Economics Bulletin

Volume 40, Issue 3

The extent and cost of common stigmas among university students

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Abstract

Stigmatization indicates that a person possesses a condition or status that others devalue. This study explores different types of stigmatizing conditions and the co-occurring (intersectional) stigmas among 476 students attending a 13,000-student state university in North-East Ohio. In addition to studying the extent and intersectionality of stigma, the collected data is used to estimate some economic costs associated with it. The three most prevalent stigma conditions reported by students were depression, overweight, and poverty. Based on this study, these three conditions in particular identified in the study should be considered when setting up stigma prevention and intervention programs on university campuses. In addition to the personal benefits of an individual's healing, a simple cost analysis conducted in the study highlights very large financial returns to both universities and society of even moderate interventions.

Citation: Ying Tang and Sharon Stringer and Tomi Ovaska, (2020) "The extent and cost of common stigmas among university students", *Economics Bulletin*, Volume 40, Issue 3, pages 1924-1936
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Submitted: November 21, 2019. **Published:** July 14, 2020.

1. Introduction

Stigmatization indicates that a person possesses a condition or status that is devalued by others (Goffman 1963). While stigmatization is an issue around the world, it is especially prevalent in the United States of America potentially due to its "Melting Pot" property of diverse ethnicities, cultures, social economic status, and countless other distinctions.

Recently, researchers have developed a comprehensive instrument to better understand the impact of multiple stigmas or co-occurring stigmas on health for different subgroups of people (Pachankis et al. 2018). Understanding the processes of being stigmatized and un-stigmatized is important because of its beneficial impact on important dimensions of well-being such as resilience, self-efficacy, community engagement (Rensen et al. 2010), and self-compassion and health (Stringer et al. 2018). According to the Organization for Economic Co-operation and Development (OECD), people experiencing increasing stigma and discrimination also reduce their use of help services and engagement in leisure activities and are more likely to be unemployed and resort to crime (OECD 2014). In addition to the individual costs, stigma also carries heavy economic costs to society, including the loss of social capital (Coleman 1988, Putnam et al. 1993, NAMI 2015).

Stigmatized people face many different forms of stigma, which impact how individuals develop psychologically, how they think others perceive them, and how and if they experience success and failure throughout life. The concept of overlapping stigma conditions, or “intersectionality,” attempts to explain how individuals’ identities change as a result of having several stigmatizing conditions such as obesity, homelessness, depression, ethnic minority status or poverty. Given the pervasiveness and negative effects of stigma, much research has been conducted to understand factors that contribute to psychological resilience, a term that refers to the positive adaptation to challenging changes in life or adversity (Lengnick-Hall and Beck 2005, Reich et. al. 2010).

Resilience is linked to a wide variety of positive personal and professional outcomes, such as improved mental and physical health and job performance. One factor that may help promote resilience in stigmatized individuals is self-compassion. Self-compassion refers to extending compassion to oneself during times of pain, perceived inadequacy, or failure (Neff 2003). Much theory and research suggest that self-compassion serves as a resilience factor during times of stress. Thus, it is likely that individuals who harbor much self-compassion may demonstrate more resilience even in the face of experiencing intersectional stigmas.

This study follows the path of inquiry put forth by Pachankis et al. (2018), exploring the different types of stigmatizing conditions and the co-occurring (intersectional) stigmas among 476 students attending a 13,000-student state university in northeastern Ohio. It also seeks to establish the potentially ameliorating effect of self-compassion in mediating the relationship between stigma and resilience. In addition to studying the extent and intersectionality of stigma, the collected data is used to estimate some economic costs associated with the condition. The results could potentially motivate universities to pay more attention to the prevention and treatment of stigmatizing conditions.

Un-stigmatizing would not only greatly improve the lives of students but also have positive effect on the metrics that universities and society use to quantify socio-economic progress. The uniqueness of the study rests on its subject: student population. Successful education is a critical part of student happiness and the creation of human capital (Putnam et al. 1993), which is highly correlated with a nation's future prosperity. The second contribution of the study to the stigma literature is its basic cost analysis; not dealing with stigma has a very high opportunity cost for both individuals and the society.

2. Data and Methodology

Participants were recruited through the subject pool of the psychology department at the university, which included a diverse body of students. The bimodal questionnaire developed by Pachankis et al. (2018) was the main study tool used to identify stigma, which contains 93 stigmatizing conditions that researchers and laypeople both agree to be common. As shown in Table I, the full sample consisted of 476 participants from a population of 13,000 state university students.[1] Participants who completed the survey had a mean age of 20.21 (SD=5.07, median = 19), ranging from 18 - 73 years of age. Most frequent participants were Caucasians (78%), females (66%) and university freshmen (55%).

Table I. Participant Descriptive Statistics

Respondents' Demographic Characteristics

		n	%
Gender	Female	312	66.0
	Male	152	33.2
	Other / Not Disclosed	12	0.8
Ethnicity	White	372	78.2
	African American	52	10.9
	Hispanic	14	2.9
	Asian	13	2.7
	Native American	2	0.4
	Other	23	4.8
Year in University	Freshman	263	55.4
	Sophomore	145	30.5
	Junior	41	8.6
	Senior	26	5.5
Total		476[a]	100

[a] All categories do not add up to 476 observations due to missing respondent answers.

The survey was conducted online. After providing informed consent and their demographic background, students were asked to choose from a list of 93 stigmatizing life events that they

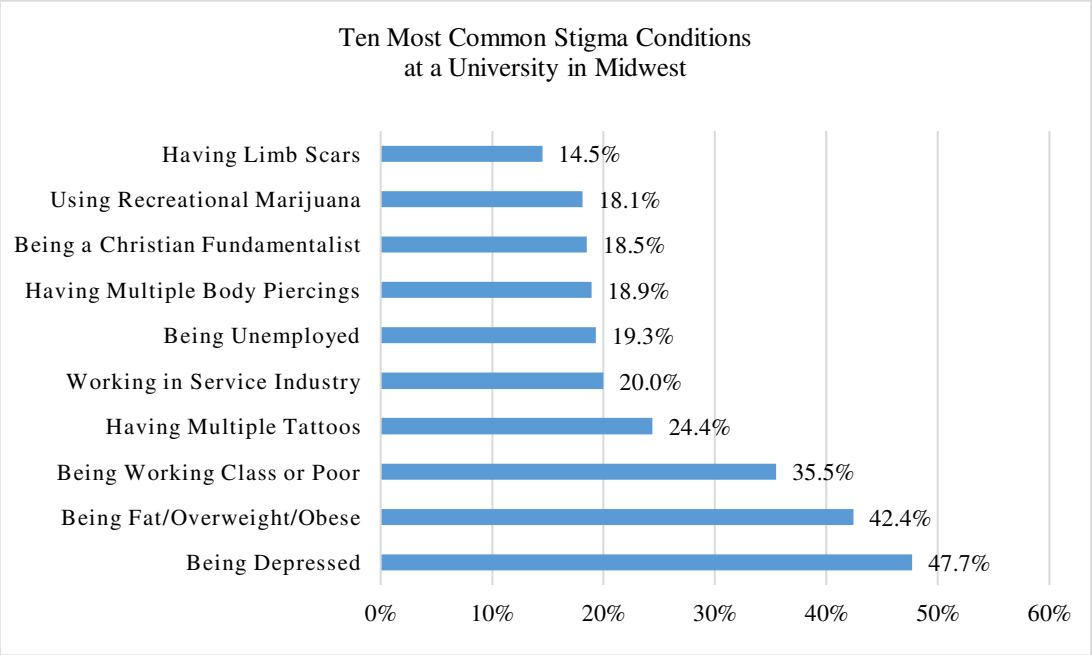
[1] Whether a question about stigma referred to current-day or the past was determined by the formulation in Pachankis et al. (2018) list of 93 stigmatizing conditions.

had experienced during their lifetime (see Appendix). Participants were asked to complete the study in their own time. The results are shown in Figure 1.

3. Stigma's Extent and Intersectionality

Of the 93 stigmatizing conditions in Pachankis et al. (2018), participants reported having experienced an average of 4.25 (SD=3.08) stigmas ranging from 0 to 53. Figure 1 displays the ten most frequent stigma conditions[2] as reported by students – depression, overweight and poverty being the top three stigmatizing factors[3].

Figure 1. Most Common Stigmas Mentioned by Participants (% of Full Sample)



Note. The category Being Depressed combines categories currently symptomatic and depression in the past (stigmatizing conditions # 49 and 50). The same applies for Being Fat/Overweight/Obese (# 12 and 13).

4. Potential Psychological Factors to Reduce Negative Effects of Stigma

In the current study, respondents reported self-compassion using the Self-Compassion Scale (mean score from 26 questions on 1-5 point scale; higher scores mean greater self-compassion) as well as resilience in the Shift-and-Persist Resilience Scale (Chen et al. 2015) (sum score of 8 questions with a 4-32 point range; higher scores mean greater resilience). OLS regression analyses were used to examine the relationship between the amount of experienced stigma, self-compassion, and resilience. The descriptive statistics of the variables in the model are in Table

[2] Each stigma condition was presented without a formal definition to the participants. Some stigmas were broken down into past or present conditions, such as depression, whose data were combined into one composite count as seen in Figure 1.

[3] Admittedly, with some rearranging of the stigma dimensions, one could come with a different order of importance like poverty at 74.8% (being working class or poor, working in service industry, being unemployed), visible body characteristics 57.8% (having tattoos, visible body piercings and limb scars), depression 47.7%, being fat/overweight/obese 42.4%.

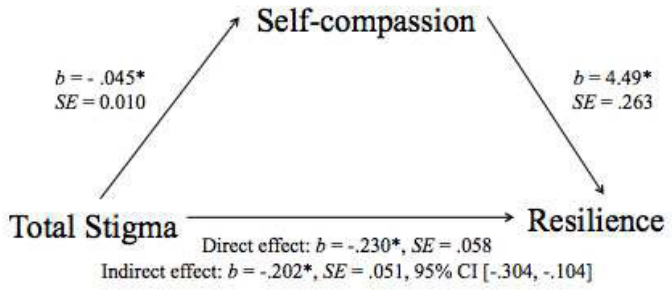
II. Results in Figure 2 show that the extent to which one experiences stigma was significantly associated with self-compassion, b = -.045, SE = .010, t(454) = -4.41, p < .05, 95% CI [-.065, -.025] and with resilience controlling for self-compassion, b = -.230, SE = .058, t(451) = -3.95, p < .05, 95% CI [-0.344, -0.116]. Self-compassion was also significantly associated with resilience controlling for stigma, b = 4.49, SE = .263, t(451) = 17.09, p < .05, 95% CI [3.976, 5.009].

To investigate the hypothesis that self-compassion mediates the effect of stigma on resilience, the indirect effect was tested using a percentile bootstrap estimation approach with 5000 samples (Shrout and Bolger 2002), implemented as Model 4 with the PROCESS macro Version 3.3 (Hayes 2018, Hayes and Preacher 2014). These results are shown in Table III and indicate that the indirect effect was significant; b = -.202, SE = .051, the 95% CI [-.304, -.104], meaning that although stigma experiences negatively associate with resilience, self-compassion could be an important mediator. The findings suggest that there is a clear negative relationship between experiencing stigma and resilience. However, even among individuals who may experience much intersectional stigma, as long they develop greater self-compassion, they may in turn experience more resilience. As a result, resilience can transform negative life circumstances into positive personal growth and enriching experiences (see also Masten et al. 2009).

Table II. Descriptive Statistics of Total Stigma Conditions, Self-compassion, and Resilience

	n	Mean	Median	Mode	Range	Min	Max
Total Stigma Conditions	476	4.25	3	3	52	1	53
Self-compassion	461	2.89	2.93	3	3.54	1.25	4.79
Resilience	468	24.89	25	24	21	11	32

Figure 2. Self-compassion as a Mediator between Experienced Stigma and Resilience



Note. * $p < .05$

Table III. Mediation of Self-compassion in the Effects of Total Stigma on Resilience

Predictor	Mediator	Outcome	Indirect Effect	95% CI of Indirect Effect		Direct Effect	Total Effect	Proportion Mediated
Total Stigma	Self-compassion	Resilience	-0.20*	-0.30	-0.10	-0.23*	-0.43*	46.52%

Note. $N = 454$. All estimates are unstandardized. Confidence intervals (CI) resulted from 5000 bootstrap draws. * $p < .05$.

Based on the answers to the self-compassion and resilience questionnaire, educational campaigns, counseling and support system stand out as promising policy measures for universities in fighting stigma. Previous literature on general population also lends support for their effectiveness in fighting stigma (Griffiths et al. 2014). The answers hint that institutional help – typically in the form of a social worker or a psychologist – could be particularly valuable in eviscerating the negative impact of stigma on students by helping them ascertain different types of stigma, recognize the sources of stigma, identify appropriate coping strategies, facilitate positive reframing, social support, self-determination and re-appraisal of the situation and ultimately develop self-compassion and resilience. Cultivating kindness toward oneself also potentially enhances people's well-being (Neff 2003), yet it may not develop automatically, particularly when people are swayed by cultural messages that rigorous self-discipline and determination alone are sufficient for overcoming hardships (Stanley 2019).

5. Stigma's Economic Costs

As shown in Figure 1, depression, obesity and poverty were the most stigmatizing factors among the 476 university students. In the study's sample population, about 92.8% reported having experienced some form of stigma. Of those, 24.4% acknowledged suffering from current depression and 5.3% from bi-polar disorder, 26.7% being overweight, fat/obese and 35.5% being working class or poor and 19.3% unemployed. These patterns have since been replicated in other university samples[4]. In the macro level, covering the entire U.S., this would translate into a large number of students having to deal with a daily stigma. According to the National Center for Education Statistics, the U.S. has approximately 19.9 million students in institutions of higher education in fall 2018.[5] Were the numbers from this study true for the entire country - maybe about 1/3rd, or 5.6 million students - are currently stigmatized by at least one of the three most commonly occurring stigmas.

[4] Since the current study, depression, being overweight, and being working class/poor consistently emerged as three top stigma conditions in three other separate samples (n = 513, 443, 125, respectively) collected from the same research site. The same pattern emerged in a dataset (n = 323) collected around the same time as the current study at a similarly sized public university in east Tennessee.

[5] National Center for Education Statistics; https://nces.ed.gov/fastfacts/display.asp?id=372 [accessed 06/20/2020)

The largest, quite heterogeneous, group of stigmas fall probably under mental disorders – though because of their idiosyncrasies, these stigmas resist common classification.[6,7,8] Moreover, stigma in general and mental health are found to have a correlation of a medium effect size (Mak et al. 2007). Experiencing stigma is foremost a personal tragedy for the affected, but stigma also carries societal costs. For instance, NAMI, The National Alliance on Mental Illness (2015) in its "CEOs against Stigma" campaign points to many negative effects stigma has on the workplace. Economically most importantly, stigma reduces worker productivity, which is the single most important driver of people's income.

Furthermore, mental disorders have a greater negative effect on productivity than physical disorders. Stigma is often exacerbated in the work or study place by well-meaning co-workers with comments like "just shape up, put yourself together, or keep going," causing the stigmatized person to internalize the stigma even more.[9] A slowed down work pace, sick leaves and disability are some common symptoms of stigma at play in the workplace. In the university world, low grades, class absences, isolation from groups, early withdrawals from courses, incomplete grades or dropped classes would be typical university equivalents and potentially reflect the increased levels of stress, depression, and anxiety reported recently across many college campuses (Karlgaard 2019).

In fact, according to the NAMI survey of ten large companies incorporating about 10,000 workers, nearly 2/3rd of workplace absenteeism is due to a mental disorder (depression, impaired health). Furthermore, severe depression was deemed equivalent to driving impaired with blood alcohol content of 0.8 promille.[10] From the student performance point of view, the above effects are alarming. Continuing depression which interferes with clarity of thinking and functioning can lead to skipping classes, withdrawals, lower grades, and grade failure, which further strengthen self-stigmatization. Being overweight is also linked to impaired physical health, depression, and lesser academic performance among university students (Odlaug et al. 2015).

NAMI calculated that severely depressed employees have an employer cost of about $12,000 a year. Startlingly, in terms of productivity loss at work, Hemp (2004) estimated that presenteeism at workplace is two to three times costlier in terms of lost productivity than medical care, absenteeism, and disability combined. Presenteeism cost implies that you are at work but perform well below your potential, sitting at your desk without clear purpose. A

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[6] All 93 stigmas identified in Pachankis et al. (2018) were included in this study's questionnaire. The full list of those stigmas is included in the appendix at the end of this article.

[7] This study focuses much, though not entirely, on mental health issues because of its central importance to stigma cost but also because of data availability on various costs. One corollary to the chosen estimation strategy is that the study likely underestimates the true cost of stigmas even if mental health is associated with many stigmas. BeLue et al. (2009) found that "Given that the relationship between mental health problems and youth overweight differs according to race/ethnic group, public health programs that target overweight youth should be cognizant of potential comorbid mental health problems." While poverty has a clear socio-economic side to it not originating in mental health, Elliot (2016) also notes that "Poverty increases the risk of mental health problems and can be both a causal factor and a consequence of mental ill health."

[8] Skinner et al. (2003) discuss extensively the difficult issues surrounding category system construction.

[9] See Drapalski et al. (2013).

[10] In many U.S. states that is equal to the drunken driving limit, or about three beers drunk concurrently.

practical corollary of this is that a stigmatized student who nevertheless attends classes regularly is not necessarily a good proxy of study productivity.

In a recent study, the Center for Disease Control (CDC 2015) put the annual cost of absenteeism to U.S. employers at $225.8 billion. Using a conservative multiplier from Hemp's (2004) study, this would imply a presenteeism cost in the range of $550 billion to $675 billion a year. Hence, the cost of absenteeism and presenteeism put together could reach between $775 b. and $900 b. in lost productivity (income) annually for the economy. The midpoint estimate is equivalent to about 4.2% of the annual U.S. GDP, falling very close to the OECD (2014) stigma cost estimate of about 4.0% of GDP.[11]

The numbers previously presented are a good starting point for calculating cost estimates of stigma at the university level. First, according to the National Center for Education Statistics the total spending in the U.S. on post-secondary institutions in academic year 2015-2016 was $559 billion.[12] Using the earlier 4.2% income mid-range estimate on the cost of absenteeism and presenteeism yields a total higher education stigma cost of about $23.5 billion ($559 b. x 0.042) a year or $1,200 ($23.5 b. / 19.9 m.) per student.

According to the National Center for Education Statistics about 40% of students enrolled in 2- or 4-year institutions of higher education do not graduate within six years.[13] A notable portion of those 6+ students likely live with one or more stigma conditions. A simple calculation is quite instructive. Suppose that the stigmatized share in the 6+ students' group is one half and that they pay $8,000 a year in tuition and fees. As noted earlier, there are about 19.9 million students of higher education in the U.S. in 2018. Doing this calculation: (19.9 m. x 0.20 x $8,000) yields 32 billion dollars a year in forgone tuition and fees due to stigma. What's more, the above is likely an underestimate of the true cost of stigma among students; adding to the estimate the opportunity cost of time and the value of personal suffering of the affected and their close ones would increase the estimate further.

From the cost analysis viewpoint, the message is quite clear: the pecuniary cost associated with stigma is so high that even moderate countermeasures to fight it would likely yield high private and social returns. Getting back to our case study's Midwest state university with 13,000 students; we earlier calculated the national stigma cost as $1,200 per U.S. student. That number multiplied by the midwestern university's enrollment results in an institutional aggregate stigma cost of $15.6 million, or almost 10% of the university's annual budget. Assuming an annual employer-cost of a trained mental health counselor at $57,660,[14] a 30% success rate in restoring stigmatized students to health would financially justify the hiring of extra 79 counselors to

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[11] Organization for Economic Co-operation and Development (2014) *Making Mental Health Count: The Social and Economic Costs of Neglecting Mental Health Care,* OECD: Paris, France.

[12] National Center for Education Statistics; https://nces.ed.gov/fastfacts/display.asp?id=75 [accessed 06/20/2020)

[13] National Center for Education Statistics; https://nces.ed.gov/programs/coe/indicator_ctr.asp [accessed 06/28/2020]

[14] According to The U.S. Bureau of Labor Statistics (BLS) 2018-19 Occupational Handbook psychologists (Ph.D.) and MSWs (Master's) in the study region have median annual salaries of $79,010 and $49,470, respectively. According to the LinkedIn, the LPCs (Master's) have a median salary of $44,500. Taking the arithmetic average of the three yields $57,660.

complement the study university's current two counselors.[15] As a bonus to students' improved mental health, motivated students would make classes more interesting, shorten graduation times, and improve student retention rates. In addition, the country would see the share of adults with a tertiary degree go up, making it economically more productive (resulting in increasing incomes) and more competitive in the global marketplace.

Yet, institutions of higher education are still habitually underfunded on anti-stigma education and understaffed with trained personnel to help students with stigma. The good news is that this also offers a great opportunity for improving the current state, both at the institutional and individual level. Given the low initial starting point, dealing with stigma on campus should be considered as economically low-hanging fruit. Taking decisive countermeasures is also important for another reason. Namely, an interesting paradox arises when awareness of stigma in society rises. As Harel and Klement (2007) note, the more common stigma becomes, the more it becomes normalized as a societal standard. Consequently, the incentive to deal with the problem becomes less urgent while the problem and its associated costs keep on rising. Unfortunately, stigma is often invisible, and this may lead the public to underestimate stigma's true prevalence. In this case, the availability bias may be working in the wrong direction – when we become accustomed to something, we cease to pay attention to it (Kahneman 2011).

6. Conclusion

The three most prevalent stigma conditions reported by students were depression, being overweight, and poverty. Based on this study, these three conditions, plus self-compassion and resilience should be considered when setting up stigma prevention and intervention programs on university campuses. A simple cost analysis conducted in the study hinted at very large financial returns to both universities and society of even moderate interventions. The results, interpreted within the context of current models of risk, self-compassion, and resilience, help better understand and potentially improve the psychosocial adjustment of university students who experience stigma. The findings suggest how to direct resources for early identification and treatment of stigma on campuses.

One promising future direction for research would be to collect student data with more diverse student characteristics and conduct personal interviews rather than online surveys. This type of study also provides a fertile ground for comparisons with other universities in different locations and cultures. At the practical level, the study's results could be spread through psychology and economics conferences and be used to offer interdisciplinary seminars at other universities to provide in-depth coverage of stigma, resilience and the lessons-learned from this study.

[15] Given the meta-study of Griffiths et al. (2014), the CBT success rate of 30% on mental stigma is well within the range found in previous independent studies.

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APPENDIX

The 93 stigmatizing conditions. Based on: Pachankis, J.E., Hatzenbuehler, M.L., Wang, K., Burton, C.L., Crawford, F.W., Phelan, J.C. and B.G. Link (2018) "The burden of stigma on health and well-being: A taxonomy of concealment, course, disruptiveness, aesthetics, origin, and peril across 93 stigmas" *Personality and Social Psychology Bulletin* **44**(4), 451-474.

1 being Latina/Latino
2 being Black/ African American
3 being Asian American
4 having to use a wheelchair (all the time)
5 being blind (completely)
6 being deaf (completely)
7 having movement/gait impairment (current)
8 having movement/gait impairment (in the past)
9 having psoriasis (current)
10 having psoriasis (in the past)
11 having facial scars
12 being fat/overweight/obese (current)
13 being fat/overweight/obese (in the past)
14 having a cleft lip and palate (current)
15 being older aged
16 being short (e.g., dwarfism)
17 having unattractive (i.e., ugly) facial features
18 having multiple facial piercings
19 being South Asian
20 being Middle Eastern
21 being Native American
22 being multiracial
23 being lesbian, gay, bisexual (i.e., non-heterosexual)
24 being asexual
25 being transgender
26 being voluntarily childless
27 being divorced (previously)
28 being infertile
29 having had an abortion (previously)
30 having been raped (previously)
31 being a teen parent (currently)
32 being a teen parent (previously)
33 having had sex for money
34 having urinary incontinence
35 having fecal incontinence
36 having mental retardation (i.e., IQ< 70)
37 having a speech disability (e.g., stutter)
38 having breast cancer (current)
39 having had breast cancer (in the past)
40 having colorectal cancer (current)
41 having had colorectal cancer (in the past)
42 having prostate cancer (current)
43 having had prostate cancer (in the past)
44 having lung cancer (current)
45 having had lung cancer (in the past)
46 having diabetes (type 2)
47 having had a stroke (recent)
48 having had a hemi attack (recent)
49 having depression (symptomatic)
50 having depression (in the past)
51 having bipolar disorder (symptomatic)
52 having had bipolar disorder (in the past)
53 having schizophrenia (symptomatic)
54 having had schizophrenia (in the past)
55 having autism or autism spectrum disorder
56 having alcohol dependency (i.e., alcoholism) (current)

57 having had alcohol dependency (i.e., alcoholism) (in the past)
58 having drug dependency (i.e., addiction) (current)
59 having had drug dependency (i.e., addiction) (in the past)
60 having genital herpes
61 being HIV-positive
62 having had a bacterial STD (e.g., gonorrhea, chlamydia, syphilis)
62 having had a bacterial STD (e.g., gonorrhea, chlamydia, syphilis)
63 having chest scars
64 having limb (i.e., arm, leg) scars
65 being intersex
66 having multiple body piercings
67 having multiple tattoos
68 being working class or poor
69 working in a manual industry
70 working in a service industry
71 being unemployed
72 having less than a high school education
73 being illiterate
74 living in a trailer park
75 living in public housing (i.e., low-income housing)
76 using injection drugs
77 using cocaine (recreationally)
78 using crystal methamphetamine (recreationally)
79 using marijuana (recreationally)
80 having a criminal record
81 being previously imprisoned, currently on parole
82 being an undocumented immigrant
83 being homeless
84 being a drug dealer
85 being atheist
86 being a fundamentalist Christian
87 being Muslim
88 being a documented immigrant
89 being a smoker (daily)
90 being Jewish
91 being a gang member (currently)
92 being polyamorous (e.g., multiple concurrent intimate relationships)
93 being a sex offender