

Disparagement humour and anti-obesity attitudes

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Abstract

People with obesity are often the target of disparaging humour. The typical derision of obesity found in everyday life also extends into the realm of the media. Many assumptions have been made about the effects this type of humour may have on the public's attitudes toward people with obesity, but little empirical research exists. In the present research, two studies sought to uncover whether jokes and humorous media depictions of people with obesity affect individuals' attitudes. In Study 1, participants (N = 271) either read a list of derogatory jokes about obesity, read a list of derogatory comments about obesity, or read a list of jokes that were unrelated to obesity. All participants were then asked to report their 1) attitudes toward people with obesity in several domains, 2) level of belief in stereotypes about obesity and 3) judgement of the social acceptability of jokes about obesity. Participants' scores on these dependent measures did not differ across groups suggesting obesity jokes do not have an immediate impact on attitudes. In Study 2, participants (N = 146) were shown video clips from film and television programmes that featured derogatory humour targeting obese characters. Again, participants' scores on dependent measures did not differ across groups. The results of these studies suggest that brief exposure to derogatory weight-related humour may not affect individuals' attitudes toward people with obesity as might be assumed. Longer exposure to disparaging humour may be required to shift individuals' attitudes about people with obesity.

Keywords: disparagement theory of humour, obesity, stereotypes, stigma, health.

1. Introduction: disparagement humour and obesity stigma

Individuals with obesity experience stigmatisation and discrimination in many life areas including health care, employment settings, and interpersonal relationships (Puhl & Heuer 2009). The typical derision of obesity found in real life extends into the realm of disparaging humour, particularly in the media. Disparagement humour is composed of jokes that ridicule or insult a target (Martin 2007) and at times approach transgression into non-humorous insults

(Marsh 2014). Jokes that rely on poking fun at an undesirable stereotypical trait of a specific group typify this sort of humour. In disparagement humour, the group being targeted is typically of a lower social status than the people making the joke.

Disparaging humour is ubiquitous in media depictions of obesity. Characters with obesity are often depicted as the target of jokes (Ata & Thompson 2010). For example, Parrott (2016) conducted a content analysis of 645 clips from 31 television programmes and found that overweight characters were the targets of disparaging humour 20 per cent of the time. In an analysis of 18 popular sitcoms, female characters' body weight was associated with the number of derogatory comments they received (Fouts & Burggraf 2000). Another study of 27 sitcoms found that male characters' weight was associated with the number of disparaging jokes they made about their own body (Fouts & Vaughan, 2002). A comprehensive content analysis of the most popular television programmes found that overweight characters were most often the target of jokes and were less often shown with friends and romantic partners compared to thinner characters (Greenberg et al. 2003). In another study, Himes & Thompson (2007) coded the interactions of obese characters on 35 films and television shows. They found that stigmatisation mostly occurs in the context of jokes and comments made verbally and directed toward another character (Himes & Thompson 2007). Parrot (2016) and Burmeister & Carels (2014b) found that appreciation and distaste for disparagement humour targeting obesity is associated with viewer's pre-existing antifat attitudes. Despite these observational findings, fewer studies have used experimental manipulations to examine the impact of weight-based disparagement humour on attitudes toward people with obesity. One example is Parrot (2016, study 2) in which participants were exposed to video clips of disparagement humour targeting weight along with information from third party audience members that validated or condemned the humour; both the audience validation and participants' existing attitudes were associated with increased enjoyment of the disparaging humour. The current study seeks to add to this body of rare and important research.

1.1. Disparagement humour research

Disparagement humour research suggests that although no longer politically correct, some stereotypes are still "fair game" as long as they are the subject of humorous content (Cendra et al. 2019; Lockyer & Pickering 2008). However, limited research has studied whether humour decreases, increases, or has no effect on prejudiced attitudes (Goodwin & Whannel 1990). Some have argued that stereotypes presented in a humorous and satirical manner will inevitably reinforce prevailing stereotypes and social hierarchies because understanding the humour requires activation of knowledge of the stereotype (Bowes 1990). Related, although some stereotypes might be presented with the intent of highlighting social injustice (e.g., satirical commentary on racism), some viewers may not be laughing at the stereotype as intended (Lindo 2015). Instead, they might interpret the humorous depiction of social stereotypes as an indication of their nonseriousness and as confirmation of the stereotype (Lindo 2015; Linn 2003). This idea is based on what cognitive theorists have described as a core component of humour: for an event to be humorous, it must include some indication that it is nonserious enough so that concerns about the target's welfare are allayed (Martin 2007). Thus, it could be that the message delivered via humour is that stereotypes, prejudice, and stigma are sources of amusement and they are true (Linn 2003).

Empirical studies have investigated the possible unique effects of humorous presentations of stereotyped groups. The body of work examining disparagement humour (i.e., humour aimed at denigrating a person or a social group; Martin 2007) has focused primarily on humour targeting women. For example, Ford et al. (2001) exposed men to disparaging humour that targeted women by asking them to read a series of written jokes in a vignette. Results

demonstrated that sexist men exposed to jokes about women showed less concern about a hypothetical sexist event.

Ford (1997) presented Caucasian participants with a compilation of sketches taken from television comedies. Half of the participants watched humorous clips containing stereotypical portrayals of African Americans (i.e., showing African Americans as poor, violent, and uneducated), while the other half watched videos with neutral portrayals of African Americans. Later, they were asked to judge the guilt of the suspect in an assault case. By manipulating the suspect's name, the description of the case subtly implied that he was either African American (Tyron) or Caucasian (Todd). Participants' ratings of guilt of the Caucasian suspect did not differ between the two video conditions. Guilt ratings of the African American suspect however, were higher for participants who had seen the stereotypical portrayal compared to those in the neutral video condition. In line with other research, these findings suggest that exposure to stereotypical portrayals of individuals from specific social groups can affect attitudes and beliefs about members of that specific social group (Ford 1997).

Additional research by Ford (2000) asked participants to read either sexist statements, sexist jokes, or neutral jokes. After exposure to one of the three, participants rated the offensiveness of a male character's behaviour in a vignette in which he was depicted sexually harassing a subordinate female employee. Results indicated that participants who were highly sexist and who had been exposed to sexist humour rated the supervisor's behaviour as more tolerable than otherwise. These results were expanded upon by multiple experiments in a study by Ford et al. (2008). In one experiment, the amount of money men were willing to donate to a women's advocacy organisation was predicted by their level of sexism. But this was only true for men exposed to sexist humour – not those exposed to neutral humour or non-humorous sexist comments. In another experiment, men's level of sexism predicted how much money they would cut from a woman's organisation when they were exposed to sexist comedy videos, but not neutral comedy videos (Ford et al. 2008).

Some research has tested the importance of the relative status of the social group being targeted. Olson et al. (1999) conducted two experiments which did not produce changes in expressed beliefs in stereotypes toward men after presenting female participants with humour meant to disparage men. As part of the same study, a third experiment found similar results using lawyers as the target of humour. These experiments show that humour targeting a relatively high-status group (i.e., men and lawyers) may be unlikely to change the expression of negative attitudes. Disposition humour theory suggests that people enjoy humour more when they hold negative attitudes toward the target (Zillmann & Cantor 1996). Some have also proposed that humorous expressions of derogation allow one to claim that "it was just a joke" in the event that their opinion is ill-received (Martin 2007).

Taken together, these studies provide evidence of the effect that exposure to negative stereotypes has on the expression of negative attitudes toward targeted groups. Research suggests that these effects are consistent for stereotypes targeting low status groups (e.g., racial minorities and women). Evidence also suggests that when stereotypes about women are presented in a humorous manner, they increase the expression of discriminatory attitudes in individuals who already hold discriminatory attitudes. These effects have rarely been tested with other low status groups such as those with obesity – a group against which negative attitudes are commonly held.

2. Research goals

The effect of short-term exposure to stereotypes on expression of attitudes toward low-status groups has been established. Additionally, empirical studies have demonstrated that humorous

depictions may have a special effect of increasing the expression of prejudiced attitudes for some stereotyped groups. Individuals with obesity face stigma in many areas of life and this stigma is prevalent in the media. Depictions of obesity in film and on television are based on common negative stereotypes and are frequently presented to viewers as both disparaging and humorous. Obesity is a trait that is widely thought of as being under the control of the affected person and jokes about people with obesity are still far more acceptable and politically correct than jokes about other minority groups. Thus, the effect of such humour on individuals' expression of attitudes is worth empirical study. This investigation seeks to uncover whether humour and disparagement interact to affect viewers' self-report of attitudes about people with obesity. Study 1 was designed to test the unique and interactive effects of written jokes and derogation of obesity on expression of attitudes about obesity. Study 2 utilised the same dependent measures, but randomised participants to see either humorous videos targeting either overweight characters or a no-video control.

3. Study 1

This experiment was designed to measure the effect of obesity-related jokes on readers' self-report of anti-fat attitudes, belief in stereotypes about obesity, and perceptions of the social acceptability of prejudice toward people with obesity. This study tested whether participants who read jokes about obesity would express greater anti-fat attitudes, greater beliefs in obesity stereotypes, and more acceptance of obesity stigmatisation than participants who read neutral jokes or non-humorous comments expressing stereotypes about weight.

3.1. Methods

3.1.1. Participants

Participants ($N = 272$) were female (64%), White (75.7%), Black (5.9%), Hispanic (5.1%), Asian (11%), other (2.2%); their mean age was 32.74 years old ($SD = 10.74$). Most participants' household yearly income was less than \$55,000 (58.9%). Mean body mass index was 26.02 ($SD = 6.47$). They were recruited from an online participant pool (Amazon.com MTurk) and were compensated monetarily with \$0.55 for completing the 12-minute-long survey. Amazon.com's Mechanical Turk (MTurk) is an online system that allows individuals to complete paid tasks online, including completing surveys. MTurk has been found to provide valid data for researchers (Burmeister & Carels 2014b; Buhrmester et al. 2011; Downs et al. 2010; Paolacci et al. 2010).

3.1.2. Procedure

Participants found the study advertised on the MTurk system as work involving "*Reading short vignettes and provide your opinions.*" After providing informed consent, participants were randomised to one of three groups. Approximately 1/3 of participants were assigned to each of the conditions, including the Weight Joke condition ($n = 90$), the Weight Comment condition ($n = 91$), and the Neutral Joke condition ($n = 91$). Participants were asked to "*Please read this story and answer the questions about it at the end.*" The vignette the participants read included the experimental manipulation. After reading the vignettes, participants were asked to complete the study's dependent measures and they were then debriefed.

3.1.3. Materials

Vignettes. Participants read one of three vignettes that contained the experimental manipulation. All of the vignettes began with similar text.

Participants in the Weight Joke condition read “A group of workers were having a conversation in their office at lunch. Before long the conversation turned to a discussion of jokes. The coworkers shared a few of their favourite jokes. Here are some they told...” Following this stem, participants read a series of four jokes that targeted obesity. For example, “My fat friend calls herself a ‘light eater.’ As soon as it gets light out, she starts eating.”

Participants in the Neutral Joke condition read “A group of workers were having a conversation in their office at lunch. Before long the conversation turned to a discussion of jokes. The coworkers shared a few of their favourite jokes. Here are some they told...” Following this stem, participants read a series of four jokes that did not target obesity such as “A man went to play golf for the day – he took his golf clubs and two pairs of pants. He brought the extra pair of pants in case he got a hole-in-one.”

Participants who were randomised to the Weight Comment condition read the text “A group of workers were having a conversation in their office at lunch. Before long the conversation turned to a discussion of people who are overweight. The coworkers shared a few of their views. Here are some of the views they shared...” This stem was followed by a series of four derogatory comments about weight that were not in the form of jokes, such as “My fat friend eats all day long” and “I think people who are overweight must be that way because they just refuse to exercise. Maybe their doctors should tell them to.”

Joke Pretest. The jokes were pretested in a sample of MTurk participants ($N = 59$) to confirm that the weight jokes and neutral jokes were equally funny. Participants were presented with all the jokes in randomised order and were asked to rate how funny they were on a scale from 0 to 6. A Paired samples t-test revealed that the jokes used in the weight condition ($M = 2.33$, $SD = .93$) were not significantly different than the jokes in the neutral condition ($M = 2.41$, $SD = .78$), $t(58) = -.93$, $p = .36$), suggesting the jokes were equally funny.

Dependent Measures. This study sought to measure the effect of reading weight-related jokes on participants’ self-report of their attitudes about obesity in several domains including 1) general attitudes about obese persons, 2) belief in stereotypes about obesity persons, and 3) perception of social acceptability of jokes about weight.

Attitudes about Obese Persons. Participants completed the Universal Measure of Bias (UMB; Latner et al. 2008). This 20-item instrument was designed to measure individuals’ attitudes toward others with a stigmatising characteristic across four domains including negative judgement, a desire for social distance, interpersonal attraction, and a desire for equal rights for the group. The UMB has returned reliable and valid data about attitudes toward obesity from samples of adults in several studies (Latner et al. 2008; Pearl et al. 2012; Puhl et al. 2013). In their initial study, Latner et al., (2008) found high internal consistency and strong factor loadings for the UMB. Cronbach’s alphas for these subscales in the current study were the following: negative judgement (.91), a desire for social distance (.84), interpersonal attraction (.92), and desire for equal rights (.97).

Belief in stereotypes. Participants’ belief in the common stereotypes about individuals with obesity was measured by asking them to provide their estimate of the percentage of people with obesity who have 10 stereotypical traits such as laziness, gluttony, and poor hygiene. This measure was derived from the Obese Persons Trait Survey (Puhl et al. 2013). Previous studies have found higher belief in negative stereotypes as measured by the OPTS to be associated with dislike of persons with obesity (Burmeister & Carels 2014a). In one experiment, participants’ ratings on the OPTS were sensitive to change after exposure to social consensus information about others’ beliefs about obesity (Puhl et al. 2013). Cronbach’s alpha for the current study was .95.

Acceptability of weight stigmatisation. Using a 6-point Likert scale, Participants were also asked to rate their agreement with the following statements: “It is acceptable for people to make comments about other people’s body weight. It is acceptable for people to make jokes about other people’s body weight. It is acceptable for people to tease others about their body weight.” These questions are modified versions of those used by Aronson et al. (2007) in their assessment of college students’ acceptability of various forms of teasing. Cronbach’s alpha for the three questions was .90.

Demographic information. Participants were also asked to provide demographic information as well as information about their height and weight. Specifically, they reported their age, sex, race and/or ethnicity, family income level, weight, and height.

3.2. Results

Analyses revealed that demographic variables were not significantly different between groups (all *p* values > .10) and that all scores and ratings were normally distributed. Participants who failed to answer either of two screening questions (e.g., “Please answer 6 for this question”) and those who did not answer all questions were removed from all analyses (*n* = 13). SPSS 17 was used for all analyses.

Mean scores on the UMB subscales (see Table 1) were in line with previous studies that found similar mean scores in similar samples of adults (Latner et al. 2008; Pearl et al. 2012; Puhl et al. 2013).

ANOVA was used to test for differences among the three conditions. A different test was conducted for each dependent variable (see Table 1). Participants’ score on the four subscales of the UMB did not differ between conditions. Participants’ belief in stereotypes about obesity did not differ between conditions. Participants’ ratings of the acceptability of jokes about obesity did not differ between conditions.

Table 1. Study 1 Means and Results of Analysis of Variance

| | Group Means and Standard Deviations | | | | ANOVA | |
|----------------------------------|-------------------------------------|---------------|-----------------|----------------|----------|----------|
| | Total Sample | Weight Humour | Weight Comments | Neutral Humour | <i>F</i> | <i>p</i> |
| UMB Negative Judgement | 2.41 (1.05) | 2.35 (1.04) | 2.51 (1.07) | 2.38 (1.05) | .59 | .56 |
| UMB Attraction | 3.00 (0.71) | 2.94 (0.71) | 2.99 (0.70) | 3.06 (0.72) | .72 | .49 |
| UMB Social Distance | 2.48 (0.99) | 2.41 (0.98) | 2.52 (1.04) | 2.50 (0.97) | .31 | .74 |
| UMB Equal Rights | 3.89 (1.20) | 3.95 (1.15) | 3.92 (1.11) | 3.80 (1.32) | .42 | .66 |
| Obese Persons Trait Survey | 55.23 (22.02) | 54.25 (22.26) | 57.07 (21.20) | 54.73 (22.56) | .40 | .67 |
| Acceptability of Stigma Vignette | 2.38 (1.13) | 2.38 (1.09) | 2.45 (1.19) | 2.33 (1.13) | .25 | .78 |
| Humorousness | 0.89 (0.82) | 1.12 (0.82) | 0.31 (0.66) | 1.16 (0.68) | 38.55 | .00 |

Note. Each row represents a separate analysis testing mean differences between conditions; Mean (Standard Deviation); *N* = 271 for all comparisons.

Several participant characteristics (i.e., age, gender, and BMI) were analysed as potential moderators of the relationship between experimental condition and the dependent measures. Using a Univariate General Linear Model, no variables emerged as significant moderators of the relationship between experimental conditions and dependent measures.

3.3. Study 1 discussion

The results of this study suggest that reading jokes that make fun of persons with obesity does not necessarily affect the readers' self-report of anti-fat attitudes, belief in stereotypes, or acceptability of the stigmatisation of obesity. These findings are contrary to commonly assumed connections between exposure to humorous derogation of people with obesity and individuals' subsequent attitudes. Importantly, there were no differential effects for jokes or comments suggesting that there is no difference between humorous jokes and serious comments when it comes to effects on attitudes about obesity. There were also no indications that participant characteristics were relevant, as no significant moderators emerged.

There were some important limitations of this study. First, the study design did not allow for the detection of differential effects for humour that targets women versus men. Studies have consistently found that the stigma of obesity tends to be more relevant for women than it is for men (Puhl & Heuer 2009). Women are susceptible to obesity stigma at lower BMIs than men, and they typically face stronger consequences than men (Puhl & Heuer 2009). The stimuli in this study were mostly nondescript about the gender of the target. It may be that only humour targeting obese females affect attitudes.

Second, although written jokes have been powerful enough stimuli to instigate change in the expression of attitudes in other studies (Ford 1997), they may not have been in the present study. While the present study was designed to maximise experimental control by using easily controlled stimuli (i.e., written jokes), it may have provided participants with a set of stimuli that were either too weak or too unlike anything that would be encountered in the real world to have an effect. It is possible that people are not used to reading written jokes in an era of the internet, television, and film. Finally, written jokes may not be the best way to present participants with information about obesity stereotypes given they are often based on visual appearance

4. Study 2

The results of this study suggest that reading jokes that make fun of persons with obesity does not necessarily affect the readers' self-report of anti-fat attitudes, belief in stereotypes, or acceptability of the stigmatisation of obesity. These findings are contrary to commonly assumed connections between exposure to humorous derogation of people with obesity and individuals' subsequent attitudes. Importantly, there were no differential effects for jokes or comments suggesting that there is no difference between humorous jokes and serious comments when it comes to effects on attitudes about obesity. There were also no indications that participant characteristics were relevant, as no significant moderators emerged.

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4.1. Methods

4.1.1. Participants

Participants ($N = 146$) were female (62.6%), White (70.7%), Black (7.5%), Hispanic (3.4%), Asian (14.3%), other (4.1%), and their mean age was 33.21 years old ($SD = 11.04$). Their average BMI was 26.11 ($SD = 5.97$). Most participants' household yearly income was less than \$55,000 (67.4%). They were recruited from an online participant pool (Amazon.com MTurk) and were compensated monetarily with \$0.55 for completing the survey.

4.1.2. Procedure

Participants found the study advertised on the MTurk system as work involving “*Watch video clips and provide your opinions.*” After providing informed consent, participants were randomised to one of three groups. Approximately one-third of participants were assigned to each of the conditions: the Female Target condition ($n = 51$), the Male Target condition ($n = 44$), and the No Video Control condition ($n = 51$). After watching the videos, participants were asked to complete the study's dependent measures and they were then debriefed.

4.1.3. Materials

Video Clips. The compilation of clips comprised several scenes from popular television and film comedies. The scenes presented verbal jokes and humorous depictions of stereotypes about people with obesity. These scenes were intended to approximate the type of weight-related humour common in film and television. Previous content analysis research has created a description of typical ways in which persons with obesity are presented in the media (Himes & Thompson 2007; Greenberg et al. 2003). Similar compilations of clips have been used in a previous study of obesity-related humour (Burmeister & Carels 2014b).

The videos were also chosen for their presentation of obesity itself as a visually comical condition rather than a dramatic or purposefully empathy-evoking manner. Importantly, the videos were chosen for their depiction of stereotypes about obese individuals (e.g., lazy, gluttonous, shameful). Videos were divided into two groups: those that show a female character being the target of the humour, and those that show a male being the target.

One scene shown in the male target condition shows a male character who is too big to move or leave a bed. His friend hits him with a baseball bat, but he does not feel any pain because he is too fat (*That 70s Show*). In another scene, a character shows a photo of himself from when he used to be overweight and he says it is from “*before I knew how much I hated myself*” (*Dodgeball*). The scenes also utilise stereotypes about obese people for their humour. For example, one of the videos shows an obese man eating a bucket of fried chicken representing the stereotype that people with obesity overeat (*Dodgeball*). The stereotype that people who are

overweight are lazy and unintelligent is represented in a video clip from the film *Tommy Boy*, in which Tommy is carefree and dull, while his thinner counterpart is intelligent and motivated.

The video clips for the female target condition also contain a variety of scenes. One scene shows a woman beginning to binge eat while in a bad mood and an overweight character complains about going to do yoga, “*Me in a leotard, surrounded by skinny women? I’d rather kill us all!*” (*Mike & Molly*). Another presents a woman being told she is too large for a water slide. She then goes down the slide and has so much momentum she crashes through a wall (*Norbit*). A scene from a television programme shows a comedic montage of a woman clumsily trying to fit into jeans that are too small (*Fat Actress*). Overall these clips were chosen to represent the type of weight-related humour seen in film and television comedies while at the same time presenting some of the common stereotypes about obesity. Study 2 used the dependent measures identical to those in Study 1.

4.2. Results

Analyses revealed that demographic variables were not significantly different between groups (all p values $> .10$) and that all scores and ratings were normally distributed. Participants who failed to answer screening questions (e.g., “*Please answer 6 for this question*”) or failed to prove they could see the videos by answering questions about visual details of the scenes or those who did not answer all questions were removed from all analyses ($n = 30$). SPSS 17 was used for all analyses.

Mean scores on the UMB subscales were in line with previous studies that found similar mean scores (Latner et al. 2008; Pearl et al. 2012; Puhl et al. 2013). They were also very similar to scores in Study 1 of the current investigation.

An ANOVA was used to test for differences among the three conditions. A different test was conducted for each dependent variable. Participants’ score on the four subscales of the UMB did not differ between conditions. Participants’ belief in stereotypes about obesity did not differ between conditions. Participants’ ratings of the acceptability of jokes about obesity did not differ between conditions. See Table 2 for test statistics.

Several participant characteristics (i.e., age, gender, and BMI) were analysed as potential moderators of the relationship between experimental condition and the dependent measures. *None of these variables emerged as significant moderators.*

Table 2. Study 2 Means and Results of Analysis of Variance

| | Group Means and Standard Deviations | | | | ANOVA | |
|------------------------------|-------------------------------------|---------------|-----------------|----------------|-------|-----|
| | Total Sample | Weight Humour | Weight Comments | Neutral Humour | F | p |
| UMB Negative Judgement | 2.53 (1.09) | 2.43 (1.05) | 2.62 (1.08) | 2.57 (1.18) | .47 | .63 |
| UMB Attraction | 2.99 (0.78) | 2.97 (0.72) | 2.94 (0.78) | 3.04 (0.85) | .22 | .81 |
| UMB Social Distance | 2.46 (1.06) | 2.49 (1.05) | 2.46 (1.17) | 2.44 (0.99) | .01 | .99 |
| UMB Equal Rights | 4.20 (1.38) | 4.28 (1.31) | 4.06 (1.36) | 4.23 (1.47) | .40 | .67 |
| OPTS Acceptability of Stigma | 56.27 (24.00) | 54.90 (24.68) | 56.40 (23.89) | 57.52 (23.84) | .97 | .38 |
| Video | 2.32 (1.22) | 2.35 (1.22) | 2.49 (1.24) | 2.15 (1.21) | .21 | .81 |
| Humorousness | 1.94 (1.12) | 1.77 (1.10) | 2.13 (1.12) | NA | 2.90 | .09 |

Note. Each row represents a separate analysis testing mean differences between conditions; Mean (Standard Deviation); *N* = 146 for all comparisons. UMB = Universal Measure of Bias. OPTS = Obese Person Trait Survey.

5. Discussion and conclusion

Taken together, the findings of the present research suggest that brief exposure to humorous stigmatisation of obesity is not enough to augment individuals’ expression of attitudes toward people with obesity. Two experiments found no effects following exposure to either written jokes about obesity or video clips containing humorous depictions of obesity. Likewise, no effect was found for stigmatising comments that were not presented as jokes. These findings were consistent across experiments and the same results were found for a variety of dependent variables including self-report of anti-fat attitudes, belief in stereotypes, and the acceptability of obesity stigmatisation.

Neither experiment resulted with changes to anti-fat attitudes as measured by the Universal Measure of Bias (UMB). Interestingly, this measure comprises four subscales that tap into different domains in which a person could hold attitudes about people with obesity. For example, the Social Distance subscale, with items such as “*I would not want to have a fat person as a roommate*” was not affected by the manipulation. Neither was the Attractiveness subscale, with items such as “*I find fat people to be sexy.*” The Equal Rights subscale of the UMB measures a somewhat different area of attitudes toward obese individuals, with items that ask participants how much they want people with obesity to have their rights, privileges, salaries, etc. protected legally. Participants’ ratings on this scale were not affected by exposure to weight-related humour in either experiment. Likewise, the UMB Negative Judgement subscale, with items such as “*Fat people are sloppy*” and another dependent measure – the Obese Persons Trait

Survey – were not affected by the manipulations. Both of these scales measure individuals' belief in stereotypes about people with obesity.

These findings are inconsistent with common assumptions about media depictions of obesity as well as predictions made based on previous empirical findings which have shown that stereotyped information that is presented to individuals can affect their self-reported attitudes about stigmatised groups. One previous study had found that exposing people to stereotypical comedic depictions of African Americans had an effect on individuals' judgements of how guilty an African American was in a story about assault (Ford 1997). Similarly, Johnson et al. (2009) found that images that portrayed stereotypes of black men and women had an effect on participants' willingness to support public policies that would help black persons-in-need. The findings of the present study indicate no such effects.

One explanation for this could be that attitudes toward obesity are simply not affected by brief exposure to stigmatising information whether presented humorously or not. Thus, unlike race, the media may not have as much power to affect attitudes toward obesity after short exposure. If the stigmatisation of obesity functions differently than the stigmatisation of other groups (such as those based on race), it may have to do with factors that differ between the targeted groups. For example, despite how challenging weight loss is (Brownell 2010), obesity is often seen as a changeable attribute. Thus, the boundary between persons with obesity and those without may seem permeable. Also, widespread obesity is relatively new in developed regions of the world, whereas racial boundaries have long existed. Thus, comparisons between obesity and race may not be apt.

Several studies, however, would suggest that attitudes toward obesity can be affected. For example, Domoff et al. (2012) found that watching an episode of *The Biggest Loser* changed viewers' attitudes about the controllability of weight as well as engendered greater dislike of people with obesity. Other studies have shown that looking at images of people with obesity performing stereotypical actions (e.g., eating, watching TV) can affect attitudes toward people with obesity (Pearl et al. 2012; McClure et al. 2011) perhaps suggesting a larger dose of exposure to disparaging humour is needed to impact attitudes about people with obesity. However, previous research would suggest that the clips were representative of the type of weight humour common in the media. That is, the clips used in the present study were similar in content to the type found to be most prevalent in a content analysis conducted by Himes & Thompson (2007).

Study 2 was also designed to explore whether the gender of the target of humour was a relevant variable. Given that women seem to be more relevant targets for anti-fat attitudes than men (Puhl & Heuer 2009), it could be predicted that humour that targeted women would have a greater effect. No such relationship was found. Again, this could be due to a true negative result. However, it could also be due to other factors such as a weak manipulation (i.e., the difference between men and women targets was not salient enough). Future studies could include more thoroughly controlled video stimuli as well. Those used in the current study were from popular comedy films and television programmes and, although they represented the weight-related humour found in the media, they were not standardised across conditions. That is, the clips varied across groups on more factors than just the gender of the target of humour. Future research could utilise custom-made video clips that depict the same scenes with identical dialogue with the only difference between groups being the gender of the target. That level of experimental control was not possible using clips from actual programmes.

Several potential moderator variables were also explored, but none was found to be significant moderators of the experimental effect. Namely, participant gender and body mass index (BMI) were two factors that one might suspect to be important interaction variables. Neither was significant or even nearly significant moderators in the analyses conducted. Many might assume gender would moderate an experimental effect in the present study because of

previous research that has found men to have stronger anti-fat attitudes than women in general (Puhl & Heuer 2008).

One may expect BMI to be a significant moderator as a viewer's own body weight and shape to may affect how they perceive jokes and comments that ridicule others with extra body weight. This was not the case in the present study. Even when comparing participants in the highest and lowest BMI categories, no interactions were found in either of the two experiments.

An important moderator that was not measured in the present study is participants' level of pre-existing anti-fat attitudes. For example, Parrott (2016) and Burmeister & Carels (2014b) found that participants' pre-existing attitudes were associated with their enjoyment of humour targeting people with obesity. Prejudiced norm theory developed by Ford & Ferguson (2004) suggests that stereotyped information about a stigmatised group presented in a humorous manner can make individuals with high levels of prejudice toward that group more willing to express those attitudes. Their research on sexist stereotypes has found that for men already high in hostile sexist attitudes, sexist humour (but not sexist comments or neutral humour) seems have a "prejudice releasing" effect (Ford & Ferguson 2004). It may be the case that humour about stereotypes creates an atmosphere in which individuals feel more at ease expressing their attitudes which they would have otherwise censored. Future studies will need to test for baseline level of anti-fat attitudes to be able to measure whether stigmatising humour helps people with higher anti-fat attitudes feel more comfortable expressing their attitudes.

Another limitation to consider is that the design of the present study prioritised simplicity at the expense of the ability to keep the study hypotheses hidden from participants. In future work, it will be important to limit participants' ability to detect the study hypotheses, perhaps via more elaborate designs. For example, researchers could ask participants to respond to several unrelated stimuli to cloud their judgement of the purpose of the study. In the current Study 1, jokes were pretested to ensure they were reliably funnier than the non-humorous comment stimuli. Future work would benefit from additional pretesting of stimuli such as conducting a content analysis of jokes and video clips.

In summary, the present study sought to determine whether jokes about obese people had an effect on participants' expression of anti-fat attitudes. The results suggest there may be no immediate effect and they introduce several important avenues open for further inquiry. Primarily, subtle behavioural measures should be utilised in future studies to circumvent participant reactivity to having their attitudes measured. Future research could also utilise other dependent variable measures known to return valid and reliable data such as the Attitudes Toward Obese Persons Scale (Allison et al. 1991) and the Antifat Attitudes Scale (Morisson & O'Conner 1999). Longitudinal studies might be necessary to detect effects of long-term exposure to humorous stereotypes about weight as predicted by cultivation theory (Gerbner et al 1986). Indeed, cultivation theory would predict that numerous (perhaps many) exposures to negative media depictions of obesity would be necessary to affect attitudes. Importantly, the impact of humour on attitudes about obesity may function quite differently between cultures and regions of the world. Obesity has a high prevalence in some developed nations such as the United States, but is quite low in other developed nations such as Japan. Obesity rates are increasing in developing regions of the world, but rates still lag behind and obesity stigma may function differently there (Ng 2014). Research on the intersections between obesity stigma and disparagement humour is rare and worthy of increased attention and empirical study from scholars in a variety of fields such as communications, media studies, public health, and psychology.

References

- Allison, D. B., Basile, V. C. & Yunker, H. E. (1991). 'The measurement of attitudes toward and beliefs about obese persons'. *International Journal of Eating Disorders*, 10 (5), pp. 599-607.
- Aronson, E., Biegler, H., Bond, B., Clark, R. A., Drogos, K., Garcia, M. A., ... & Yahn, A. (2007). 'Norms for teasing among college students'. *Communication Research Reports*, 24 (2), pp. 169-176.
- Ata, R. N. & Thompson, J. K. (2010). 'Weight bias in the media: A review of recent research'. *Obesity Facts*, 3 (1), pp. 41-46.
- Bowes, M. (1990). 'Only when I laugh'. *Understanding Television*, London: Routledge. pp. 128-140.
- Buhrmester, M., Kwang, T. & Gosling, S. D. (2011). 'Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?'. *Perspectives on Psychological Science*, 6 (1), pp. 3-5.
- Brownell, K. D. (2010). 'The humbling experience of treating obesity: Should we persist or desist?'. *Behaviour Research and Therapy*, 48 (8), pp. 717-719.
- Burmeister, J. M., & Carels, R. A. (2014a). 'Television use and binge eating in adults seeking weight loss treatment'. *Eating Behaviours*, 15 (1), pp. 83-86.
- Burmeister, J. M. & Carels, R. A. (2014b). 'Weight-related humour in the media: appreciation, distaste, and anti-fat attitudes'. *Psychology of Popular Media Culture*, 2 (4), pp. 223-238.
- Cendra, A. N., Triutami, T. D. & Bram, B. (2019). 'Gender stereotypes depicted in online sexist jokes'. *The European Journal of Humour Research*, 7 (2), pp. 44-66.
- Domoff, S. E., Hinman, N. G., Koball, A. M., Storfer-Isser, A., Carhart, V. L., Baik, K. D. & Carels, R. A. (2012). 'The effects of reality television on weight bias: an examination of the biggest loser'. *Obesity*, 20 (5), pp. 993-998.
- Downs, J. S., Holbrook, M. B., Sheng, S. & Cranor, L. F. (2010). 'Are your participants gaming the system?: Screening Mechanical Turk workers'. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. pp. 2399-2402.
- Ford, T. E. (1997). 'Effects of stereotypical television portrayals of African-Americans on person perception'. *Social Psychology Quarterly*, (60) pp. 266-275.
- Ford, T. E. (2000). 'Effects of sexist humour on tolerance of sexist events'. *Personality and Social Psychology Bulletin*, 26, 1094-1107.
- Ford, T. E., Boxer, C. F., Armstrong, J. & Edell, J. R. (2008). 'More than "just a joke": The prejudice-releasing function of sexist humour'. *Personality and Social Psychology Bulletin*, 34, pp. 159-170,
- Ford, T. E. & Ferguson, M. A. (2004). 'Social consequences of disparagement humour: A prejudiced norm theory'. *Personality and Social Psychology Review*, 8, pp. 79 -94.
- Ford, T. E., Wentzel, E. R. & Lorion, J. (2001). 'Effects of exposure to sexist humour on perceptions of normative tolerance of sexism'. *European Journal of Social Psychology*, 31, pp. 677-691.
- Fouts, G. & Burggraf, K. (2000). 'Television situation comedies: Female weight, male negative comments, and audience reactions'. *Sex Roles*, 42, pp. 925-932.
- Fouts, G. & Vaughan, K. (2002). 'Television situation comedies: Male weight, negative references, and audience reactions'. *Sex Roles*, 46, pp. 439-442.
- Gerbner, G., Gross, L., Morgan, M. & Signorielli, N. (1986). 'Living with television: The dynamics of the cultivation process.' *Perspectives on Media Effects*, 1986, pp. 17-40.
- Goodwin, A. & Whannel, G. (eds.). (1990). *Understanding Television*. Routledge.
- Greenberg, B. S., Eastin, M., Hofschire, L., Lachlan, K. & Brownell, K. D. (2003). 'Portrayals of overweight and obese individuals on commercial television'. *American Journal of Public Health*, 93 (8), pp. 1342-1348.

- Himes, S. M. & Thompson, J. K. (2007). 'Fat stigmatization in television shows and movies: A content analysis'. *Obesity*, 15, pp. 712-718.
- Johnson, J. D., Olivo, N., Gibson, N., Reed, W. & Ashburn-Nardo, L. (2009). 'Priming media stereotypes reduces support for social welfare policies: The mediating role of empathy'. *Personality and Social Psychology Bulletin*, 35 (4), pp. 463-476.
- Latner, J. D., O'Brien, K. S., Durso, L. E., Brinkman, L. A. & MacDonald, T. (2008). 'Weighing obesity stigma: the relative strength of different forms of bias'. *International Journal of Obesity*, 32 (7), pp. 1145-1152.
- Lindo, L. M. (2015). 'A man and his mic: Taking Chris Rock and Dave Chappelle to teacher's college'. *The European Journal of Humour Research*, 3 (4), pp. 54-74.
- Linn, T. (2003). 'Media methods that lead to stereotypes'. *Images That Injure: Pictorial Stereotypes in the Media*, Westport CT: Praeger. pp. 23-7.
- Lockyer, S. & Pickering, M. (2008). 'You must be joking: The sociological critique of humor and comic media'. *Sociology Compass*, 2 (3), pp. 808-820.
- Marsh, M. (2015). 'On going too far'. *The European Journal of Humour Research*, 2 (4), 126-139.
- Martin, R. A. (2007). *The Psychology of Humour: An Integrative Approach*. Burlington, MA: Elsevier Academic Press.
- McClure, K. J., Puhl, R. M. & Heuer, C. A. (2011). 'Obesity in the news: do photographic images of obese persons influence antifat attitudes?'. *Journal of Health Communication*, 16 (4), pp. 359-371.
- Morrison, T. G. & O'Connor, W. E. (1999). Psychometric properties of a scale measuring negative attitudes toward overweight individuals. *The Journal of Social Psychology*, 139 (4), pp. 436-445.
- Ng, M., Fleming, T., Robinson, et al. (2014). 'Global, regional, and national prevalence of overweight and obesity in children and adults during 1980-2013: a systematic analysis for the global burden of disease study 2013'. *The Lancet*, 384 (9945), pp. 766-781.
- Olson, J. M., Maio, G. R. & Hobden, K. L. (1999). 'The (null) effects of exposure to disparagement humour on stereotypes and attitudes'. *Humour: International Journal of Humour Research*, 12, pp. 195-220.
- Parrott, S. (2016). 'When everyone is laughing: The presence, characteristics, and enjoyment of disparagement humour in online TV'. *Mass Communication and Society*, 19 (1), pp. 49-73.
- Paolacci, G., Chandler, J. & Ipeirotis, P. G. (2010). 'Running experiments on Amazon Mechanical Turk'. *Judgement and Decision Making*, 5 (5), pp. 411-419.
- Pearl, R. L., Puhl, R. M. & Brownell, K. D. (2012). 'Positive media portrayals of obese persons: Impact on attitudes and image preferences'. *Health Psychology*, 31 (6), pp. 821-829.
- Puhl, R. M. & Heuer, C. A. (2009). 'The stigma of obesity: A review and update'. *Obesity*, 17(5), pp. 941-964.
- Puhl, R. M., Luedicke, J. & Grilo, C. M. (2014). 'Obesity bias in training: attitudes, beliefs, and observations among advanced trainees in professional health disciplines'. *Obesity*, 22 (4), pp. 1008-1015.
- Zillmann, D. & Cantor, J. R. (1996). 'A disposition theory of humour and mirth'. *Humour and Laughter: Theory, Research and Applications*. New York: Wiley.