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SOCIAL BEHAVIOR RESEARCH AND PRACTICE

ISSN 2474-8927 Open Journal http://dx.doi.org/10.17140/SBRPOJ-2-108

Research

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Volume 2 : Issue 1
Article Ref. #: 1000SBRPOJ2108

Article History
Received: November 30th, 2016
Accepted: February 23rd, 2017
Published: February 23rd, 2017

Citation
Asbury MB, Kratzer JMW, Brinthaupt TM. The *stickiness* of weight stigma: An examination of residual weight stigma, stigma targets, and willingness to date. *Soc Behav Res Pract Open J*. 2017; 2(1): 18-26. doi: 10.17140/SBRPOJ-2-108

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The *Stickiness* of Weight Stigma: An Examination of Residual Weight Stigma, Stigma Targets, and Willingness to Date

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ABSTRACT

This research examined the stickiness of stigma related to being overweight and dating. Three studies explored whether residual weight stigma exists by comparing being overweight to other stigmatized conditions. The first study showed little evidence that overweight was a stigmatizing condition, with participants showing similarities in willingness to date someone who is overweight compared to other physical or medical conditions. There was partial support in the second study for the prediction that overweight was a stigmatizing condition in comparison to conditions related to physical appearance. The third study indicated that there was a tendency for participants to attribute greater personal responsibility for the overweight condition compared to other stigmatized conditions. Taken together, the results provided little evidence for residual stigma associated with the overweight condition and dating preferences.

KEY WORDS: Residual weight stigma; Social stigma; Appearance stigma; Dating.

INTRODUCTION

Stigma directed at individuals who are obese (i.e., those with a Body Mass Index over 30) is pervasive and harmful, leading to prejudice and discrimination in employment, healthcare, and education.[1,2] Experiencing weight bias negatively affects one's mental and physical health and increases mortality risk.[3-5]

Underpinning the severity of this stigma is the perception that obesity is able to be controlled by the individual.[6,7] For example, psychological research demonstrates that people perceive individuals who are obese as responsible for their condition due to overeating and lack of exercise, which are perceived to be personally controllable factors.[8-10] Thus, obese individuals are characterized as lazy and/or lacking self-control.[11-13] Because of these attributions, people who are obese face a similar form of stigma to conditions that are also thought to be under one's personal control, such as being homeless and having an addiction.[14] There is evidence that obesity is considered the responsibility of the individual even when compared to other diseases and health conditions. For example, Crandall and Moriarty[15] noted that respondents perceived obesity to be behaviorally caused by the individual, similar to sexually transmitted diseases, and this resulted in others exhibiting greater social distance from those afflicted.

Obesity is also stigmatized more harshly than eating disorder conditions, such as anorexia or bulimia.[16] Research indicates that while eating disorders are perceived negatively, participants also associate positive attributes to those with these conditions (e.g., being thin and

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Open Journal
ISSN 2474-8927 http://dx.doi.org/10.17140/SBRPOJ-2-108

losing weight).[17,18]

Issues of controllability are likely to affect the amount of stigma obese individuals face and contribute to obesity stigma moving from prejudice to discrimination. Interpersonal relationships are one area in which one's weight can affect outcomes, specifically in terms of romantic relationships. For example, overweight women are rated to be unattractive, unlikely to have a partner, and unworthy of attractive partners.[19-21] Similarly, men are less likely to respond to dating advertisements for women who identify as obese[22] compared to when the women identified as having drug problems.[23]

This issue of weight bias in dating seems to be primarily a women's issue, with research showing that women are judged more harshly for their weight than men.[21,24,25] For example, Meltzer[26] and colleagues conducted a 4-year longitudinal study on married couples and found that when controlling for extraneous variables, such as income level and education, partners reported more marriage satisfaction if the wife was thinner than the husband. Moreover, when romantic partners do not have similar body shapes (i.e., if one partner carries more weight than the other), they are stigmatized and are viewed as having a less successful relationship.[27]

Unfortunately for those who are overweight, weight stigma is long-lasting.[16,28] The term *residual stigma* is used to refer to stigma that exists after a stigmatized condition is remedied (e.g., an obese person loses weight), and research indicates that those who lose weight are viewed more positively yet are still rated as unhealthy compared to weight-stable individuals.[29-31] Moreover, these studies note that the way in which one loses weight is a moderating factor. For example, Fardouly and Vartanian[29] found that individuals who lost weight through diet and exercise were rated more positively than those who lost weight through surgery. Those who lost weight through surgery were still viewed as lazy, even after losing the weight.

Residual stigma is a relatively new concept. Therefore, in the current set of studies, we sought to expand the literature regarding residual stigma in relation to weight, or the *stickiness* (i.e., persistence) of weight stigma. For our first study, we sought to examine if weight stigma still resides, or sticks, after one has lost the weight, specifically in the area of dating. We wanted to address a gap in the literature regarding residual stigma and dating as well as expand on earlier research regarding the desirability of overweight individuals.[20,22,30]

Study 1

We designed Study 1 to examine the first set of hypotheses, which focused on comparing being overweight with other physical and social conditions. Research has noted that being overweight is often compared to being homeless or having an addiction.[11,14] Therefore, we sought to frame the first study by comparing residual stigma associated with being overweight to other stigmatized groups, including those who face addictions. For our first hypothesis, we predicted that currently having a stigmatized condition would be associated with lower willingness to date than having had a condition in the past (H_1). This prediction is based on research by Romer and Bock,[32] which suggests that having overcome a stigmatized condition is judged more favorably than currently having a stigmatized condition.

In addition, based on the research indicating the severity of the stigma associated with being overweight,[2,11,14] we predicted that participants would be less willing to date a person who is currently overweight compared to the other conditions (H_2). The stigma targets that were used for comparison included the following: being an alcoholic, being a drug addict, being overweight (at least 50 lbs), being homeless, having ovarian cancer (female) or prostate cancer (male), having lung cancer, having an eating disorder, or suffering from clinical depression.

These stigma targets were chosen for several reasons. First, with the exception of the lung and prostate cancer condition, the targets are groups of people who often experience blame for their condition. For example, being homeless, an alcoholic, and a drug addict are viewed as the fault of the individual,[14] and even those with lung cancer are viewed as being at fault for their conditions due to smoking, even when that is not the direct cause.[33] Similarly, those who are overweight are also blamed for their condition,[8-10] even if the condition could be due to genetics or medication. Having an eating disorder was chosen as a comparison group because dating someone with an eating disorder, such as anorexia or bulimia, has been shown to be preferred to dating a person who is obese.[34] Ovarian or prostate cancer was used to have a comparison to the cancer (e.g., lung cancer) that people often view as the fault of the individual. Finally, suffering from clinical depression was used as a stigma target because mental illness is also a highly stigmatized condition, and like being overweight, an individual suffering from the condition often self-stigmatizes.[35]

Due to the severity associated with weight stigma, for our third hypothesis, we predicted that participants would be less willing to date people who used to be overweight than a person who used to have the other social and behavioral conditions (H_3). Finally, we predicted that participants would rank formerly overweight individuals as least likely to date over those who used to have the other social and behavioral conditions (H_4).

MATERIALS AND METHODS

Participants

Participants (81; 53 women, 27 men, 1 other) were undergraduate students from a large (23,000+) public university located in the

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southeastern U.S. Students ranged in age from 18-46 (*M*=20.74, *SD*=4.88). Most of the participants were either Caucasian (46; 57%) or African-American (28; 35%). The majority of participants were freshmen (41; 51%) or sophomore (22; 27%).

Participants came from a psychology department mass-pretesting session conducted at the beginning of an academic term. Students volunteered from the General Psychology course to complete a survey containing a variety of demographic, behavioral, and attitudinal measures. They participated in groups of 10-30, signed an informed consent form, completed the survey in approximately 20 minutes, and received course research credit for their participation.

Brinthaupt and Pennington[36] provide a more detailed description about the structure and operation of the pretesting session and resulting data archive.

Materials and Procedure

As part of the pretesting survey, participants received a series of statements describing people who currently have or have had several different kinds of conditions or experiences. Ratings and rankings appeared on the survey in the following order. Instructions directed participants to assume that the information provided was all that they knew about the target person and to rate each statement using a 5-point Likert scale (0=*strongly disagree*, 4=*strongly agree*). The targets included eight physical or medical conditions. Each statement began with the stem "*I would be willing to date someone who…*" In particular, participants first rated their willingness to date someone who is an alcoholic, is a drug addict, is overweight (at least 50 lbs), homeless, has ovarian cancer (female) or prostate cancer (male), has lung cancer, has an eating disorder, or suffers from clinical depression.

Following the current condition ratings, participants rated their willingness to date someone who used to have those same conditions (e.g., "USED to be an alcoholic"). Finally, participants rank ordered each of the eight conditions in terms of their likelihood of dating someone who used to have that condition (1=*your top choice (most likely to date)*, 8=*your last choice (least likely to date)*). Seven participants failed to follow the directions for the ranking task, resulting in a sample size of 74 for these data.

Results and Discussion

Table 1 presents the descriptive statistics for the current and past versions of each of the conditions. As the *t*-test and mean values in the table show, the data supported our first hypothesis that currently having any of the stigmatized conditions (including overweight) would be associated with lower willingness to date than having had the conditions in the past. Analysis of gender differences on the 16 current and past condition ratings (using Bonferroni adjusted α- levels of .003 per test (.05/16)) revealed no conditions with statistically significant differences.

Our second hypothesis predicted that participants would be less willing to date a person who is currently overweight over the other current conditions. Paired samples *t*-test analyses comparing the overweight condition to the other conditions (using Bonferroni adjusted α-levels of .006 per test (.05/8)) revealed several interesting results. First, as Table 1 indicates, participants reported being *more* willing to date a person who is currently overweight than a person who is an alcoholic ($t(80)=6.36$, $p<.001$), a drug addict ($t(80)=9.42$, $p<.001$), or homeless ($t(80)=6.50$, $p<.001$). Overweight was not significantly different from the remaining conditions. Therefore, this hypothesis was not supported.

The third hypothesis specifically examined how residual weight stigma would be related to willingness to date when compared to other stigmatized conditions. With respect to having had the condition in the past, participants reported being *more* willing to date a person who used to be overweight than a person who was an alcoholic ($t(80)=3.88$, $p<.001$), a drug

Table 1: Dating Willingness Ratings of Target with Physical or Medical Condition Currently or in the Past.

	Currently...		Used to...			
Item	**Mean**	**SD**	**Mean**	**SD**	***t*-value**	**d**
Is/be overweight (at least 50 lbs)	1.88	1.05	2.99	0.68	8.17 ***	1.25
Is/be an alcoholic	0.88	1.08	2.59	0.93	14.36 ***	1.70
Is/be a drug addict	0.53	0.92	2.23	1.12	13.27 ***	1.66
Is/be homeless	1.07	1.05	2.93	0.80	14.33 ***	1.99
Has/have ovarian/prostate cancer	2.20	0.99	2.85	0.85	6.47 ***	0.70
Has/have lung cancer	1.98	1.02	2.69	0.83	7.54 ***	0.76
Has/have an eating disorder	1.73	1.16	2.77	0.81	8.40 ***	1.04
Suffer(s) from clinical depression	1.84	1.21	2.80	0.73	7.96 ***	0.96

Note: N=81. Participants rated the items using a 5-point scale (0=strongly disagree, 4=strongly agree). *** $p<.001$.

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ISSN 2474-8927 http://dx.doi.org/10.17140/SBRPOJ-2-108

addict ($t(80)=6.42$, $p<.001$), or had lung cancer ($t(80)=3.22$, $p<.003$). There were no conditions in comparison to which participants were significantly less willing to date a person who used to be overweight. Thus, there was no evidence of residual stigma associated with overweight and no support for the third hypothesis. We also conducted a 2 (gender: Male, female) X 2 (time: Current, past) mixed ANOVA on the overweight condition. While replicating the time difference reported earlier, this analysis revealed no significant interaction between gender and time.

Our final analysis of the residual stigma question addressed how participants would rank individuals who used to have stigmatized conditions in terms of willingness to date. Analysis of the rank data revealed that overweight was ordered near the middle of the conditions ($M=4.08$, $SD=2.04$), with drug addict ranked the lowest ($M=6.50$, $SD=1.99$) and being homeless ranked the highest ($M=2.54$, $SD=2.17$). Consideration of the individual rankings of overweight indicated that 55% of participants ordered this condition as one of their top four preferences with respect to willingness to date, with 45% ordering it as one their four lowest preferences. Six participants ranked overweight as their top choice, and two ranked it as their lowest choice. The one-way chi-square test of the rankings indicated a significant effect, $X^2(7)=15.08$, $p<.04$. Thus, there was no support for H_4, that participants would rank overweight individuals as least likely to date compared to the other social and behavioral conditions.

In summary, we found little evidence that overweight was an especially stigmatizing condition. Participants showed similar patterns of willingness to date for overweight compared to other physical or medical conditions. The evidence for residual stigma was similar for overweight and the other conditions. Participants also placed overweight as relatively moderate in terms of their preferential ranking of all the conditions. These results provide little support for the view that overweight is a particularly pernicious stigma, at least when it comes to willingness to date.

Study 2

In Study 1, our comparisons focused on conditions that may not be visible to the eye. For example, a person can look at another individual and not know that person is a drug addict or is depressed. For our second study, we sought to examine residual weight stigma in comparison to physical characteristics or conditions that are visible to the eye. Thus, for Study 2, we had similar hypotheses and research questions. However, in Study 2, we compared overweight to other visible physical conditions. These conditions included the following: Someone who has acne, has a large birthmark on their cheek, wears eye glasses, stutters when they speak, is missing a front tooth, is underweight (at least 15 lbs.), or has a tattoo on their face. We chose these conditions because they are easily visible to other people, as is overweight.

Therefore, we hypothesized the following:

H_5: Currently having a visible physical condition will be associated with lower willingness to date than having had a physical appearance condition in the past.
H_6: Participants will be less willing to date a person who is currently overweight over the other current visible physical condition conditions.
H_7: Participants will be less willing to date a person who used to be overweight over the other physical conditions that one used to have.
H_8: Participants will rank formerly overweight individuals as least likely to date over the other physical conditions.

MATERIALS AND METHODS

Participants

Participants (83; 46 women, 37 men) were undergraduate students from a large (23,000+) public university located in the southeastern U.S. Students ranged in age from 18-43 ($M=19.73$, $SD=3.19$). Most of the participants were either Caucasian (41; 49%) or African-American (30; 36%). The majority of participants were freshmen (58; 70%) or sophomore (20; 24%). Participants came from public speaking courses and were drawn from a different academic term than the Study 1 participants. They completed the materials in class, after signing an informed consent form. Students finished the survey in approximately 20 minutes and received course research credit for their participation.

Materials and Procedure

The methodology and procedure were the same as with Study 1. In this case, we included overweight with conditions that were more visible to the eye. In particular, participants first rated their willingness to date (0=*strongly disagree*, 4=*strongly agree*) someone who has acne, has a large birthmark on their cheek, is overweight (at least 50 lbs.), wears eye glasses, stutters when they speak, is missing a front tooth, is underweight (at least 15 lbs.), or has a tattoo on their face. Following the current condition ratings, participants rated their willingness to date someone who used to have the same conditions. Finally, participants rank ordered each of the eight conditions in terms of their likelihood of dating someone who used to have that condition (1=*your top choice (most likely to date)*, 8=*your last choice (least likely to date)*). Three participants failed to follow the directions for the ranking task, resulting in a sample size of 80 for the ranking data.

Results and Discussion

Table 2 presents the descriptive statistics for the current and past

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versions of each of the conditions. As the table indicates, there were negative aspects of most of the conditions. In particular, participants were significantly less likely to want to date targets who currently had each of the conditions (except eyeglasses) compared to targets who used to have those conditions. These results replicated the time findings from Study 1, showing support for hypothesis five (that currently visible physical conditions would be associated with lower willingness to date than having had those conditions in the past). As Table 2 indicates, seven of the eight conditions showed that current-condition ratings were significantly lower than past-condition ratings. Analysis of gender differences on the 16 current and past condition ratings (using Bonferroni adjusted α-levels of .003 per test (.05/16)) revealed no conditions with statistically significant differences.

For hypothesis six, we used paired-samples *t*-tests (using Bonferroni adjusted α-levels of .006 per test (.05/8)) to compare the overweight condition to the other physical appearance conditions. These analyses revealed several interesting results. First, as Table 2 shows, participants reported being less willing to date a person who is currently overweight than a person who has acne ($t(82)=4.49$, $p<.001$), a facial birthmark ($t(82)=3.68$, $p<.001$), or wears glasses ($t(82)=9.92$, $p<.001$). They reported being more willing to date a person who was currently overweight than a person who is missing a front tooth ($t(82)=7.23$, $p<.001$) or has a facial tattoo ($t(82)=7.62$, $p<.001$). Thus, there was partial support for hypothesis six, that participants would be less willing to date a currently overweight person than a person with other visible physical conditions.

The seventh hypothesis specifically examined how residual weight stigma would be related to willingness to date when compared to the other physical appearance conditions. With respect to having had the condition in the past, participants reported being less willing to date a person who used to be overweight than a person who used to have acne ($t(82)=2.96$, $p<.005$) or wear glasses ($t(82)=3.29$, $p<.001$). They reported being more willing to date a person who used to be overweight than a person who used to have a tattoo on their face ($t(82)=6.05$, $p<.001$). Therefore, there was minimal support for the seventh hypothesis. As with Study 1, we conducted a 2 (gender) X 2 (time: Current, past) mixed ANOVA on the overweight condition. This analysis revealed no significant interaction between gender and time.

Our final analysis of the residual stigma question addressed how participants would rank individuals who used to have the various physical appearance conditions in terms of willingness to date. Analysis of the rank data revealed that, as in Study 1, overweight was ordered near the middle of the conditions ($M=4.08$, $SD=2.00$), with having had a facial tattoo ranked the lowest ($M=6.96$, $SD=1.64$) and used to wear glasses ranked the highest ($M=2.26$, $SD=1.98$). Consideration of the individual rankings of overweight indicated that 60% of participants ordered this condition as one of their top four preferences with respect to willingness to date, with 40% ranking overweight in the four lowest preferences. Ten participants ranked overweight as their top choice, and seven ranked it as their lowest choice. The one-way chi-square test of the rankings indicated a significant effect, $X^2(7)=22.80$, $p<.002$. Thus, there was little support for H_8, that participants would rank formerly overweight individuals as least likely to date compared to the other physical conditions.

In summary, we found partial support for the prediction that overweight was a stigmatizing condition in comparison to conditions related to physical appearance. Compared to Study 1 (which examined a variety of disease and behavioral conditions), Study 2 results showed that, relative to certain physical appearance conditions, there may be some stigma associated with being overweight. However, similar to Study 1, there was little evidence for residual stigma associated with the overweight condition.

Study 3

To better understand the findings of Studies 1 and 2, we also needed to understand the extent to which individuals consider obesity to be an issue of personal responsibility compared to other stigmatized conditions. While there have been several studies regarding personal responsibility of one being overweight, the

Table 2: Dating Willingness Ratings of Target with Physical Appearance Condition Currently or in the Past

	Currently...		Used to...			
Item	**Mean**	**SD**	**Mean**	**SD**	***t*-value**	**d**
Is/be overweight (at least 50 lbs)	2.28	1.05	3.16	0.90	7.53 ***	0.90
Has/have acne	2.80	0.92	3.41	0.68	6.68 ***	0.75
Has/have a large birthmark on their cheek	2.71	0.90	3.22	0.81	4.70 ***	0.60
Wear(s) eye glasses	3.57	0.57	3.47	0.65	1.65	0.16
Stutter(s) when they speak	2.48	1.00	3.23	0.85	6.90 ***	0.81
Is/be missing a front tooth	1.31	1.05	3.02	1.06	13.64 ***	1.62
Is/be underweight (at least 15 lbs)	2.52	0.92	3.16	0.89	6.08 ***	0.71
Has/have a tattoo on their face	1.12	1.34	2.41	1.31	9.51 ***	0.97

Note: N=83. Participants rated the items using a 5-point scale (0=strongly disagree, 4=strongly agree). ***p<.001.

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extant research[10,14,15] was conducted prior to obesity being labeled a disease in 2013 by the American Medical Association.[37] Thus, we sought to examine the level of controllability that individuals associate with being overweight compared to the variety of other conditions we used in Studies 1 and 2 (e.g., homelessness, drug addiction, depression, cancer, missing teeth). Based on previous research, we predicted that participants would attribute personal responsibility for being overweight more than the other conditions (H_9).

Materials and Method

Participants

Participants (257; 169 women, 88 men) were undergraduate students from a large (23,000+) public university located in the southeastern U.S. Students ranged in age from 18-67 (*M*=19.81, *SD*=4.89). Most of the participants were either Caucasian (156; 61%) or African-American (55; 21%). The majority of participants were freshmen (151; 59%) or sophomore (70; 27%).

Participants came from a similar Psychology Department mass-pretesting session as described in Study 1. They completed the measures in a different academic term from the previous studies. They participated in groups of 10-30, signed an informed consent form, completed the survey in approximately 20 minutes, and received course research credit for their participation.

Materials and Procedure

We examined the extent to which participants believed that a person with a medical, behavioral, or physical appearance condition is personally responsible for that condition. We used the 16 unique items from Studies 1 and 2 and worded the items in present tense (e.g., "someone who is an alcoholic" and "someone who has a tattoo on their face"). The complete list of items appears in Table 3.

Participants received these instructions for rating the items: *For the following items, please rate the extent that you believe that the person with the "condition" is personally responsible for having that condition. Without knowing anything else about the person, to what extent do you think having the condition is due to their own behaviors, actions, or lifestyle?* They rated these items with a 5-point scale (0=*They are not at all personally responsible for this condition*, 2=*They are moderately personally responsible for this condition*, 4=*They are completely personally responsible for this condition*).

Results and Discussion

Table 3 provides descriptive statistics and results of *t*-test comparisons of mean responsibility ratings to the rating scale midpoint. As the table shows, participants rated four items significantly above the midpoint: Alcoholic, drug addict, overweight, and tattoo (using Bonferroni adjusted α-levels of .003 per test (.05/15)). Except for the homeless, eating disorder and underweight items, participants rated all the remaining conditions as significantly below the midpoint, with the person being less rather than more responsible for those conditions.

As we expected, overweight was more likely than most other conditions to be seen as something for which one is per-

Table 3: Personal Responsibility Ratings of Medical, Behavioral, and Physical Appearance Conditions

Item	Mean	SD	*t*-value	d
Someone who is overweight (at least 50 lbs).	2.58	0.87	10.66 ***	0.67
Someone who is an alcoholic.	3.00	0.90	17.76 ***	1.11
Someone who has acne.	0.82	0.78	-24.39 ***	1.51
Someone who is a drug addict.	3.16	0.88	21.22 ***	1.32
Someone who has a large birthmark on their cheek.	0.03	0.20	-153.91 ***	9.85
Someone who wears eye glasses.	0.44	0.80	-31.41 ***	1.95
Someone who is homeless.	2.07	0.94	1.13	0.07
Someone who has ovarian (female) or prostate (male) cancer.	0.31	0.64	-42.43 ***	2.64
Someone who stutters when they speak.	0.31	0.60	-45.09 ***	2.82
Someone who has lung cancer.	1.30	1.18	-9.61 ***	0.59
Someone who is missing a front tooth.	1.49	1.00	-8.23 ***	0.51
Someone who has an eating disorder (i.e., anorexia or bulimia).	1.87	1.25	-1.64	0.10
Someone who is underweight (at least 15 lbs).	1.81	1.06	-2.87	0.18
Someone who suffers from clinical depression.	1.12	1.01	-14.09 ***	0.87
Someone who has a tattoo on their face.	3.82	0.62	47.08 ***	2.94

Note: N=257. Participants rated the items using a 5-point scale (0=They are not at all personally responsible for this condition, 4=They are completely personally responsible for this condition). Means were tested against the scale midpoint (2=They are moderately personally responsible for this condition). ****p*<.001

ISSN 2474-8927 http://dx.doi.org/10.17140/SBRPOJ-2-108

sonally responsible, with participants rating it between the moderately and largely responsible response options. Analysis of the percentage of participants who chose each of the five response options revealed that most respondents chose either the moderately personally responsible (38.5%), largely personally responsible (41.2%), or completely personally responsible (13.3%) options for the overweight item. The one-way chi-square test of the response options indicated a significant effect, $X^2(4)=178.08$, $p<.001$. Thus, the ninth hypothesis, that participants would attribute personal responsibility for being overweight more than the other conditions, was partially supported.

Matched-pairs *t*-tests comparing overweight ratings to the other conditions revealed several significant differences. As Table 3 indicates, someone who is overweight was judged to be less personally responsible for that condition than a target who is an alcoholic ($t(256)=6.04$, $p<.001$), a drug addict ($t(256)=9.14$, $p<.001$), or has a facial tattoo ($t(256)=20.60$, $p<.001$).

Participants rated overweight as a condition with significantly greater personal responsibility than all of the other conditions (all $p<.001$). We also examined gender differences in the responsibility ratings. This analysis indicated that (using Bonferroni adjusted alpha levels of .003 per test (.05/15)) none of the 15 items showed significant gender differences.

The results suggest that there is a tendency for participants to attribute greater personal responsibility for the overweight condition compared to some of the other disease, behavioral, and physical appearance conditions. In Studies 1 and 2, three of the most stigmatized conditions (alcoholic, drug addict, and facial tattoo) were lower on dating likelihood than overweight, and overweight was rated as a condition for which one was less personally responsible compared to these conditions. However, despite overweight being rated more personally responsible than the remaining conditions, most of these did not show differences in dating preference relative to overweight. Thus, the responsibility data did not provide support for the residual weight stigma concept.

DISCUSSION

These studies examined the concept of residual weight stigma in the context of dating, specifically examining how residual weight stigma is perceived when compared to social, behavioral, and physical conditions. Results from Study 1 revealed that when compared to social and behavioral conditions, such as alcoholism, drug addiction, and homelessness, being overweight was less stigmatized both regarding current and past conditions. In addition, the results from Study 2 showed that being overweight was stigmatized, but it fell in the midpoint of stigmatized conditions both past and present, indicating that there is little residual stigma associated with being overweight in the context of dating. Finally, Study 3 examined the extent to which participants viewed individuals as personally responsible for the conditions they have. The results revealed that individuals view an overweight person as more personally responsible for many but not all of the conditions we examined.

While we found in Studies 1 and 2 that obesity stigma was not as severe as other stigmatized conditions, previous research[14-16] has shown different findings. Obesity stigma has been viewed as one of the worst stigmas that currently exists,[2] and our findings confirm that obesity stigma exists in the context of data. However, unlike other studies, we found that when compared to other highly stigmatized conditions, being overweight is not as stigmatized in the context of dating. For Study 1, several of the conditions, including alcoholism and drug addiction, could be harmful either to the individual with the condition or to those who associate with that person. Therefore, it is likely that participants viewed dating someone as being overweight as less harmful than these other conditions. Similarly, Latner and colleagues,[30] concept of residual stigma was not supported with these studies when compared to other conditions in the context of dating. Residual weight stigma was similar to the residual stigma of other social and behavioral conditions (i.e., Study 1) and being overweight was not stigmatized as much as some other physical conditions in Study 2. These findings are not supported by previous research.

However, despite being less stigmatized than other conditions, participants still rated overweight as a condition for which one is more personally responsible for than other conditions (Study 3). The third study examined all of the conditions in general, without any reference to dating. This brings up more questions regarding current and residual weight stigma in dating. Few research studies have focused specifically on the context of dating and obesity or overweight stigma. Studies that have examined the weight stigma and dating[19,21,22] have primarily examined overweight individuals in comparison with *normal* weight individuals and found that participants are less likely to date overweight partners. This study expanded on that research and situated the idea of overweight stigma in comparison to other physical, social, and behavioral conditions.

It is also worth noting that studies of obesity stigma conducted prior to 2013 examined obesity as a condition that a person brought upon him or herself. However, since 2013, obesity has been classified as a disease by the American Medical Association.[37] Thus, this classification could be a reason for why the stigma regarding overweight is not as severe as other conditions. Future research will need to examine if the classification of obesity as a disease is related to perceptions of stigma, whether people are aware of or agree with the disease classification, and the extent to which people differentiate between conditions of overweight and obesity with respect to their perceptions and preferences.

Overall, the results of this study lead to more questions regarding residual weight stigma, general weight stigma, and

ISSN 2474-8927 http://dx.doi.org/10.17140/SBRPOJ-2-108

dating. This topic is worth exploring further, for as the obesity rate continues to increase,[38] more of the population will have to consider dating individuals who fall into the obese category. This could create issues with how individuals seek partners, what they are willing to accept in a partner, partner expectations, and partner communication.

LIMITATIONS AND FUTURE RESEARCH

It is important to note that this study is not without limitations. First, while using a college research pool is convenient, the results may not be generalizable to other populations. Future research should seek to examine perceptions of overweight stigma outside the college population. The results may also have been different if we surveyed individuals regarding their perceptions about stable, long-term relationships (e.g., marriage) rather than shorter-term dating behavior.

Second, because there is a lack of research in the realm of residual weight stigma and dating, we created this study as exploratory in nature. Thus, our questions to participants were broad. Future research could seek to ask more specific questions regarding overweight and obesity stigma in the realm of dating.

Finally, previous research regarding overweight and dating has found gender differences, with men being more likely to stigmatize women regarding weight.[22,24] Our studies found no gender differences in terms of willingness to date individuals who are currently and used to be overweight. Future research might examine whether employing weight stigmatization is differentially related to willingness to date for men and women.

CONCLUSION

The present studies provided little evidence for residual stigma associated with the overweight condition and dating preferences. This exploratory set of studies has helped us understand the level of stigma associated with weight *versus* other conditions. The practical implications of this study include knowing how college students view weight in relation to other stigmatized conditions when it comes to dating among this age group. Residual weight stigma is a unique concept that can be further explored in relation to other conditions and interpersonal or group relationships.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

REFERENCES

1. Latner JD, O'Brien KS, Durso LE, Brinkman LA, Macdonald T. Weighing obesity stigma: The relative strength of different forms of bias. *Int J Obesity*. 2008; 32(7): 1145-1152. doi: 10.1038/ijo.2008.53

2. Puhl R, Heuer C. The stigma of obesity: A review and update. *Obesity*. 2009; 17(5): 941-964. doi: 10.1038/oby.2008.636

3. Lewis S, Thomas S, Blood R, Castle D, Hyde J, Komesaroff P. How do obese individuals perceive and respond to the different types of obesity stigma that they encounter in their daily lives? A qualitative study. *Soc Sci Med*. 2011; 73(9): 1349-1356. doi: 10.1016/j.socscimed.2011.08.021

4. Sutin A, Stephan Y, Terracciano A. Weight discrimination and risk of mortality. *Psychol Sci*. 2015; 26(11): 1803-1811. doi: 10.1177/0956797615601103

5. Tomiyama A. Weight stigma is stressful. A review of evidence for the Cyclic Obesity/Weight-Based Stigma model. *Appetite*. 2014; 82: 8-15. doi: 10.1016/j.appet.2014.06.108

6. Ebneter D, Latner J, O'Brien K. Just world beliefs, causal beliefs, and acquaintance: Associations with stigma toward eating disorders and obesity. *Pers Indiv Differ*. 2011; 51(5): 618-622. doi: 10.1016/j.paid.2011.05.029

7. Puhl R, Brownell K. Psychosocial origins of obesity stigma: Toward changing a powerful and pervasive bias. *Obes Rev*. 2003; 4(4): 213-227. doi: 10.1046/j.1467-789x.2003.00122.x

8. Crandall C. Prejudice against fat people: Ideology and self-interest. *J Pers Soc Psychol*. 1994; 66(5): 882-894. doi: 10.1037/0022-3514.66.5.882

9. Dejong W. Obesity as a characterlogical stigma: The issue of responsibility and judgments of task performance. *Psychol Rep*. 1993; 73(3): 963-970. doi: 10.2466/pr0.1993.73.3.963

10. Musher-Eizenman D, Holub SC, Miller AB, Goldstein SE, Edwards-Leeper L. Body size stigmatization in preschool children: The role of control attributions. *J Pediatr Psycho*. 2004; 29(8): 613-620. doi: 10.1093/jpepsy/jsh063

11. Brownell K, Puhl, RM, Schwartz, MB, Rudd, L. *Weight Bias*. New York, USA: Guilford Press; 2005.

12. Crandall C, Martinez R. Culture, ideology, and antifat attitudes. *Pers Soc Psychol B*. 1996; 22(11): 1165-1176. doi: 10.1177/01461672962211007

13. Puhl R, Brownell K. Bias, discrimination, and obesity. *Obes Res*. 2001; 9(12): 788-805. doi: 10.1038/oby.2001.108

14. Weiner B, Perry R, Magnusson J. An attributional analysis of reactions to stigmas. *J Pers Soc Psychol*. 1988; 55(5): 738-748. doi: 10.1037/0022-3514.55.5.738

15. Crandall C, Moriarty D. Physical illness stigma and social

ISSN 2474-8927 http://dx.doi.org/10.17140/SBRPOJ-2-108

rejection. *Brit J Soc Psychol*. 1995; 34(1): 67-83. doi: 10.1111/j.2044-8309.1995.tb01049.x

16. Andreyeva T, Puhl R, Brownell K. Changes in perceived weight discrimination among Americans, 1995-1996 through 2004-2006. *Obesity*. 2008; 16(5): 1129-1134. doi: 10.1038/oby.2008.35

17. Mond J, Robertson-Smith G, Vetere A. Stigma and eating disorders: Is there evidence of negative attitudes towards anorexia nervosa among women in the community? *J Ment Health*. 2006; 15(5): 519-532. doi: 10.1080/09638230600902559

18. Roehrig J, McLean C. A comparison of stigma toward eating disorders versus depression. *Int J Eat Disorder*. 2009; 43(7): 671-674. doi: 10.1002/eat.20760

19. Harris MD. Is love seen as different for the obese? *J Appl Soc Psychol*. 1990; 20(15): 1209-1224. doi: 10.1111/j.1559-1816.1990.tb01469.x

20. Horsburgh-McLeod G, Latner J, O'Brien K. Unprompted generation of obesity stereotypes. *Eat Weight Disord*. 2009; 14(2-3): e153-e157. doi: 10.1007/bf03327815

21. Regan P. Sexual outcasts: The perceived impact of body weight and gender on sexuality. *J Appl Soc Psychol*. 1996; 26(20): 1803-1815. doi: 10.1111/j.1559-1816.1996.tb00099.x

22. Smith C, Schmoll K, Konik J, Oberlander S. Carrying weight for the world: Influence of weight descriptors on judgments of large-sized women. *J Appl Soc Psychol*. 2007; 37(5): 989-1006. doi: 10.1111/j.1559-1816.2007.00196.x

23. Sitton S, Blanchard S. Men's preferences in romantic partners: Obesity vs addiction. *Psychol Rep*. 1995; 77(3f): 1185-1186. doi: 10.2466/pr0.1995.77.3f.1185

24. Boyes A, Latner J. Weight stigma in existing romantic relationships. *J Sex Marital Ther*. 2009; 35(4): 282-293. doi: 10.1080/00926230902851280

25. Sheets V, Ajmere K. Are romantic partners a source of college students' weight concern? *Eat Behav*. 2005; 6(1): 1-9. doi: 10.1016/j.eatbeh.2004.08.008

26. Meltzer A, McNulty J, Novak S, Butler E, Karney B. Marriages are more satisfying when wives are thinner than their husbands. *Soc Psycho Pers Sci*. 2011; 2(4): 416-424. doi: 10.1177/1948550610395781

27. Collisson B, Howell J, Rusbasan D, Rosenfeld E. "Date someone your own size": Prejudice and discrimination toward mixed-weight relationships. *J Soc Pers Relat*. 2016; 33: 1-31. doi: 10.1177/0265407516644067

28. Latner J, Stunkard A. Getting worse: The stigmatization of obese children. *Obesity Res*. 2003; 11(3): 452-456. doi: 10.1038/oby.2003.61

29. Fardouly J, Vartanian L. Changes in weight bias following weight loss: The impact of weight-loss method. *Int J Obesity*. 2011; 36(2): 314-319. doi: 10.1038/ijo.2011.26

30. Latner J, Ebneter D, O'Brien K. Residual obesity stigma: An experimental investigation of bias against obese and lean targets differing in weight-loss history. *Obesity*. 2012; 20(10): 2035-2038. doi: 10.1038/oby.2012.55

31. Mattingly B, Stambush M, Hill A. Shedding the pounds but not the stigma: Negative attributions as a function of a target's method of weight loss. *J Appl Biobehav Res*. 2010; 14(3): 128-144. doi: 10.1111/j.1751-9861.2009.00045.x

32. Romer D, Bock M. Reducing the stigma of mental illness among adolescents and young adults: The effects of treatment information. *J Health Commun*. 2008; 13(8): 742-758. doi: 10.1080/10810730802487406

33. Chapple A, Ziebland S, McPherson A. Stigma, shame, and blame experienced by patients with lung cancer: Qualitative study. *Brit Med J*. 2004; 328(7454): 1470-1473. doi: 10.1136/bmj.38111.639734.7c

34. Sobal J, Bursztyn M. Dating people with anorexia nervosa and bulimia nervosa: Attitudes and beliefs of university students. *Women Health*. 1998; 27(3): 73-88. doi: 10.1300/j013v27n03_06

35. Kanter J, Rusch L, Brondino M. Depression self-stigma. *J Nerv Ment Dis*. 2008; 196(9): 663-670. doi: 10.1097/nmd.0b013e318183f8af

36. Brinthaupt TM, Pennington JT. Development of a departmental data archive for teaching and research. *Teach Psychol*. 2005; 32: 257-259.

37. Pollack A. (2013). A.M.A. Recognizes obesity as a disease. Web site. http://www.nytimes.com/2013/06/19/business/ama-recognizes-obesity-as-a-disease.html. Accessed January 29, 2017.

38. Centers for Disease Control. (2015). Maps of trends in diagnosed diabetes and obesity. Web site. http://www.cdc.gov/diabetes/statistics/slides/maps_diabetesobesity_trends.pdf. Accessed November 30, 2016.