite a modest (0.6%) increase in the rate of unemployment.

Across the world people suffered economic losses, but not everywhere suffered the increased loss of life from suicides. We can learn from our fellow sufferers, and perhaps implement strategies to protect the people at risk of depression and suicide following a significant economic downturn.

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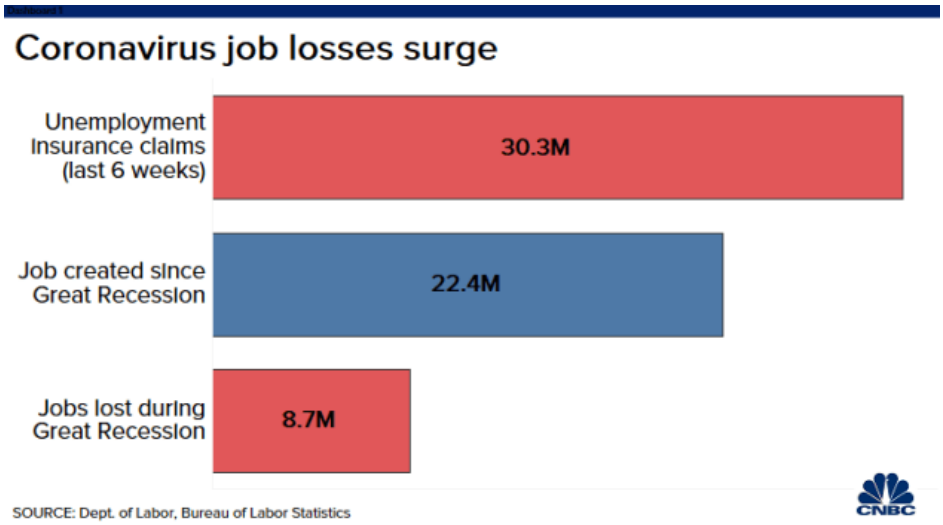
But where are we now?

With unemployment?

Before the eruption of the coronavirus pandemic, the United States was enjoying an unemployment rate of 3.5%, the lowest it had seen in over 10 years. However, as of April 16, 2020, 22 million people filed for unemployment in the U.S. in just 4 weeks (Long, 2020). By April 24, the unemployment rate was at 20% (Bick and Banden 2020), and by April 30 another 3.84 million filed for unemployment in a week, thus raising the 6-week total to 30.3 million having filed for unemployment (Cox 2020).

Furthemore, economists predict the increased rates of unemployment will remain afloat, lowering only down to 5-6% by 2022 (Golle and Yoo 2020). Even if the effects of the downturn do not last as predicted through 2022, it seems a more collective opinion that they will remain between 8-10% through the end of 2020 (Schneider 2020 and Golle and Yoo 2020).



And Concerning Suicides?

The most recent CDC statistics showed that in 2017 there were:

- 47,173 deaths by suicide
- approx 1.4 million suicide attempts
- 14 suicides per 100,000 people

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With these statistics, suicide is made the 10th leading cause of death in the U.S. overall. But looking at specific age groups, we see it ranks as the 4th leading cause of death in ages 35-54, and the second leading cause of death for 10-34 year olds (Weir 2019). This is the setting in which we find the pandemic preparing to affect the United State's vulnerable populations.

So What Can We Expect?

While no one can predict the future with complete accuracy, looking at past trends we *can* produce a reasonable, conservative estimate in order to prepare for likely possibilities. By looking at the data concerning unemployment and suicide rates after the Great Recession, I have made a conservative estimate predicting the rise of suicide deaths in the United States that might follow the economic downturn we are beginning to experience from the COVID-19 pandemic.

Let's review the data we saw above following the Great Recession:

- 10% unemployment (at its worst)
- 2.2% increase in suicides above previous trajectory immediately in 2007 (11.25 to 11.5 per 100,000)
- 8.7% increase in suicides above previous trajectory by 2010 (11.5 to 12.5 per 100,000)
- 4,750 suicide deaths above the predicted for that 3 year span (see graph above)

So, if we saw the same percentage increase in suicide deaths following this pandemic, the intial 2.2% would lead to a 2020 rate of 14.3 per 100,000, and by 2023 the 8.7% increase would lead to a rate of 15.2 per 100,000 suicide deaths per year. Because the current U.S. population is about 330 million, an easy way to conceptualize these numbers is that for every **1.0 increase in the rate per 100,000 deaths, you have 3,300 more suicides every year.** These numbers were calculated with the expectation that the 2017 rate did not rise in these past 3 years and would not rise through 2023. In reality, the suicide rate in the U.S. has continued a consistent rise over the past 20 years.

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From these calculations, we can predict at least a very **conservative 5,000 excess suicide deaths** over the next three years following the recession we are about to experience.

Factors that suggest the deaths by suicide will be *higher* from this pandemic:

- Unemployment is 20%, *double* what it was at the peak of the Great Recession.
- Social distancing from real contact with family and friends likely diminishes the protection from suicide that is usually enjoyed from social connections.
- Additional ongoing stress with the fear of the unknown, fear of death, family and friends potentially dying from COVID-19, and an increased close contact with one's living companions, which is showing an increase in potential for arguments and marital conflicts.

Factors that may be protective in this pandemic:

- Financial support from government stimulus checks.
- National circumstances of mass layoff which tend to keep people from blaming themselves for their joblessness.

Regardless of the exact numbers, it seems inevitable that we can expect a significant increase in deaths by suicide, and for this, we should be prepared.

What can we do about it now?

Financial support:

- We can advocate for policies that help support people financially.
- We can help patients or people you know access resources that help them manage their finances despite being on a smaller budget.
    - *(Perceived* financial strain was associated with lower mental health (rc =0.45) and life satisfaction (rc=0.38). McKee-Ryan *et. al* (2005)

Connection: Social Support Help

- Encourage therapy—have a lower threshold for yourself, people you know, and patients, for suggesting therapy.
    - Marriage therapy, Tele-therapy
- Encourage people to have meaningful connection points.

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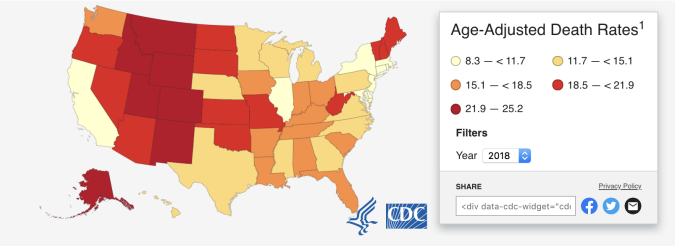
    - Meet loved ones in outdoor places, perhaps in your front yard, with masks and 6 feet of distance, in order to reap some benefit from in person connection.
- Exercise:
    - Get outside and move your body when/where you can. If you have a yard, use it! If you live in an apartment, run the stairs or use video workouts. Find open areas and go for a walk.
    - Strength training can be particularly beneficial for mental health, and many personal trainers are more than willing to train over video because they are out of work at gyms due to the stay-at-home orders.

Psychiatry Access: States with more access to psychiatrists and mental health professionals have lower suicide rates (Figure depicts suicide mortality rates by state)



- Prescribe across state lines and telepsychiatry across state lines permanently.
- To increase psychiatry access, there needs to be true parity for mental health treatment by insurance companies.
    - Relatively few psychiatrists and therapists take insurance because they are reimbursed much less than they should be. One example is for the diagnosis and treatment of depression. In 2015, for every $1 that a primary care provider received for the treatment of depression, a psychiatrist received only 83 cents for the same diagnostic code.
    - We can increase funding for telephone visits.
    - We can increase partial hospitalization and day treatments over video conferencing technologies (also make this easier with less prior authorizations and more insurances offering it).
    - We should advocate for more government funding for psychiatry residency positions.
    - Insurances should reimburse out-of-network psychiatrist and therapy visits at a higher rate (often they won't pay at all, or only pay 30%).

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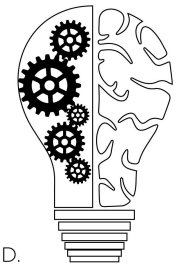

- There needs to be adequate funding for psychiatrists to have psychotherapy add-on codes to their patient visits. Current funding forces psychiatrists to see 4 per hour, which cuts off connection and potentially the ability to do more psychotherapy, which is important for progress.
- We need to make room for psychiatrists to spend time with patients.
  - Busy work (ex: filling out prior authorization forms every time a medication or dose needs to be changed) as it keeps psychiatrists from seeing as many patients as possible, thus diminishing psychiatry access to a large portion of people who need it.

In Summary

- People are 2-3x more likely to suffer from depression or commit suicide when unemployed than when employed.

- The U.S. and the majority of the world saw an alarming increase in suicides after the Great Recession a little over 10 years ago, and we should expect a similar or greater threat with this coming economic recession.

- The majority of suicides after the Great Recession were from people already diagnosed with depression, so we need to particularly take care and be vigilant, noticing and asking about any changes with our existing patients.

- Suicides are preventable. Improving access to psychiatric care by advocating for the ability to prescribe across state lines, for true parity with mental health codes, increased funding for telephone visits, out of network funding, government funding for more psychiatry residency spots, and increased partial hospitalization or day treatments via teleconferencing.

- Encouraging in person connections (as much as possible with safe distancing) and exercise can make a real impact on an individual at risk for depression or suicide.

- Support government policies that help reduce the financial strain of unemployment during this crisis.

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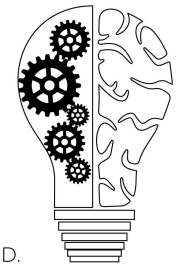

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- If you are someone you love is suffering from depression or at risk of suicide, there are plenty of psychiatrists and mental health professionals who are opening up more treatment times in their schedule during this crisis. Please reach out, or help your loved one reach out.

As mental health professionals, we need to be advocating for and prepared for the coming crisis. Since suicide and depression apparently increases over time spent in isolation, and also with the onset of others going back to work, we need to be getting the word out, creating simple helpful tips and tools for people to reach out to loved ones and stay connected. It seems obvious, and many are already doing this. The research shows, though, that the initial downturn isn't as problematic for people as the duration of time spent unemployed and for those that continue to be unemployed when the economy does start back up again. It's not over yet, and as we care for our patients, let's be vigilant about changes in moods and behavior. We should also be working to find any way we can to change nation-wide policies so we can try to keep suicide and depression rates as low as possible.