Correspondence

Stigma towards persons who use methamphetamine: Results from a nationally representative survey of U.S. Adults

A B S T R A C T

This study seeks to understand the general adult population's knowledge, attitudes, and stigma towards methamphetamine use and people with a history of methamphetamine use utilizing a cross-sectional national survey. We analyzed data from a cross-sectional survey drawn from AmeriSpeak®, a probability-based ongoing panel of over 35,000 households representative of the U.S. household population. We developed a 10-item social stigma scale, and estimated a multivariable generalized linear regression model for public stigma towards methamphetamine use as our dependent variable and a series of covariates. Six adjusted independent variables were noted to be significantly associated with higher stigma towards methamphetamine use: older age, higher household income, married status, Republican party affiliation, no history of methamphetamine use, and higher racism score. Sex assigned at birth, race (with Black as reference category), education level, and history of arrest or incarceration showed no statistical significance in stigma scores. In a separate regression model limited to people with a history of methamphetamine use (n = 727), notably White respondents had lower stigma compared to Black respondents. Our large population-based survey identified several factors associated with higher stigma towards those who use methamphetamines, including higher racist attitudes which was associated with a higher stigma score and higher internalized stigma amongst Black respondents with a history of methamphetamine use. Given the scope of methamphetamine use in the U.S., addressing stigma, in particular in regard to race, may impact the nation's public health efforts to reduce methamphetamine-associated adverse outcomes.

1. Introduction

Methamphetamine is a potent, addictive synthetic stimulant with adverse health effects. In 2020, approximately 2.5 million people in the U.S. above the age of 12 used methamphetamine, and 1.5 million were diagnosed with methamphetamine use disorder (U.S. Drug Enforcement Administration, Diversion Control Division, 2020). Methamphetamine use has been associated with increased rates of HIV; other sexually transmitted infections, and other harms including intimate partner violence, and co-occurring mental illness (U.S. Drug Enforcement Administration, Diversion Control Division, 2020; Jennings et al., 2021). Stigma related to methamphetamine use further compounds the negative effects related to engagement to care and adherence across various health conditions (Jennings et al., 2021; Xavier Hall et al., 2022; Stangl et al., 2019). This study seeks to understand the general adult population's knowledge; attitudes; and stigma towards methamphetamine use and people with a history of methamphetamine use utilizing a cross-sectional national survey.

2. Methods

We analyzed data from a cross-sectional survey administered from October 1st to November 19, 2021. Participants were drawn from AmeriSpeak®, a probability-based ongoing panel of over 35,000 households, selected through a stratified random sample of US households from NORC's national sample frame covering 97 % of the U.S.

household population, with small financial incentives to respond (Dennis, 2019). We used statistical weights to adjust our data to US census benchmarks (balanced by sex, age, education, race/ethnicity, and region). Given our modest response rate of about 40 %, we also developed non-response weights (using a response propensity approach) to statistically adjust our results to address any bias that non-response might introduce to the study (Bilgen et al., 2018).

We developed a 10-item social stigma scale (Cronbach's alpha = 0.86) adapted from prior stigma survey research projects to measure social stigma towards methamphetamine use (Yang et al., 2019; Kennedy-Hendricks et al., 2017). We estimated a multivariable generalized linear regression model for public stigma towards methamphetamine use as our dependent variable and a series of covariates, including demographic variables, political party affiliation, methamphetamine use, criminal legal involvement history and racism as measured using the Color-Blind Racial Attitudes Scale (CoBRAS) (Neville et al., 2000). Statistical analyses were conducted using IBM SPSS software version 28.0. This study was conducted with the approval of NORC's Institutional Review Board.

3. Results

6,515 adults completed this project's survey Table 1 displays demographic data and regression model results. We observed a mean score of stigma towards methamphetamine use of 3.75 with 39.7 % with a score of 4 or greater (range 1 to 5).

Table 1

Demographics and adjusted regression estimates for stigma towards methamphetamine use among US adults in 2021 (n = 6,515).

Variable	%	β	Std. Error	95 % Wald Confidence Interval Lower/Upper		*P* value
(Intercept)		3.40	0.06	3.29	3.51	0.00
Age (years)						
60+	31.1	0.35	0.04	0.29	0.41	0.00
45–59	24.2	0.28	0.03	0.22	0.34	0.00
30–44	26.0	0.14	0.03	0.09	0.20	0.00
18–29 (REF)	18.7	.	.	.	.	.
Race/Ethnicity*						
Asian, 2+, other	8.5	−0.07	0.04	−0.14	0.01	0.09
Hispanic	16.6	0.06	0.03	−0.01	0.13	0.07
White	62.8	0.01	0.03	−0.05	0.06	0.91
Black (REF)	12.1	.	.	.	.	.
Education						
Post grad study/ professional degree	15.2	−0.04	0.04	−0.11	0.04	0.35
Bachelor's degree	20.8	0.07	0.04	−0.01	0.14	0.07
Vocational/tech school/some college/ associates	27.7	0.02	0.03	−0.04	0.09	0.50
HS graduate or equivalent	27.3	0.01	0.03	−0.06	0.07	0.94
Less than HS (REF)	9.1.	.	.	.	.	.
Household Income						
$100,000 or more	24.0	0.09	0.03	0.04	0.15	0.001
$60,000 to under $100,000	23.6	0.03	0.03	−0.02	0.08	0.25
$30,000 to under $60,000	26.0	0.01	0.02	−0.04	0.06	0.75
Less than $30,000 (REF)	26.5	.	.	.	.	.
Marital Status						
Living with partner	6.1	0.06	0.04	−0.02	0.13	0.13
Never married	28.6	−0.06	0.02	−0.11	−0.01	0.02
Separated	4.4	−0.13	0.04	−0.22	−0.04	0.003
Divorced	10.3	0.03	0.03	−0.03	0.09	0.31
Widowed	3.5	0.06	0.05	−0.04	0.17	0.21
Married (REF)	47.0	.	.	.	.	.
Political Party Affiliation						
Republican	24.5	0.09	0.03	0.04	0.15	0.001
Lean Republican	9.7	0.05	0.03	−0.02	0.12	0.14
Don't Lean/ Independent/None	19.2	0.01	0.03	−0.05	0.06	0.88
Lean Democrat	12.1	−0.06	0.03	−0.11	0.002	0.06
Democrat (REF)	34.5	.	.	.	.	.
Biological sex at birth						
Yes, respondent is female	53	−0.03	0.02	−0.06	0.01	0.15
Lifetime use of meth						
Yes, used Methamphetamines, amphetamines or other forms of speed	11.2	−0.30	0.03	−0.36	−0.25	0.00
CJI history						
Yes, criminal justice involvement history	14.8	0.01	0.03	−0.05	0.05	0.98
Colorblindness/ discrimination						
CoBRAS_Scale	2.88 (1.04) **	0.05	0.01	0.03	0.07	0.00

CJI = Criminal justice or incarceration, CoBRAS = Color-Blind Racial Attitudes, β = beta coefficient yielded from linear regression with continuous outcome of stigma towards meth use disorder. *For "Race/Ethnicity" participants were provided a question about ethnicity and race and were allowed to self-identify with the group they most identified with. Study took place between October-November 2021 with survey evenly distributed throughout the United States of America. **Result reported as mean score with standard deviation in parentheses.

Within the regression model, six adjusted independent variables were noted to be significantly associated with higher stigma towards methamphetamine use: older age, higher household income, married status, Republican party affiliation, no history of methamphetamine use, and higher racism score. Sex assigned at birth, race (with Black as reference category), education level, and history of arrest or incarceration showed no statistical significance in stigma scores. In a separate regression model limited to people with a history of methamphetamine use (n = 727), notably White respondents had lower internalized stigma compared to Black respondents.

4. Discussion

Our large population-based survey identified several factors associated with higher stigma towards those who use methamphetamines. One significant variable was having higher racist attitudes which was associated with a higher stigma score and reflects a critical component of the intersection of racism, stigma, and substance use. This is further exacerbated by the finding of higher internalized stigma amongst Black respondents with a history of methamphetamine use.

Given the scope of methamphetamine use in the U.S., addressing stigma, in particular in regard to race, may impact the nation's public health efforts to reduce methamphetamine-associated adverse outcomes. Potential interventions may also include targeted public education campaigns tailored towards others who are older, higher income, married, and Republican.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data that has been used is confidential.

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None of the authors have conflicts of interest to disclose.

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