



Occupying multiple stigmatized identities: Smoking and unemployment stigmas among the unemployed

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ABSTRACT

Stigma – which involves stereotyping, discrimination, and status loss – is a central driver of morbidity and mortality. Given the de-normalization of smoking and the status loss of unemployment, unemployed individuals who smoke may occupy multiple stigmatized identities. As such, this study examined aspects and correlates of smoking and unemployment stigmas among unemployed job-seekers who smoke. Adult job-seekers who smoke tobacco (N = 360) were recruited at government-run employment development departments (EDDs) in the San Francisco Bay Area in 2015–2018. Participants completed measures of smoking and unemployment stigma and self-reported their demographic, tobacco use, and physical and mental health characteristics. Smoking and unemployment stigmas were moderately positively correlated, and the sample reported higher unemployment stigma than smoking stigma. A sample majority endorsed at least one element of smoking and unemployment stigmas; most common for both was self-disappointment. Two sets of linear regression analyses using a general-to-specific modeling procedure were run to identify significant correlates of smoking stigma and unemployment stigma. Both stigmas were significantly associated with depressive symptoms and with preparing to quit smoking. Participants in poorer health and those with stable housing endorsed greater smoking stigma, while unemployment stigma was endorsed more among White individuals and those with past-year e-cigarette use. The findings highlight the need to examine multiply occupied stigmas as a social determinant of population health.

Introduction

As cigarette smoking prevalence continues to decline in the United States, people who smoke encounter a social context in which smoking is increasingly unacceptable. In addition to the health and financial harms associated with smoking, the “smoker” label today may also carry stigma (Stuber & Galea, 2009).

Stigmatization reflects a social process by which exclusion, rejection, blame, or devaluation occurs due to an aspect of one’s identity (Brown-Johnson & Popova, 2016). Stigma can develop through external discrimination or internal self-devaluation (Brown Johnson, Brodsky, & Cataldo, 2014). There is strong evidence that smoking-related stigma occurs through both external and internal processes. Externally, most non-smokers stigmatize people who smoke (Peretti-Watel, Legleye, Guignard, & Beck, 2014), and half of people who currently smoke and previously smoked experience judgment from others in the form of devaluation and discrimination (Stuber & Galea, 2009). In addition, many individuals who smoke also experience self-stigma, or the internalization of the negative stereotype (O’Connor, Rees, Rivard,

Hatsukami, & Cummings, 2017).

Stigma’s impacts on individuals are consequential: it has been argued that stigma is a fundamental cause of morbidity and mortality at the population level (Hatzenbuehler, Phelan, & Link, 2013). At the individual level, experiencing stigma is associated with social withdrawal, stress, and isolation, all of which diminish quality of life (Hatzenbuehler et al., 2013; Stuber, Galea, & Link, 2008; Stuber & Galea, 2009).

There is also evidence that, compared to non-smokers, people who smoke may be more likely to occupy multiple stigmatized identities. People who smoke are more likely to be of low income, uninsured, unemployed, and have mental illness or a substance use disorder (Schroeder & Morris, 2010). Indeed, prior research has found that smoking self-stigma is related to stigma experienced in other domains, such as mental illness and race/ethnicity (Brown-Johnson et al., 2015). Together, these individuals’ statuses may, in part through stigmatization, exacerbate their societal marginalization (Prochaska, Shi, & Rogers, 2013).

Because unemployment also carries stigma (Krug, Drasch, & Jungbauer-Gans, 2019), unemployed individuals who smoke may be

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particularly vulnerable to the effects of occupying multiple stigmatized identities. Cross-sectional and longitudinal studies show a consistent relationship between smoking and unemployment. Smoking prevalence in the US among the unemployed (44.7%) is considerably higher than among full-time employed individuals (27.8%) (U.S. Department of Health and Human Services SAAHSA, 2006–2008). In the 2007–2009 California Health Interview Survey, unemployed job-seekers had the highest smoking prevalence relative to employed individuals and non-job-seeking unemployed individuals (Prochaska et al., 2013).

The co-occurrence of unemployment and smoking may increase the marginalization of individuals who experience multiple forms of stigma. Particularly if they have other marginalized identities, unemployed job-seekers who smoke may be particularly vulnerable to stigma and may experience stigma from multiple sources. Indeed, research suggests that unemployed individuals who smoke may suffer adverse consequences compared to their non-smoking counterparts: in a longitudinal study of reemployment differences between people who do and do not smoke, the former had a lower likelihood of reemployment at 12-month follow-up and were paid significantly less than non-smokers when reemployed (Prochaska et al., 2016).

Given the established relationship between smoking and unemployment, this study identified unique and common correlates of smoking stigma and unemployment stigma among unemployed adult job-seekers who smoke. To our knowledge, no study has explored demographic, tobacco use, and physical and mental health features of individuals' identities that may be associated with smoking and unemployment stigmas. Yet examining how these stigmas may manifest in individuals is critical, as experiencing stigma may discourage job-seekers from applying for opportunities, impact employers' treatment of them, decrease the quality of their social relationships, and negatively affect their health and well-being. At the same time, not all unemployed individuals who smoke will experience one or more stigmas. For instance, if a behavior or circumstance (e.g., smoking, unemployment) is common in one's social group, it may be perceived as normative and therefore less stigmatized. Additionally, competing priorities may impact experiences of stigma. For example, someone with unstable housing may feel that obtaining employment is more of an urgent concern than quitting smoking and may therefore feel more shame regarding their unemployment status than their smoking status. Thus, identifying correlates of each stigma will help identify - and intervene with - those most at risk of experiencing them. More broadly, understanding how different aspects of individuals' identities intersect in their experiences of stigma is an important first step toward managing stigma and improving both health and reemployment outcomes.

Methods

Participants

Adults who smoke tobacco were recruited between October 2015 and February 2018 onsite at five employment development departments (EDDs) in the San Francisco Bay Area. EDDs help individuals find work through offering job search and résumé workshops, job fairs and referrals, and trainings. Participants were recruited through direct approach onsite by study staff, flyers posted in the employment centers, and word-of-mouth. Interested clients who reported smoking tobacco met with research staff to determine eligibility.

Inclusion criteria were age 18 years or older; English literate; residing in the San Francisco Bay Area; unemployed or underemployed (<40 h worked in the past month or < 10 h in the past week); established current daily smoking (100+ cigarettes smoked in one's lifetime and current smoking of 1+ cigarettes daily, with a measured carbon monoxide (CO) breath sample reading of ≥ 7 ppm), and actively seeking work evidenced by an updated resume, job application, or attendance at an onsite job seminar. The parent study, which sought to improve time to re-employment, was limited to a 6-month follow-up. Individuals

chronically unemployed (>2 years) were excluded because it was anticipated that circumstances often associated with chronic unemployment (e.g., incarceration, substance use disorders, other medical conditions) could impede re-employment in that short timeframe. Intention to quit smoking was not required.

Procedures

Study procedures have been described elsewhere and were approved by Stanford University's Institutional Review Board (Prochaska et al., 2019). In the parent study, participants provided signed informed consent and were assured confidentiality. Incentives of \$25 were provided for participants' time in completing study assessments (40 min each) at baseline and 3- and 6- month follow-ups with a \$25 bonus for completing all three assessments, for a total possible incentive of \$100. Participants received study-branded items (e.g. pens, post-its, folders) with the team's contact details. After baseline assessment, participants were randomized blocking on recruitment site, stage of change, and heaviness of smoking. For the present study, only participants' baseline data were analyzed.

Measures

Descriptive characteristics

Participants reported their age; gender (male, female, other); race/ethnicity (categorized into non-Hispanic White, Hispanic, African American, multiracial or other); highest level of completed education (less than high school degree, high school degree/GED, some college, college degree, graduate degree); marital status (single/never married, married/cohabitating, divorced/separated/widowed); and housing status (rent/own home, friend/relative's home, treatment center, SRO/hotel/motel, unhoused, other).

Tobacco use

Tobacco measures included the Heaviness of Smoking Index (i.e., cigarettes per day and time to first cigarette upon waking) (Prochaska et al., 2019) and stage of change for quitting smoking: preparation (ready to quit in next 30 days with a past-year 24-h quit attempt), contemplation (ready to quit in next 6 months), or precontemplation (not ready to quit) (Prochaska & DiClemente, 1983). Participants reported e-cigarette use in the past year, and whether they lived with a person who smokes.

Work history

Employment measures included duration since last employment and reason for loss of last employment.

Smoking and unemployment stigma

The Smoking Stigma Scale (SSS, 8-items, Cronbach alpha = 0.91) and the Unemployment Stigma Scale (USS, 11-items, Cronbach alpha = .95) were developed to measure stigma related to smoking and being unemployed, respectively. The items, shown in Table 1, were adapted from the Internalized Stigma of Mental Illness (ISMI, 17-items) measure. A 4-point Likert-type response scale was used (1 = strongly disagree, 4 = strongly agree) (Ritsher, Otilingam, & Grajales, 2003). We previously reported on development and validation of a longer version of the Smoking Stigma Scale (Brown-Johnson et al., 2015).

Physical and mental health

Self-rated health was measured with the item, "In general, would you say your health is ... ?" (1 = poor, 5 = excellent). Depressive symptoms were assessed with the 10-item Center for Epidemiologic Studies Depression (CESD) scale, with total scores ranging from 0 to 30; scores of 10 or greater indicate clinically significant symptoms.

Table 1
Unemployment and smoking stigmas: Individual items.^a

Unemployment Stigma Scale Items	% Agree/Strongly Agree	M (SD)
I am disappointed in myself for not having a job.	54	2.57 (.99)
I am embarrassed or ashamed that I am unemployed.	47	2.44 (.99)
I feel like I am out of the place in the world because I don't have a job.	47	2.43 (.94)
I avoid certain social situations because I don't have a job.	43	2.37 (.97)
I feel like my unemployment has made it harder for me to get a job.	41	2.32 (.95)
Not having a job has spoiled my life.	33	2.23 (.90)
Others think that I can't achieve much in life because I don't have a job.	35	2.20 (.90)
People discriminate against me because I don't have a job.	34	2.16 (.91)
People ignore me or take me less seriously just because I don't have a job.	31	2.15 (.88)
I feel inferior to others who have a job.	29	2.10 (.94)
Nobody would be interested in getting close to me because I don't have a job.	23	2.04 (.87)
Smoking Stigma Scale Items		
I am disappointed in myself for being a smoker.	44	2.34 (.96)
People discriminate against me because I am a smoker.	35	2.15 (.91)
I am embarrassed or ashamed that I am a smoker.	34	2.13 (.94)
People often treat me disrespectfully just because I am a smoker.	22	1.96 (.84)
People ignore me or take me less seriously just because I am a smoker.	19	1.88 (.82)
I feel inferior to others who are not smokers.	18	1.88 (.82)
Nobody would be interested in getting close to me because I am a smoker.	17	1.89 (.78)
Others think that I can't achieve much in life because I am a smoker.	16	1.82 (.76)

^a Responses all on a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree).

Analyses

Descriptive statistics (means, frequencies) were run to characterize the sample. SSS and USS scores were calculated by averaging the individual scale items, in accordance with ISMI scoring guidelines (Ritsher et al., 2003) and prior research (Brown-Johnson et al., 2015). A Pearson correlation was calculated to test the association between the two scales, and paired t-tests compared participant endorsement of each stigma. All theoretically-derived variables were included in two linear regression models, one for smoking stigma and one for unemployment stigma. A general-to-specific modeling strategy was adopted to identify significant correlates of these stigmas. The general-to-specific procedure first involves the definition of a general model that contains all potentially important variables. Through a series of stepwise statistical tests, empirically “unimportant” variables are removed in order to arrive at the proposed specific model, which is consistent with necessary properties for valid inference and contains all the statistically significant variables from the initial set (Clarke, 2014; Greene, 2017). For each stigma, the Bayesian Information Criterion (BIC) of the specific model was compared to that of the general model in order to evaluate model fit. Missing data were handled using listwise deletion. Analyses were conducted using Stata/SE (15.1) and IBM SPSS 26.

Results

Descriptive characteristics

The sample (N = 360) was 70% men, with a mean age of 43 years (SD = 11), identifying as African American (43%), non-Hispanic Caucasian (27%), Hispanic (8%), and multiracial (18%); 56% were single/never married, 25% were divorced/separated/widowed, and 19% were married/cohabitating; 78% had a high school degree or less and 22% had completed a college degree; 38% rented or owned their own home; 55% lived with someone who smokes; 48% scored as depressed. Most (82%) rated their health as good to excellent. The sample averaged 11.86 cigarettes per day (SD = 6.25); 67% smoked within 30 min of waking. On the Heaviness of Smoking Index, 51% scored in the low, 45% in the medium, and 4% in the high range. Stage of change for quitting smoking was 33% precontemplation, 40% contemplation, and 27% preparation. Almost half (45%) had been unemployed for longer than three months; 49% were fired or laid off from their last job. Table S1 presents full sample characteristics.

Smoking and unemployment stigma scales

Table 1 presents descriptive statistics for the individual items for the smoking and unemployment stigma scales. Most participants endorsed at least one item related to unemployment stigma (74%) and smoking stigma (62%). For both scales, most frequently endorsed was an item tapping self-disappointment (i.e., “I am disappointed in myself for *not having a job [being a smoker]*”).

On average, the sample had higher unemployment stigma (M = 2.27, SD = 0.74) than smoking stigma (M = 2.01, SD = 0.66; paired sample t (359) = -7.45, p < .001), though both mean scores were around the midpoint of the 4-point scale. Smoking and unemployment stigmas were significantly moderately positively correlated (r = 0.58, p < .001).

Correlates of smoking and unemployment stigmas

Table 2 presents the results for the final specific models for smoking stigma (Model R² = 0.17, p < .001) and unemployment stigma (Model R² = 0.26, p < .001). In the final specific model, significant correlates of higher smoking stigma were renting/owning one's home (B = 0.18, t = 2.70, p = .007), being in the preparation stage of change for quitting smoking (B = 0.27, t = 3.74, p < .001), poorer self-rated health (B = -0.09, t = -2.65, p = .008), and greater depressive symptoms (B = 0.03, t = 5.78, p < .001). In the final specific model for unemployment stigma, significant correlates of higher unemployment stigma were being White (B = 0.23, t = 2.99, p = .003), past-year e-cigarette use (p =

Table 2

Specific linear regression analyses modeling unemployment and smoking stigmas.

	Unemployment Stigma			Smoking Stigma		
	B	t	P-Value	B	t	P-Value
White (vs. other races)	.23	2.99	.003	-	-	-
Rent/own home (vs. other)	-	-	-	.18	2.70	.007
Past year e-cigarette use (vs. not)	.16	2.18	.03	-	-	-
Preparation stage of change (vs. precontemplation/contemplation)	.16	2.13	.03	.27	3.74	<.001
Self-rated health ^a	-	-	-	-.09	-2.65	.008
Depression ^b	.05	9.85	<.001	.03	5.78	<.001

^a Scores from 1 (poor) to 5 (excellent).

^b Center for Epidemiologic Studies Depression (CESD) Score; Scores range from 0 to 30.

.16, $t = 2.18$, $p = .03$), being in the preparation stage of change for quitting smoking ($B = 0.16$, $t = 2.27$, $p = .03$), and greater depressive symptoms ($B = 0.05$, $t = 9.85$, $p < .001$).

Table S2 presents the results of the general models for smoking and unemployment stigmas. For both stigmas, model fit was improved in the specific model. For smoking stigma, the model BIC was 711.95 for the specific model compared to 722.65 for the general model. For unemployment stigma, the model BIC was 710.86 for the specific model compared to 752.31 for the general model.

Conclusions

In a sample of job-seekers who smoke, a majority reported experiencing stigma related to smoking and to being unemployed. The most frequently endorsed aspect of stigma was self-disappointment. While the sample's average scores for both smoking and unemployment stigmas were moderate (i.e., 2 on a 4-point scale), the two types of stigma were significantly associated, and respondent characteristics were associated with greater levels of experienced stigma.

That smoking and unemployment stigmas were moderately positively correlated aligns with prior research findings that people who smoke may carry other stigmatized identities (Brown-Johnson et al., 2015). In addition, both stigmas shared common significant correlates, among them experiencing depressive symptoms and preparing to quit smoking. Taken together, these shared correlates suggest a common risk profile for multiple stigmas among job-seekers who smoke.

The association of smoking and unemployment stigmas with depressive symptoms is consistent with prior findings of an association between lung cancer stigma and the severity of depressive symptoms (Brown Johnson et al., 2014; Cataldo, Jahan, & Pongquan, 2012). That smoking stigma was related to preparing to quit smoking is also consistent with prior research (O'Connor et al., 2017), although it is unclear whether experiencing stigma motivates people who smoke to quit or whether greater awareness of the need to quit increases feelings of shame. Regardless, induction of smoking stigma should not be used to motivate quitting. Experimental research indicates that stigmatization may elicit emotional, cognitive, and attitudinal reactions that reduce one's likelihood of quitting smoking (Helweg-Larsen, Sorgen, & Pisinger, 2019). Tobacco treatment engagement strategies could emphasize that quitting smoking can reduce smoking stigma, and among job-seekers, may more broadly reduce self-devaluation, such as that related to unemployment stigma.

Smoking and unemployment stigmas also had unique correlates, suggesting measurement of distinct constructs rather than of an underlying, generalized sense of stigma. For instance, greater smoking stigma was associated with poorer self-rated health. Given limited public understanding of nicotine addiction and high rates of relapse, others may blame the individual for their health condition, or the individual may experience self-stigma for failure to quit smoking despite failing health. Experiencing stigma may also have a damaging effect on individuals' health and self-care practices. Prior research has found that smoking stigma is associated with greater concealment of smoking behavior from one's family and treating providers (Stuber & Galea, 2009). Individuals who rented/owned their home reported greater smoking stigma compared to individuals with other living situations. It is possible that individuals who rent or own their own homes may face greater restrictions and stigma related to smoking compared to those who are unhoused, as clean indoor air protections in residential buildings are increasingly adopted (Baggett, Tobey, & Rigotti, 2013).

Unemployment stigma was endorsed more among non-Hispanic White individuals than other racial groups, consistent with prior research findings that non-Hispanic White adults perceived more smoking-related stigma than Black and Latinx adults (Stuber et al., 2008). That White participants reported higher levels of unemployment stigma may relate to the study's setting. The San Francisco Bay Area had a very low unemployment rate at the time the study was conducted, and

racial disparities were reported in income levels, with particularly high salaries among White and Asian residents (Thadani, 2017). Our findings suggest that White respondents may have experienced greater external or internal judgment for being out of work than participants of other racial/ethnic groups. E-cigarette use in the past year also was associated with greater unemployment stigma. This finding is novel and may indicate an effort to switch to e-cigarettes to remove evidence of smoking when job-seeking. Notably, past year e-cigarette use was not associated with smoking stigma.

The findings may have implications for public health policies and interventions. Hiring policies that prohibit smoking may exacerbate experienced stigmas and perpetuate unemployment. Employment development departments may be well-placed to treat tobacco use and deliver programming to address stigma. Limited by the cross-sectional, observational design of the current study, the findings warrant further investigation using experimental designs to further elucidate the associations and determine causation. For example, worth testing is whether quitting smoking reduces stigma and thereby improves depression and overall health.

Study limitations include the cross-sectional design, which precludes causal claims. Generalizability may be limited due to the exclusion of chronically unemployed individuals and the urban setting. Tobacco use and employment characteristics may vary geographically, warranting further study among different populations. The stigma measures had the same response options and similar framing, which may have contributed in part to the significant correlation between the scales. However, the correlation was modest and different correlates were identified, suggesting that smoking and unemployment stigmas are distinct constructs with some common correlates. Lastly, while we tested a number of correlates, there may be additional confounding factors that were not measured.

Study findings support the need to examine stigma – in particular, multiply occupied stigmas – as an important social determinant of health (Hatzenbuehler et al., 2013). Stigma may relate to job-seekers' employment opportunities, efforts to quit smoking, and physical and mental health. Greater attention to multiply occupied stigmas and experimental investigations to identify novel strategies to reduce stigma are warranted.

Ethics approval

Study procedures were approved by Stanford University's Institutional Review Board.

Declaration of competing interest

JJP has provided expert witness testimony in litigation against tobacco companies and has consulted to Pfizer on smoking cessation medications. None of the other authors have any conflicts of interest to disclose.

CRediT authorship contribution statement

Priya Fielding-Singh: Conceptualization, Methodology, Software, Writing - original draft. **Erin A. Vogel:** Conceptualization, Methodology, Software, Writing - review & editing. **Judith J. Prochaska:** Supervision, Project administration, Funding acquisition, Investigation, Writing - review & editing.

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Appendix A. Supplementary data

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