

# **Efficacy of Psychological vs. Macro Income Enhancing Interventions**

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**Invited Address,**

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# Suicide as a “Mental Disorder” and/or “Social Disorder”

- Two approaches to understanding & preventing suicide include:
- MICRO: Individual centered, defining suicide as an individual problem requiring treatment of individuals (for reviews: Fox, et al., 2020; Franklin, et al., 2017)
- MACRO: The Durkheimian approach defines suicide as a social fact stemming from social/economic sources and requiring structural changes in components of society (e.g., Durkheim, 1897; Kim, 2018; Pirkis, et al. 2023; Stack, 2021)
- Both of these approaches have merit (e.g., Choi, et al., 2022), but the latter one has been relatively neglected.
- The present discussion revolves around a MACRO approach: how elements of social inequality (e.g., income inequality and the strength of the social safety net) may help in understanding the variability in suicide in today’s world, with a focus on economic inequality in the US.
- Choi, et al., (2022). Job loss, financial strain, & housing problems as suicide precipitants: Associations with other life stressors. *SSM-Population Health*, 19, 101243; Durkheim, E. (1897). *Suicide*. New York: Free Press; Fox, et al. (2020). Interventions for suicide and self-injury: A Meta-analysis of randomized controlled trials across nearly 50 years of research. *Psychological Bulletin*, 146, 117-1145; Franklin, et al., (2017). Risk factors for suicidal thoughts and behaviors: A Meta-analysis of 50 years of research, *Psychological Bulletin*, 143, 187-232; Kim, C. (2018). The impacts of social protection policies & programs on suicide: A Literature review. *Int’l Journal of Health Services*, 48(3), 512-534; Pirkis, et al., (2023). A public health, whole-of-government approach to national suicide prevention strategies. *Crisis*, 44(2), 85-92; Stack, S. (2021). Contributing factors to suicide: Political, social, cultural, and economic. *Preventive Medicine*, 152, 106498.

# **MACRO Approach: Puzzle of why suicide rates are increasing in the US by 45%, but going down 24%, on average, in Europe**

- **MICRO: Have mentally distressed persons increased by 45% in the US while they have decreased by 24% in Europe?**
- **MACRO: Are social/economic structures designed to increase economic security more in Europe than in the US?**

# Since 2000, American Suicide Rates have Increased by 44.9% while European Rates have decreased by 24.1% on average

WHO (2021) Suicide Worldwide in 2019. Geneva: WHO.

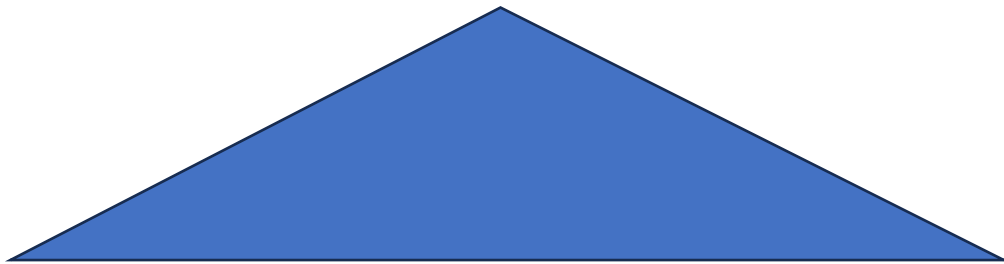
<u>Nation</u>	Suicide Rate 2000	Suicide Rate 2019	Percent Change 2000 to 2019
<b>USA</b>	<b>10.01</b>	<b>14.51</b>	<b>44.95</b>
<u>EUROPEAN NATIONS</u>			
AUSTRIA	15.8	10.4	-34.1772
BELGIUM	18.3	13.9	-24.0437
DENMARK	12.5	7.6	-39.2
FINLAND	21.74	13.43	-38.2245
FRANCE	15.81	9.65	-38.9627
GERMANY	11.15	8.27	-25.8296
LUXEMB	13.44	8.62	-35.8631
NETHERLANDS	8.09	9.27	14.58
NORWAY	13.02	9.91	-23.8863
SPAIN	6.56	5.28	-19.5122
SWEDEN	12.2	12.37	1.393443
SWITZERLAND	15.88	9.83	-30.10
UK	7.74	6.88	-11.1111
<u>European Mean Suicide Rate</u>	<b>13.2</b>	<b>9.65</b>	<b>-24.1</b>

# Why has US Suicide Increased while the Suicide Rates in Europe Decreased?

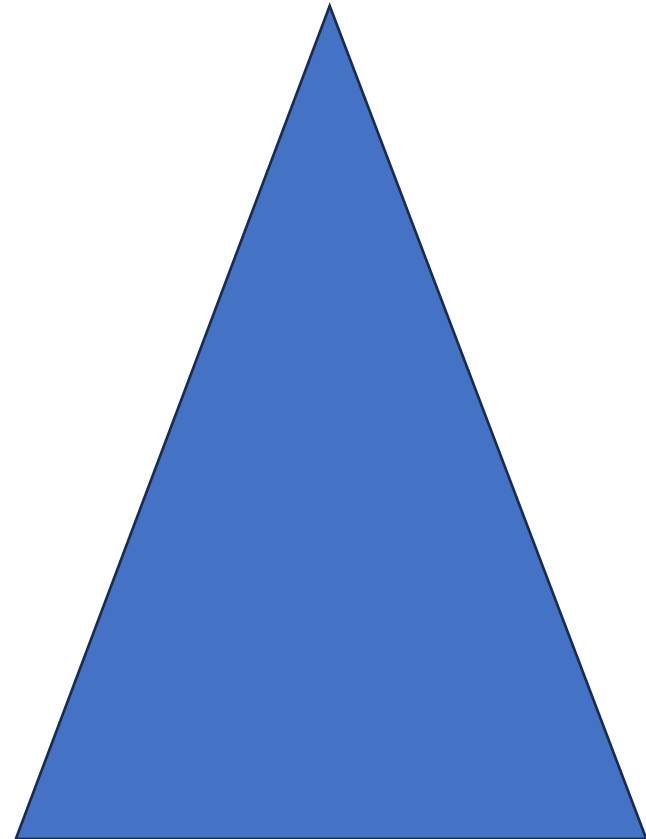
- Little research on it.
- Stack (2018), using 2000-2012 data suggested that a partial explanation concerns differences in social inequality.
- (a) substantial differences in income inequality (a major dimension of social inequality) that taps into the degree of economic stress among low-income people.
- (b) substantial differences in social welfare expenditures, a key political mechanism to combat economic inequality, which assuages the financial strain among disadvantaged populations. Can include family assistance, food stamps, tax credits, etc.
- Stack, S. (2018) Why is suicide on the rise in the US – but falling in most of Europe? The Conversation, June 28. [Why is suicide on the rise in the US – but falling in most of Europe? \(theconversation.com\)](https://theconversation.com/why-is-suicide-on-the-rise-in-the-us-but-falling-in-most-of-europe-2018-06-28)

# Income Inequality: The relative size of low socio-economic status group

- Relative Low Income Inequality
- Less of a gap between rich and poor (e.g. Gini Index of Income Inequality = .200)



- Relative High Income Inequality
- More of a Gap (e.g. Gini Index of Income Inequality = .400)



# The Degree of Income Inequality is Highest in the US vs 13 European Nations with available data

<u>NATION</u>	Gini Index of Income Inequality, 2019
USA	.415
<u>EUROPEAN NATIONS</u>	
AUSTRIA	0.302
BELGIUM	0.272
DENMARK	0.277
FINLAND	0.277
FRANCE	0.324
GERMANY	0.317
LUXEMBOURG	0.342
NETHERLANDS	0.292
NORWAY	0.277
SPAIN	0.343
SWEDEN	0.293
SWITZERLAND	0.331
UK	0.351
<u>European Mean Gini</u>	0.308
<u>US/European Mean*100</u>	137.4%

The American Gini of .415 is 37.4% higher than the mean Gini for Europe (.415/.308). The second highest Gini is for the U.K., .351.

The higher the income inequality, the larger the gap between the affluent and the poor, or the fewer the jobs that pay a living wage. In other words, the lower the economic security.

Source: World Bank (2023)

[Gini index](#) | [Data \(worldbank.org\)](#)

# Safety Net: Social welfare expenditures as a percent of Gross Domestic Product

In 2013, the US spent 18.8% of its GDP on social welfare programs, the lowest of the set of OECD nations, a sign of a weak safety net.

France	31.5%
Finland	29.5%
Belgium	29.3%
Denmark	29.08%
Austria	27.6%
Sweden	27.4%
Spain	26.3%
Germany	24.8%
Luxembourg	23.2%
Netherlands	22.9%
UK	21.9%
Norway	21.8%
Switzerland	19.2%
United States	18.8%

[Social Expenditure - Aggregated data \(oecd.org\)](#), Stack (2018)



# Do social welfare expenditures predict suicide rates in cross-national suicide rates?

- Beyond the scope of the present study.
- Evidence is mixed (e.g., Yur'yev, et al., 2012; Tuttle, 2018; see reviews in Kim, 2018, and Stack, 2021).
- However, in a recent analysis of between-country differences in suicide rates in 31 nations, the greater the social welfare expenditures, the lower the suicide rate independent of confounders including GDP, religious homogeneity, divorce, and inflation (Tuttle, 2018).
- Kim, C. (2018). The impacts of social protection policies & programs on suicide: A Literature review. *Int'l Journal of Health Services*, 48(3), 512-534; Stack, S. (2021). Contributing factors to suicide: Political, social, cultural, and economic. *Preventive Medicine*, 152, 106498. Tuttle, J. (2018). Specifying the effect of social welfare expenditures on homicide and suicide: A cross-national longitudinal examination of the stream analogy of lethal violence. *Justice Quarterly*, 35, 87-113; Yur'yev, A. et al., (2012). Role of social welfare in European suicide prevention, *International Journal of Social Welfare*, 21, 26-33.

# Union Strength and Suicide Rates

- Another cross-national difference lies in union density between the US and Europe.
- Unions, especially with strong ties to a labor party in government as often has been the case in Scandinavian nations, can act as an effective voice for income redistribution and policies to promote economic security (e.g., Stack, 1978; Western, 2011).
- OECD data report that only 9.9% of American employees belong to unions (6% in the private sector) compared to 33.7% in Europe.

- Stack, S. (1978). The effect of direct government involvement in the economy on the degree of income inequality: A cross-national study. *American Sociological Review*, 43, 880-888; Western, B. (2011). Unions, norms, & the rise of U.S. wage inequality. *American Sociological Review*, 76, 513-537.

# The Degree of Union Density (% employees in Unions) is Lowest in the US vs 13 European Nations with Available Data

<u>NATION</u>	Union Density (OECD) 2019
<u>US</u>	<u>9.9%</u>
<u>European Nations</u>	
AUSTRIA	26.3%
BELGIUM	49.1%
DENMARK	67.0%
FINLAND	58.8%
FRANCE	10.8%
GERMANY	16.3%
LUXEMBOURG	28.2%
NETHERLANDS	15.4%
NORWAY	50.4%
SPAIN	12.5%
SWEDEN	65.5%
SWITZERLAND	14.4%
UK	23.5%
<u>European Mean</u>	<u>33.70%</u>
European Mean/USA *100	3.4

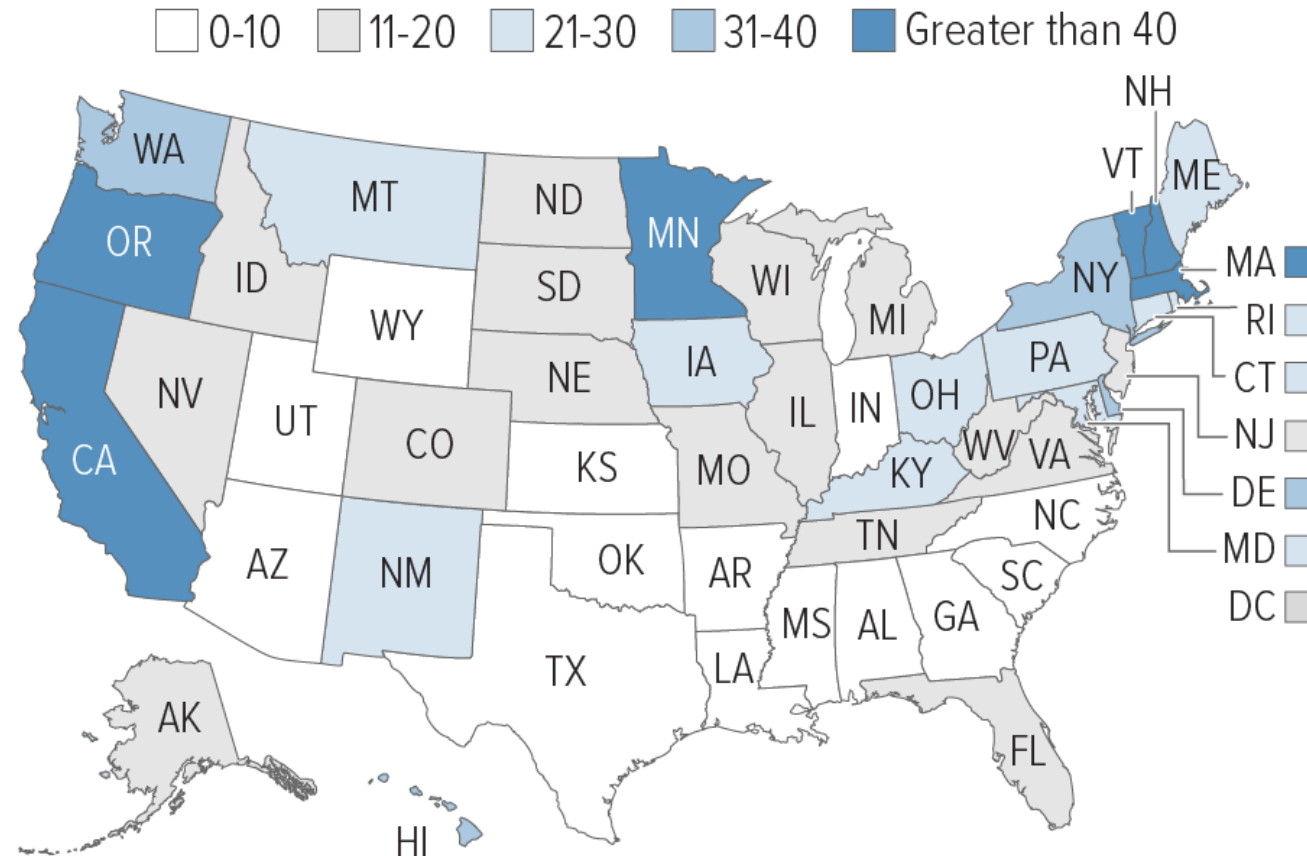
While union density has been declining in most OECD nations since 2000, there is still a large gap between the US (9.9%) and the mean for the European sample (33.7%). The 3.4 union power ratio (33.7/9.9) may help explain the rise in suicide in the US and fall in Europe. Unions can lobby for greater economic security for employees.  
Source: OECD (2023) accessed 8-26-23:  
Trade Union Dataset  
([oecd.org](https://data.oecd.org/trade-unions/))

# **Cross National Findings Applied to Over Time U.S. Suicide Trends**

- **The preliminary findings on income inequality, social welfare expenditures, and union density provide some clues to understanding suicide and its prevention.**
- **While the overall trend in American suicide is upward, some states may have been able to stem the rising tide of suicide.**
- **The present analysis reviews work on the impact of factors such as social welfare expenditures and union density in each of the 50 American states over time (panel designs).**
- **There are large differences in structures such as economic inequality and union density among the 50 states.**
- **The following chart illustrates this variation in state support for a major US program, the Temporary Assistance for Needy Families (TANF) cash welfare transfer program.**
- **TANF support varies from near zero to over 40% of poor families.**

# States' TANF Cash Assistance Programs Reach Few Poor Families

Number of families receiving TANF benefits for every 100 families with children in poverty in 2020



Note: TANF = Temporary Assistance for Needy Families. Figures reflect two-year averages for 2019-20.

Source: CBPP analysis of poverty data from the Census' Current Population Survey and TANF caseload data collected by CBPP from state agencies.

# Brief Theoretical Framework: Strain Theory

- The explanatory framework comes from a synthesis of elements of strain theory in economics and criminology (e.g., Agnew, 1992; Hammermesh & Soss, 1974; Stack & Wasserman, 2007).
- Key assumptions include that lower-status groups experience higher relative deprivation, a greater sense of distributive and procedural injustice, gaps between actual and anticipated economic outcomes, and higher general financial dissatisfaction and strain.
- Low-socioeconomic status groups have a higher risk of antecedents of suicide including mental distress, substance abuse, family disruption, child abuse and neglect, sexual abuse, intimate partner violence, disability, occupational injuries, physical illness, and delinquency (e.g., APA Task Force on Socioeconomic status (2007); Heiner, 2015; Trevino, 2021).
- A Meta-analysis of 1,231 effect sizes showed that low socio-economic status (OR=2.20) was in the top four predictors of suicide deaths nearly the same as suicide ideation (OR=2.22) and attempts (OR=2.24) (Franklin, et al., 2017).
- **Agnew, R. (1992).** Foundations for a general strain theory. *Criminology*, 30,47-88; **APA Task Force on Socioeconomic status (2007).** *Report on the APA task force on socioeconomic status*, Washington, American Psychological Association; **Franklin, et al. (2017).** Risk factors for suicidal thoughts & behaviors: A Meta-Analysis of 50 years of research. *Psychological Bulletin*, 143(2), 187-232; **Hammermesh, D. and Soss, N.M. (1974).** An economic theory of suicide, *Journal of Political Economy*, 82, 83-98; **Heiner, R. (2015).** Social Problems. New York: Oxford University Press; **Stack, S. & Wasserman, I. (2007).** Economic strain and suicide risk. *Suicide & Life Threatening Behavior*, 37, 103-112; **Trevino, A.J. (2021).** Investigating Social Problems, Thousand Oak, CA: Sage.

# Suicide Prevention: Policies to Reduce Economic Strain in Lower Socio-Economic Groups

- **Low socioeconomic status is a core risk factor for suicide in the sociological, economic, and public health literature (e.g., Case & Deaton, 2020; Cook, 2019; Li, et al., 2011; Stack, 1982; 2000; 2021).**
- **Policies designed to reduce economic strain in lower-status groups are anticipated to promote suicide prevention.**
- Case, A.; Deaton, A. (2020). Deaths of Despair and the Future of Capitalism; Princeton University Press: Princeton, NJ, USA, 2020; Cook, A. (2019), The education-suicide gradient. *Applied Economics Letters*, 26, 717-721; Li, et al., (2011). Attributable risk of psychiatric and socio-economic factors for suicide from individual-level, population-based studies: A systematic review. *Social Science & Medicine*, 72, 608-616; Stack, S. (1982). Suicide: A decade review of sociological research, *Deviant Behavior*, 4, 41-66; Stack, (2000). Suicide: A 15-year review of the sociological literature: Part I: Cultural and economic factors, *Suicide & Life-Threatening Behavior*, 30(2), 145-162; Stack, S. (2021). Contributing factors to suicide: Political, social, cultural, and economic. *Preventive Medicine*, 152, 106498.

# Central Hypotheses

- **H1. Generally, states with more egalitarian policies and structures (Democratic Party control) were more able to stem the tide of rising suicide rates.**
- **H2. Increases in the real minimum wage will be associated with lower suicide rates.**
- **H3. Increases in the Supplemental Nutrition Aid Program (SNAP) program will be associated with lower suicide rates**
- **H4. Increases in the Earned Income Tax Credit (EITC) will be associated with lower suicide rates**
- **H5. Increases in Temporary Assistance for Needy Families (TANF) will be associated with lower suicide rates.**
- **H6. Increases in union density will be associated with lower suicide rates.**
- **H7. Occupational fatality rates predict occupational suicide rates.**
- **H8. Debt predicts suicide risk.**



# Partial Model of US States' Structural Suicide Prevention

**Dominant  
Party  
Control  
of State  
House  
Shapes  
Welfare  
Policy**

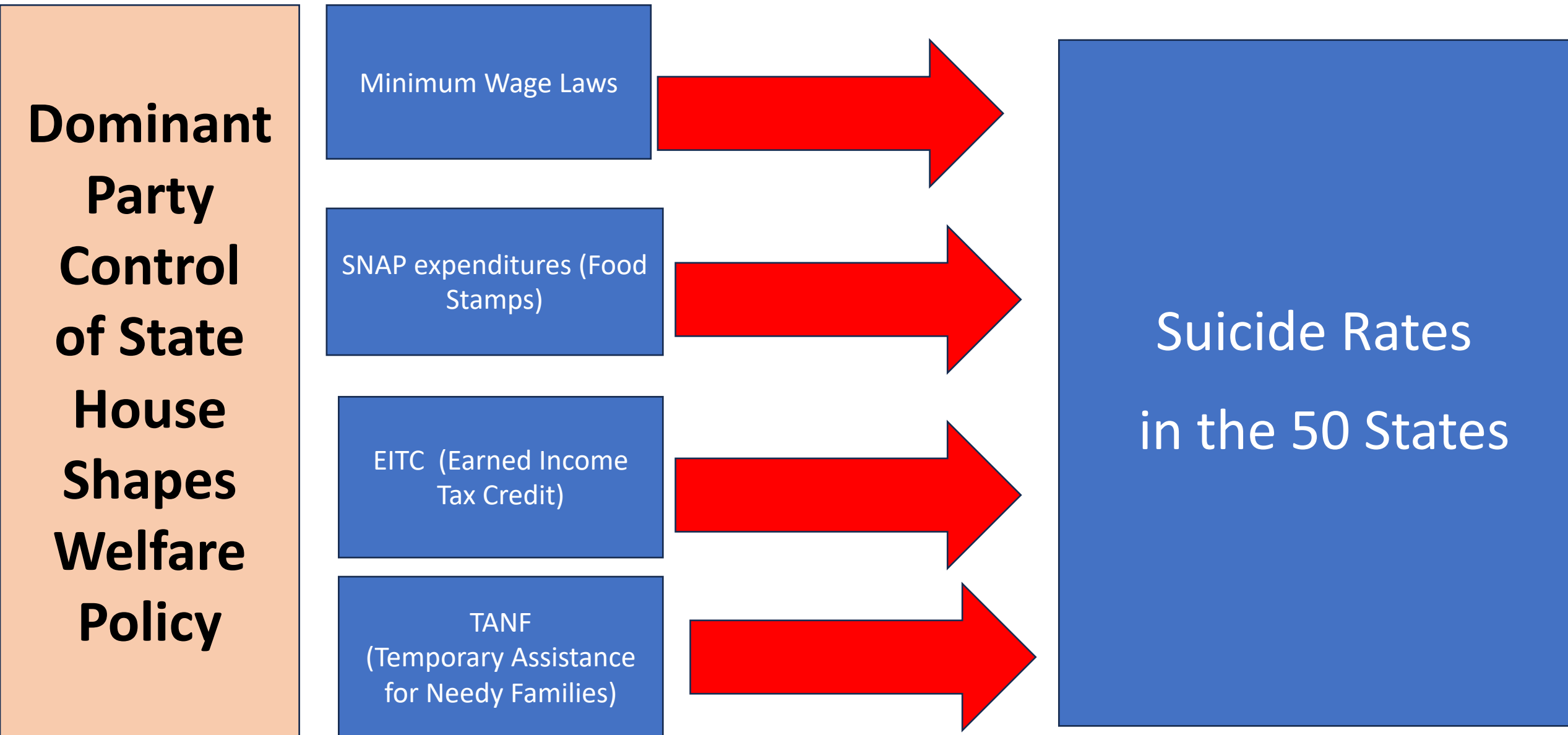
Minimum Wage Laws

SNAP expenditures (Food  
Stamps)

EITC (Earned Income  
Tax Credit)

TANF  
(Temporary Assistance  
for Needy Families)

Suicide Rates  
in the 50 States



# Analysis Strategy

- The analysis is a blend of original recent work and an integration of existing work on the subject.
- There is relatively scant work on the US involving the impact of economic security programs on suicide rates (Kim, 2018).

Kim, C. (2018). The impacts of social protection policies & programs on suicide: A Literature review. *Int'l Journal of Health Services*, 48(3), 512-534.

# Research on the Impact of Social Welfare Expenditures on Suicide Rates

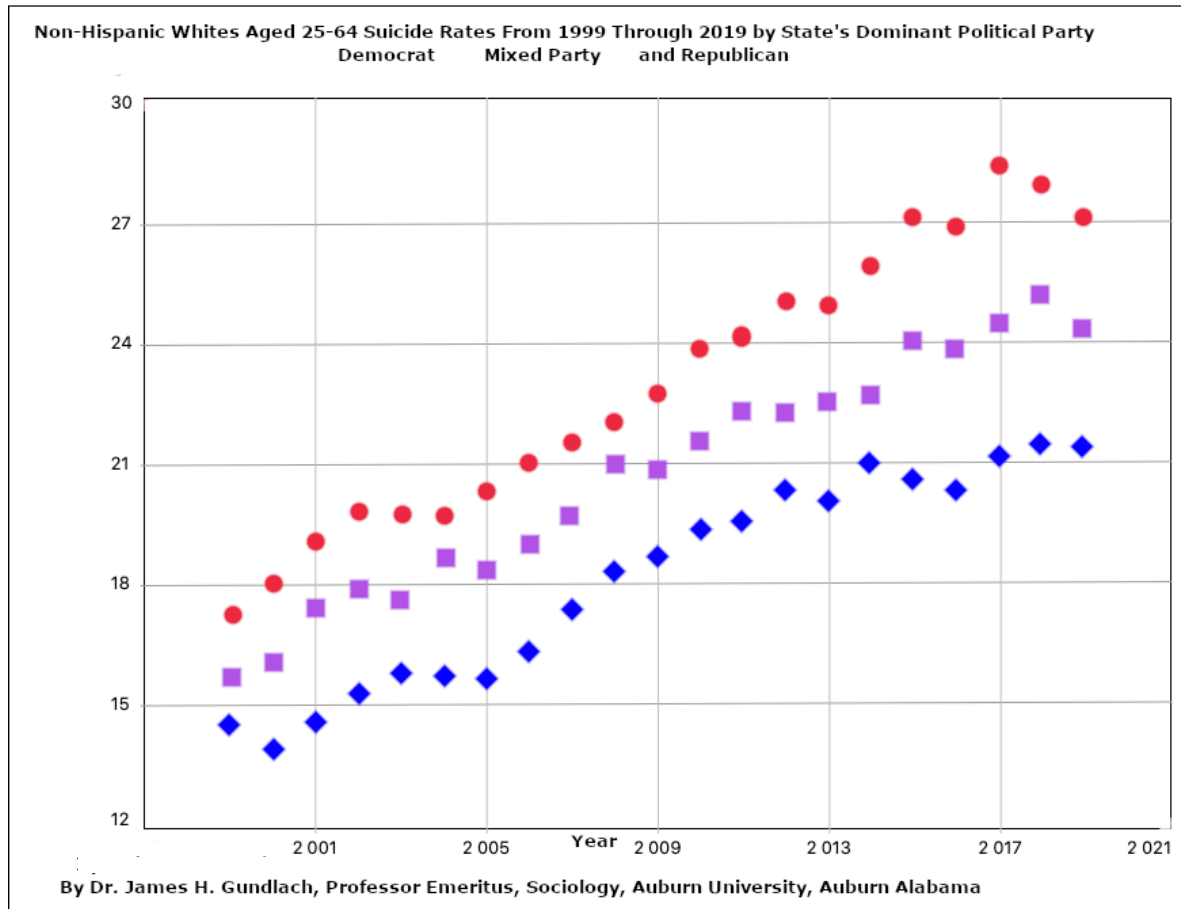
- Reviews have yielded only 9 studies on specific social welfare expenditures designed to uplift low-income groups in the US (e.g., Kim, 2018; Stack, 2021). Far more work has been done on individual-based suicide prevention interventions (thousands of studies, e.g., Fox, 2020).
- Austin, Anna, et al. (2023). Association of State Supplemental Nutrition Assistance Program Eligibility Policies With Adult Mental Health and Suicidality. *Jama Network Open*, 6 (4), e238415. Dow, WH et al. (2021). Can labor market policies reduce deaths of despair? *Journal of Health Economics*, 74, 102372; Flavin, P. & Radcliff, B. (2009). Public policies and suicide rates in the American states. *Social Indicators Research*, 90, 195-209; Fox, et al. (2020) Interventions for suicide and self-injury: A Meta-analysis of randomized controlled trials across nearly 50 years of research. *Psychological Bulletin*, 146, 117-1145. Gertner, A.K. et al. (2019). Association between state minimum wages and suicide rates in the U.S., *American J. of Preventative Medicine*, 56(5), 648-654; Kaufman, et al. (2020). Effects of minimum wages by unemployment rate on suicide in the USA. *J. of Epidemiology & Community Health*, 74, 219-224; Kim, C. (2018). The impacts of social protection policies & programs on suicide: A Literature review. *Int'l Journal of Health Services*, 48(3), 512-534; Odabasi (2023). The relationship between the supplemental nutrition assistance program (SNAP) and suicide rates, evidence from panel data. *International Journal of Happiness and Development*, 8 (1), 1-16; Rambotti, S. (2020). Is there a relationship between welfare-state policies and suicide rates: Evidence from the U.S. states, 2000-2015. *Social Science & Medicine*, 246, 112778; Zimmerman, S. (2002). States' spending for public welfare and their suicide rates, 1960 to 1995. *Journal of Nervous & Mental Disease*, 190, 349-360.

# H1. DOMINANT POLITICAL PARTY & SUICIDE RATES

# **Effect of Dominant Political Party in a State on Suicide Rates**

- **To the extent that Republican-dominated state legislatures effectively oppose policies to promote economic security for lower socio-economic groups (e.g., minimum wage, SNAP, TANF, EITC, unions), we would anticipate that Republican-dominated state legislatures (control both houses) would be more apt to have larger increases in suicide rates than other states.**
- **Data on trends in state suicide rates by state dominant party are consistent with this thesis (see chart next slide).**
- **The curve for suicide is higher in all years for the Republican-dominated states.**
- **In contrast, states with Democratic Party controlled legislatures were, as a group, more able to hold down the rising tide of suicide.**

# States' Dominant Political Party and Non Hispanic White Suicide Rates, aged 25-64, 1999-2019 (Gundlach, 2021)



While there was generally an upswing in suicide rates, the extent of the increase is related to the dominant party in a state.

Democrat= Blue Diamonds

Republican= Red dots

Mixed = Purple squares

Republican-dominated states tend to have weaker safety nets, and higher suicide rates.

Gundlach, J. (2021, personal communication, April 2021).

# H2. MINIMUM WAGE & ECONOMIC SECURITY

# **Do State Minimum Wage Laws Predict Suicide Rates in the 50 American States?**

- **Angus Deaton, who received the Nobel Prize in Economics, and Ann Case (2020) argued that increasing the minimum wage is the most politically feasible avenue to reducing deaths of despair (suicide, drug overdoses, alcoholism). Minimum wage increases can assist persons at the bottom in coping with financial stress.**
- **The American federal minimum wage stands at \$7.25/hour, but states can set amounts above that level (and below it for small employers).**
- **There is considerable variation in the American minimum wage.**
  - **Range: \$7.25 in 19 states including Alabama, Georgia, Texas.**
  - **Median \$10.50 in Michigan & Nebraska**
  - **High end: Massachusetts \$15, California \$15.50, Washington DC \$16.10.**
- **Case, A. & Deaton, A. (2020). *Deaths of Despair and the future of American capitalism*. Princeton: Princeton University Press.**



# Do State Minimum Wage Laws Predict Suicide Rates in the 50 American States (cont'd)?

- **Three studies have found that increases in states' minimum wage are associated with 2-6% decreases in suicide rates.**
  - (1) **Adjusting for relevant socio-economic confounders, for every \$1.00 inflation-adjusted increase in the minimum wage, there was an associated 1.9% drop in suicides (Gertner et al., 2019)**
  - (2) **In a follow-up study, restricting the analysis to adults with a high school education or less (at high risk), a \$1.00 inflation-adjusted increase in the minimum wage was associated with a larger reduction of 5.9% in suicide (Kaufman et al., 2020).**
  - (3) **Dow et al., (2021) reported that for every 10% increase in states' minimum wage, there was a 2.7% decline in suicide among low-educated adults.**

Dow et al., (2021). Can labor market policies reduce deaths of despair? *Journal of Health Economics*, 74, 102372; Gertner, A.K. et al. (2019). Association between state minimum wages and suicide rates in the U.S. *Am. J. Prev. Med.* 56 (5), 648–654; Kaufman, J.A., et al., (2020). The effects of increased minimum wages by unemployment rate on suicide in the USA. *J. Epidemiol. Community Health* 74:219-224.

# Debates and Actions on State & Federal Minimum Wage

Many political interest groups continue to debate and enact or fail to enact, changes in each state's & the Federal minimum wage. The fast food industry has been a center of activity.

“ONE FAIR WAGE,” & “Fight for 15,” are examples of non-profit organizations lobbying for a higher universal minimum wage.

[Home - One Fair Wage](#) [Fight for \\$15 \(fightfor15.org\)](https://fightfor15.org)



# H3. SNAP & ECONOMIC SECURITY

# **Do SNAP Expenditures (Food Stamps) Predict Suicidality Rates in American States?**

- The supplemental nutrition assistance program (SNAP) (formerly food stamps) can help reduce economic stress by reducing food insecurity among the poor. It was funded for \$55.1 billion and reached 35,700,00 recipients in 2019 (Proquest, 2021).**
- Individual state governments in the US can opt to further reduce food insecurity by eliminating/lowering federal asset requirements and/or increasing the income limit for eligibility.**
- Proquest (2021). *Proquest Statistical Abstract of the U.S., 2021*. Bethesda, Maryland. Rowman & Littlefield.**

# SNAP Benefits vary by Household Size and State (example below is California).



## Maximum Monthly Allotment

People in Household	Maximum CalFresh Allotment
1	\$281
2	\$516
3	\$740
4	\$939
5	\$1,116
6	\$1,339
7	\$1,480

# **Do SNAP Expenditures (Food Stamps) Predict Suicidality Rates in American States?**

- **A recent analysis of data (Austin, et al., 2023) found that elimination of both the asset test and increases in the income limit for eligibility were associated with a 8% reduction in past year major depression episodes, 9% reduction in serious mental illness, and 11% reduction in suicide ideation.**
- **However, while there was a 7% reduction in suicide deaths, this was not statistically significant (RR=.93, CI: .84, 1.02). 8% reduction in mental illness rates among adults.**
- **Austin, Anna, et al. (2023). Association of State Supplemental Nutrition Assistance Program Eligibility Policies With Adult Mental Health and Suicidality. *Jama Network Open*, 6 (4), e238415.**

# Do SNAP Expenditures (Food Stamps) Predict Suicidality Rates in American States?

- Rambotti (2020) used a longer time span, 2000-2015, and found that one standard deviation (4.5% state's pop.) increase in SNAP enrollments over the 16-year study period could have lowered the number of suicides by 31,600 lives.
- Odabasi, S. (2023), in a study of smaller units of analysis (US counties), found that a 1% increase in households receiving SNAP payments was associated with a .24 decrease in the county suicide rate.

- Odabasi, S. (2023). The relationship between the supplemental nutrition assistance program (SNAP) and suicide rates, evidence from panel data. *International Journal of Happiness and Development*, 8 (1), 1-16; Rambotti, S. (2020). Is there a relationship between welfare-state politics and suicide rates? Evidence from the U.S. states, 2000-2015. *Social Science & Medicine*, 246, 112778.

# H4. EITC & ECONOMIC SECURITY



# Does the Generosity of the Earned Income Tax Credit (EITC) Predict State Suicide Rates?

- Qualified low-income persons can receive a federal tax credit against their income tax, but the size of the credit allowed varies among states.
  - In 2019 Federal funds for this program were \$60.3 billion, about as much as SNAP (\$65.5 billion) (Proquest, 2021).
  - Dow, et al., (2021) found that a ten percent increase in EITC was associated with a 3.0% decrease in the suicide rate among low-educated persons.
- 
- Dow et al., (2021). Can labor market policies reduce deaths of despair? *Journal of Health Economics* 74, 102372. Proquest (2021). *Proquest Statistical Abstract of the U.S. 2021*. Bethesda, Maryland, Rowman and Littlefield.

# H5. TANF & ECONOMIC SECURITY

# **Do TANF Expenditures (Temporary Assistance to Needy Families) and/or AFDC (Aid to Families with Dependent Children) Predict Suicide Rates in the 50 American States?**

- **TANF was funded by \$20.4 billion in federal funds in 2019, about one-third of the amount of federal funding for SNAP (\$65.5 billion).**
- **It provides cash transfers to qualified impoverished families, 920,000 in 2019 (Proquest, 2021).**
- **There is substantial variation in state support for TANF as shown in the next chart.**
- **This suggests possible variation in the impact of state levels of TANF on suicide rates.**

Proquest (2021). *Proquest Statistical Abstract of the U.S. 2021*. Bethesda, Maryland, Rowman and Littlefield.

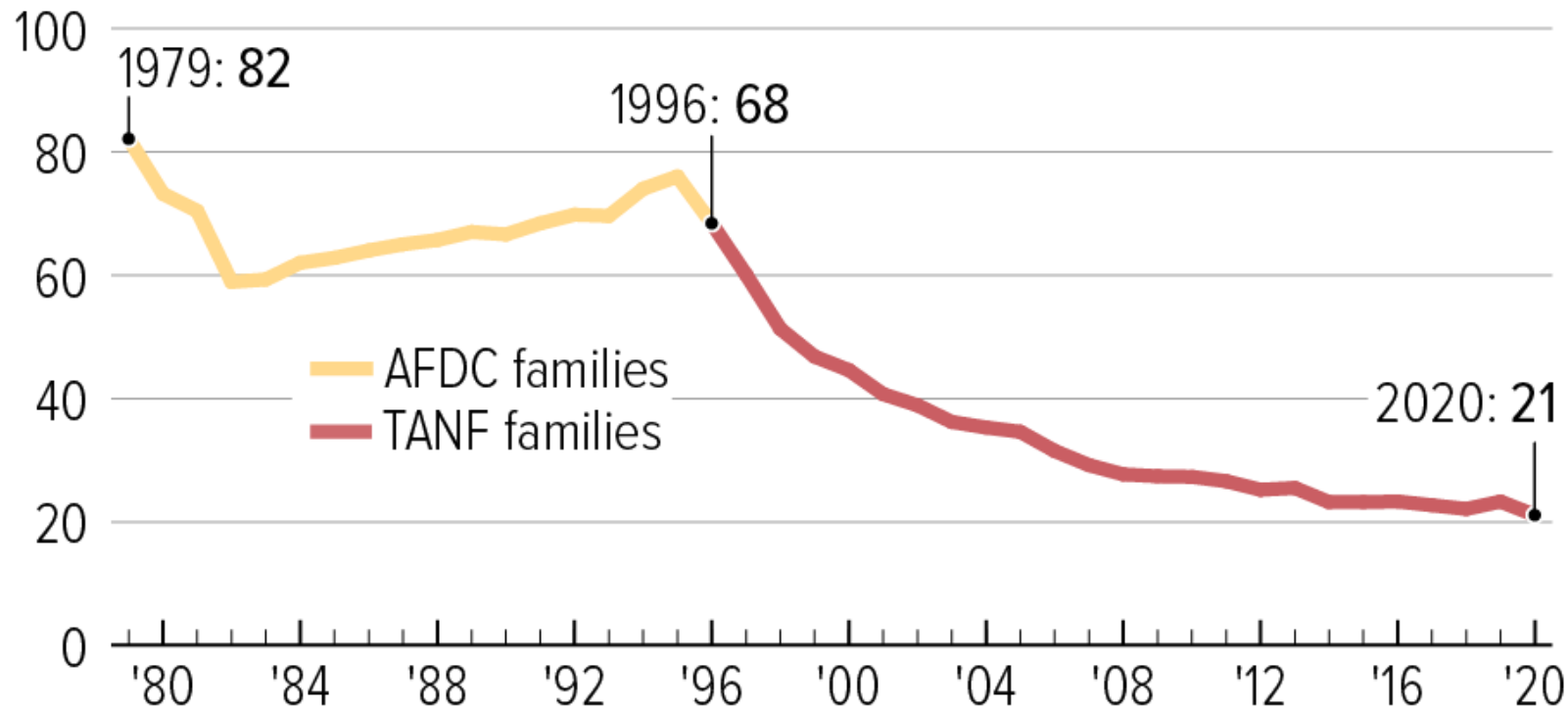
# **TANF: Effect on Suicide Rates Among States, and the US as a Whole**

- **Flavin & Radcliff (2009) analyzed states' suicide rates for 1990-2000 and determined that an increase of \$45 per capita on welfare spending was associated with 3,000 fewer suicides, or 272/year.**
- **As shown in the next chart, since the late 1990s, the percentage of a state's poverty population that received TANF has declined.**
- **This decline may be part of what drives the American suicide rate upwards through 2022.**

**Flavin, P. & Radcliff, B. (2009). Public policies and suicide rates in the American states. *Social Indicators Research*, 90, 195-209.**

# TANF's Reach Declined Significantly Over Time

Number of families receiving AFDC/TANF benefits for every 100 families with children in poverty



Note: TANF = Temporary Assistance for Needy Families, AFDC = Aid to Families with Dependent Children

Source: CBPP analysis of poverty data from the Census' Current Population Survey and AFDC/TANF caseload data from the Department of Health and Human Services and (since September 2006) caseload data collected by CBPP from state agencies

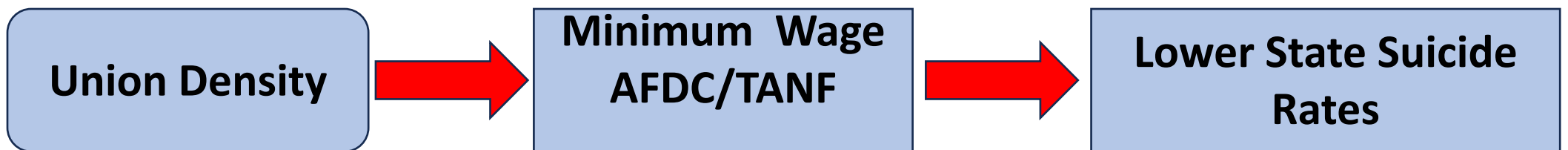
# H6. UNIONS & ECONOMIC SECURITY

# Union Strength and Suicide Rates

- Unions can push for economic security for employees.
  - However, American data shows that the percentage of employees belonging to unions in the US continues to decline from 20.1% in 1983 to 10.1% in 2022 (Van Green, 2023).
  - Nevertheless unions have provided a voice for economic security at the state level including laws regarding economic security such as minimum wage and anti-union laws such as “Right to Work” (without paying union dues) (e.g., Jacobs, 2006).
  - Union strength predicts lower income inequality (Western, 2011).
  - States with higher union strength may have been able to stem the tide of rising suicide rates.
- Jacobs, D. & Dixon, M. (2006). The politics of labor-management relations: Detecting the conditions that affect changes in right-to work-laws. *Social Problems*, 53, 118-137;  
Van Green, T. (2023) Majorities of adults see decline in union membership as bad for the U.S. and working people. Pew Research Center. Accessed August 25, [58% of U.S. adults see union membership decline as bad for U.S. | Pew Research Center](#); Western, B. (2011). Unions, norms, and the rise of US wage inequality. *American Sociological Review*, 76, 513-537.

# Union Strength, Economic Security, & State Suicide Rates

- Eisenberg-Guyot, et al., (2019) provide a pioneering study showing that a 10% increase in the percentage of employees covered by union contracts predicted a 17% decline in state suicide rates.
- For the study's period, 1986-2016, it was also shown that the greater the union density the higher the minimum wage and the higher the percentage of persons covered by welfare programs (AFDC & TANF).



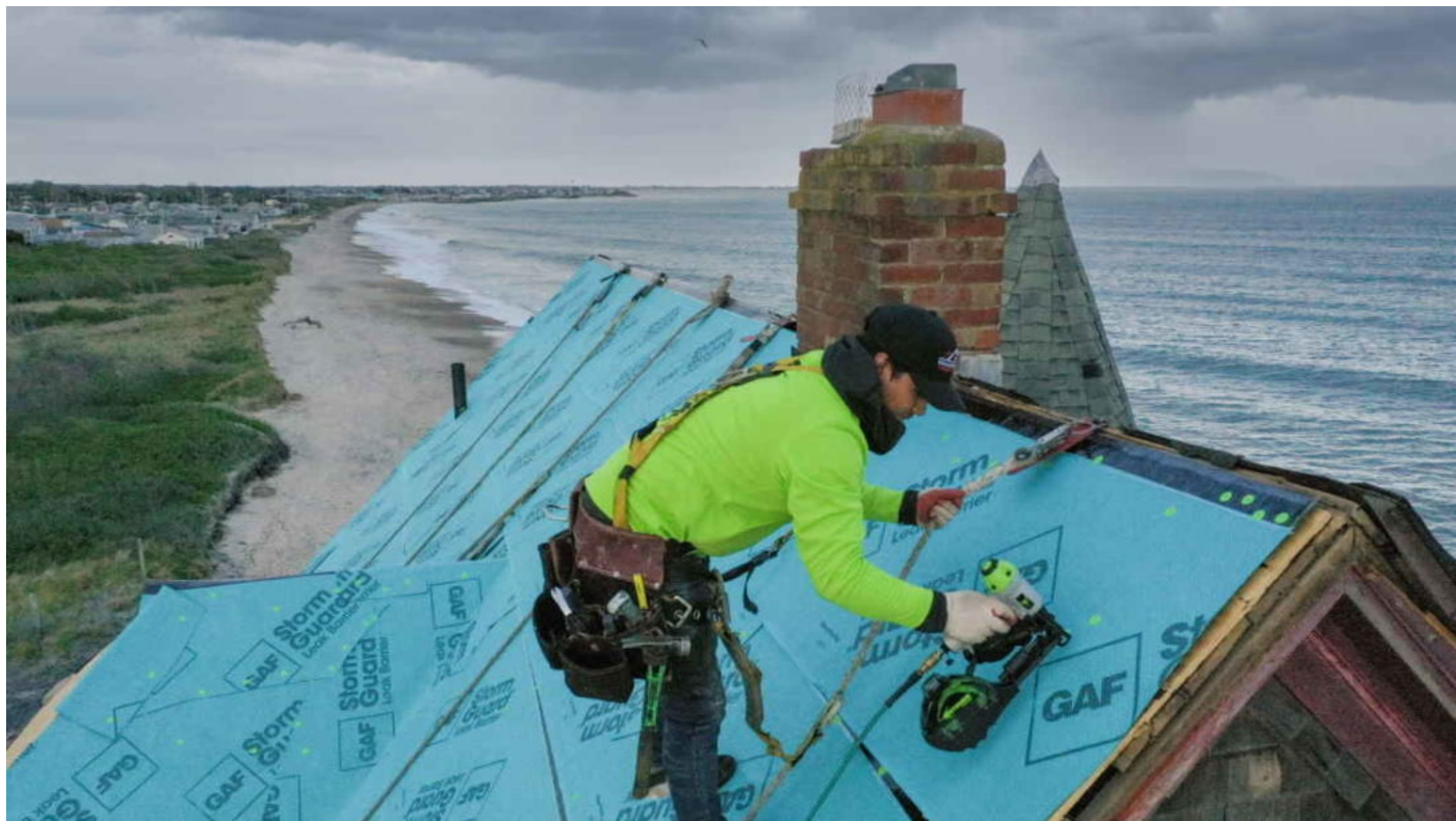
- Eisenberg-Guyot, et al., (2019). Solidarity and disparity: Declining labor union density and changing racial & educational mortality inequities in the U.S.. *American Journal of Industrial Medicine*, 63, 218-231.



# H7. INEQUALITIES IN OCCUPATIONAL INJURY

# **Social Inequalities in Occupational Safety & Fatality Rates Predict Suicide Rates**

- **Working people are differentially exposed to dangerous working conditions, a relatively unstudied occupational risk factor for suicide.**
- **Roofers, for example, often working high up on roofs moving heavy bundles of shingles and materials, have a high rate of falls and shoulder injuries (Stack, 2023).**
- **Roofers' fatal injury rate is 48/100,000 – the 4<sup>th</sup> highest (U.S. Bureau of Labor Statistics, 2017).**
- **In turn, roofers, for example, have the 7<sup>th</sup> highest suicide rate 65.2/100,000 of 108 occupations (Peterson, et al., 2020).**
- Peterson, C., et al. (2020). Suicide rates by industry and occupation – National Violent Death Reporting System, 32 states, 2016. *Morbidity & Mortality Weekly Report*, 69(3), January 24; Stack, S. (2023). Roofers' Suicide: Injury, Pain and Substance Abuse, paper presented online at the *Suicide Research Symposium*, April 26-28, 2023, revised and resubmitted for publication. U.S. Bureau of Labor Statistics (2017), *Census of Fatal Occupational Injuries* (CFOI).



**Table 1. Fatal Injury Rates for the Six Most Dangerous Occupations, of 71 Occupational Groups, & All Occupations, 2016. (Source: U.S. Bureau of Labor Statistics, 2017, Census of Fatal Occupational Injuries (CFOI)).**

Occupation	Fatal Injury Rate (Rate per 100,000 Full Time Equivalent Workers)
Logging Workers	135.9
Fishers & Related Fishing Workers	86.0
Aircraft Pilots & Flight Engineers	55.5
<u>Roofers</u>	<u>48.6</u>
Refuse & Recyclable Materials Collectors	34.1
Driver Sales Workers & Truck Drivers	24.7
All Occupations	3.6

# Social Inequality in Occupational Fatality Rates & Suicide

- Preliminary work reports a correlation of  $r=.72$ ,  $p<.001$  between occupational fatal injury rates and suicide rates for 58 occupations (Stack, 2023).
- The working pathway between injury and suicide has three steps:
- INJURY → PAIN → OPIOID ADDICTION → SUICIDE.
- This pathway is hypothesized to be found in other occupations with high injury rates including those in construction & agriculture (Stack, 2023).
- Stack, S. (2023). Roofers' Suicide: Injury, pain and substance abuse, paper presented online at the *Suicide Research Symposium*, April 26-28, 2023, revised and resubmitted for publication.

# H8. DEBT

# Debt as a Predictor of Suicide Rates

- Total American household debt reached \$16.51 trillion in 2022 (Federal Reserve Bank of New York, 2022).
- Current rate of interest on credit card debt has increased to over 22%.
- Serious debt is related to poor mental health (e.g., Drentea, et al., 2021; Richardson et al., 2013).
- Richardson (2013) provides a Meta-analysis of 52 papers on unsecured debt (e.g., credit card debt) as a predictor of mental well-being and suicidality.
- For studies predicting suicide death, persons with significant debt were fully 7.9 times more apt to die by suicide than controls with no debt.
- Drentea, P. et al., (2021). Relative deprivation, conspicuous consumption, and medical financial hardship: Potential reasons for debt and mental health. *Sociological Focus*, 54, 239-252. Richardson et al., (2013). The relationship between personal unsecured debt and mental and physical health. *Clinical Psychology Review*, 33, 1148-1162.

# Debt as a Predictor of Suicide Rates.

- In a recent longitudinal study of 57,039 persons in debt in the Swedish Enforcement Authority were followed for 2 years. ed, persons who were still in debt at follow-up were 2.21 times more apt to attempt suicide than persons who had paid off their debt (Rojas, 2023).
- Debt exemption laws can reduce the strain involved in bankruptcy filings from debt.
- States vary in the degree of debt exemption laws but no one has assessed the generosity of such laws on suicide rates (see Martin, 2022).
- Martin, E. (2022). Regulating the risk of debt: Exemption laws and economic insecurity across the US States, 1986-2012. *American Journal of Sociology*, Richardson et al., (2013). The relationship between personal unsecured debt and mental and physical health. *Clinical Psychology Review*, 33, 1148-1162. Rojas, Y. (2023). Status of debtor registration at an enforcement authority and risk of nonfatal suicide attempt. *Crisis*, 43(3), 209-215.



# CONCLUSIONS

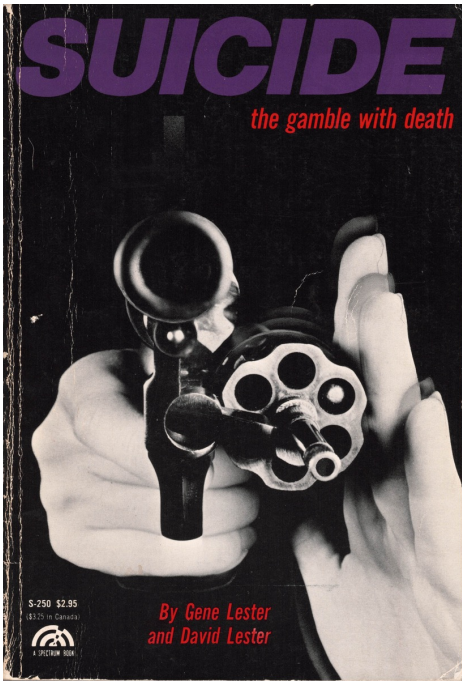
# **Efficacy of Structural Programs & Labor Unions for Enhancing Income Security within a Rising Tide of American Suicide**

- **Although suicide rates have been increasing (45% between 2000-2019), state programs to improve economic security for low-income people have held back suicide rates in states aggressively adopting the programs (minimum wage, SNAP, EITC, TANF).**
- **Labor unions have also helped stem the tide somewhat in states with higher union density.**

# Efficacy of Psychological Interventions vs. Macro Income Enhancing Interventions

- Fox, et al. (2020) reviewed 591 randomized controlled trials (RCTs) and calculated effect sizes of psychological interventions for preventing suicidality.
- The MICRO-oriented average intervention effects for prevention were small.
  - For suicide ideation:  $RR=.91$  (CI: .88, .94) 9% risk reduction
  - For suicide attempts:  $RR=.98$ , (CI .87, 1.10), not significant
  - For suicide deaths:  $RR=.89$  (CI: .76, 1.04), not significant
- In contrast, MACRO income enhancing interventions such as minimum wage increases, increases in SNAP payments, EITC expansion and union density have generally been shown to reduce suicide death rates significantly.
- The average efficacy of MACRO interventions seems higher than MICRO ones.
- Fox, et al., 2020). Interventions for suicide and self-injury: A Meta-analysis of randomized controlled trials across nearly 50 years of research. *Psychological Bulletin*, 146, 117-1145.

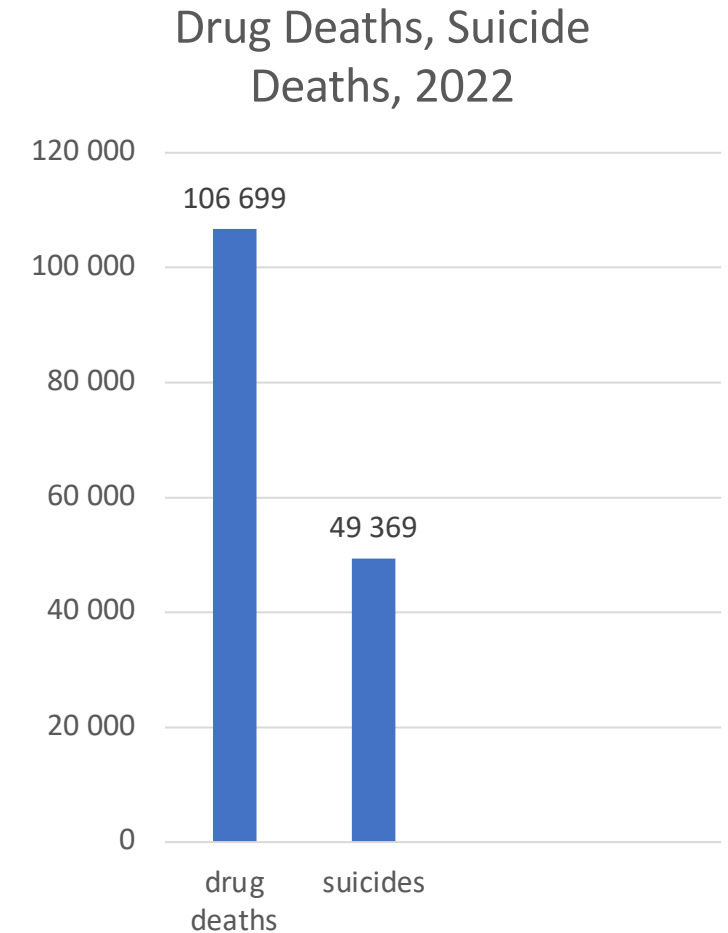
# Limitations: Studies Largely Omit the Suicide Undercount: Drug Overdoses as Gamble with Death or “Life-Threatening Behavior”



Drug overdose deaths may be like Russian Roulette, a gamble with death. Somewhere between 10% - 50% of drug overdose deaths may really be suicides, especially drug deaths that are classified as undetermined.

To date, the work on the economic safety net and suicide has generally not rigorously explored links between economic insecurity and deaths of despair rate. However, SIM (self-injury mortality that includes many drug overdose deaths) is known to be predicted by economic constructs including percent employed in manufacturing and labor underutilization rates (Rockett et al., 2022).

Rockett, I.R.H., et al., (2022). Association of state environmental and social factors with rates of self-injury mortality and suicide in the U.S. *Jama Network Open*, 5(2), e2146591.



**Kamp, J. (2023) Overdose fatalities topped 100,000 in 2023. *Wall Street Journal*, May 18, p. A10.**

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