SN Soc Sci (2022) 2:221
https://doi.org/10.1007/s43545-022-00512-7

ORIGINAL PAPER

# "Is it better to be fat than ugly?": the effect of physical attractiveness, body size, and race on individual income

**Robert L. Reece**[1]

Received: 1 September 2021 / Accepted: 5 September 2022


## Abstract

As discussions of body size have become a ubiquitous part of discourse in the United States, research has revealed that regardless of the questions researchers ask on the topic: black and white Americans have largely different relationships to their bodies and body size. These differences result from divergent racial projects where white Americans sought to stigmatize fat bodies and black Americans sought to encourage all types of bodily acceptance. This manuscript leverages the historical processes of that project to examine the intersection between race, body size, and attractiveness. I use the National Study of Adolescent to Adult Health (AddHealth) and regression analysis to ask how race, body size, and attractiveness combine to influence individual income and whether the benefits of attractiveness are distributed evenly among racial groups and body sizes. Ultimately, my results reveal that race trumps both body size and physical attractiveness such that even the smallest and more attractive black people earn lower incomes than their white counterparts. Otherwise, attractiveness may mediate the relationship between body size and income and serve as the fulcrum of income inequality.

**Keywords** Race · Ethnicity · Attractiveness · Body size · Obesity · Income inequality

## Introduction

Body size and body weight have been a part of public and scholarly discourse in the United States since the 1800s (Forth 2019; Strings 2019a), but these debates received a new rallying point when "obesity" was declared an "epidemic" in a 1999 article in the *Journal of the American Medical Association.* Since then, journalistic and academic articles have explored the "obesity epidemic" by analyzing supposed

✉ Robert L. Reece
Robert.L.Reece@gmail.com

[1] Department of Sociology, The University of Texas at Austin, 305 E 23rd St, A1700, RLP 3.306, Austin, TX 78712-1086, USA

Published online: 02 October 2022

health consequences of having "excess body weight." Others have sought to combat the "obesity epidemic" by exploring the best ways to lose weight and maintain weight loss, often touting health and wellness as their goal. Recently, these ideas have drawn challenges as social scientists and historians explore how society's focus on thinness leads to stigma and discrimination against people with larger bodies and connect weight discrimination to other intersecting forms of discrimination such as race, gender, addiction, and disability (e.g., Rasmussen 2012; Gagliardi 2018). Simultaneously, epidemiological research suggests that discrimination and stigma may be important factors in mediating the relationship between body size and health (e.g., Latner et al 2014). That is, perhaps the stigma people face and the weight loss strategies they deploy to mitigate that stigma also contribute to the relatively poorer health outcomes of people with bigger bodies.

Each of these strands of research uncovered one seemingly ubiquitous truth: nearly everything we have studied about body size is unevenly distributed by race and to a lesser extent by gender. Black Americans, in particular, seem to experience body size markedly different from their white counterparts. Despite being more likely to fall into the weight ranges classified as "overweight" and "obese" black Americans are less likely to engage in dangerous weight loss behaviors (Himmelstein et al 2017), suffer a smaller weight-related income penalty (Fletcher 2014; Maralani and McKee 2017; Slade 2017), express higher ideal body weights (Himmelstein et al 2017; Slade 2017), and are considered relatively more physically attractive at higher body weights than white Americans (Ali et al. 2013; Fletcher 2014). This paper will narrow its focus to the latter: the connection between race, body size, and physical attractiveness.

The historical processes connecting race, body size, and physical attractiveness reveal sharp differences in how black and white Americans perceive their bodies. In general, white people embarked on a historical project to stigmatize fatness and connect thinness to appropriate whiteness and black people countered with their own project to encourage fat acceptance (Matelski 2012; Strings 2019a). These divergent historical projects led to different beliefs about body size and attractiveness that are revealed in a spate of research demonstrating that black people consider bigger people more attractive than white people and bigger black people are considered more attractive than bigger white people (Hebl and Heatherton 1998; Ali et al 2013). However, we do not yet understand how body size and attractiveness may intersect to influence social outcomes.

Physical attractiveness comes with its own set of biases and advantages. People with bigger bodies tend to be viewed as less attractive than those with smaller bodies (Richmond et al. 2012), black people, particularly dark-skinned black people, are generally considered less attractive than their lighter skinned and white counterparts (Reece 2016). People who are considered more attractive are also considered smarter and happier (Ritts et al. 1992; Parks and Kennedy 2007), earn more money, and receive more promotions at work (Frieze et al. 1991; Hosoda et al. 2006). But body size and race may mitigate these advantages. For example, if bigger white people are generally considered less attractive than smaller white people, do they still receive the advantages of attractiveness? Or is attractiveness even more important for bigger people because of the disadvantages they already face? Do smaller

attractive black people earn more than bigger attractive white people? This study seeks to answer these and related questions.

I build on attribution theory, field theory, and an understanding of the racialized history of body size in the United States to explore how body size, race, and physical attractiveness intersect to influence individual income. I use regression analysis and the National Study of Adolescent to Adult Health (AddHealth) to examine how the income benefits of attractiveness are differentially distributed by race and body size and to investigate the combined effects of race, body size, and attractiveness. Ultimately, my results reveal that race trumps both body size and physical attractiveness such that even the smallest and more attractive black people earn lower incomes than their white counterparts. Otherwise, attractiveness may mediate the relationship between body size and income and serve as the fulcrum of income inequality.

## Weight stigma, attributions, and bodily capital

Weight stigma translates into tangible economic disadvantage for people with bigger bodies through a system of stereotypes and attributions that lead to employer discrimination in hiring, salaries, and promotions. Attribution theory suggests that people search for the causes of a phenomenon to determine their reaction, and stigma is the result of how people categorize and make sense of certain groups (Puhl and Brownell 2003). According to Puhl and Brownell (2003) "A stigmatized person possesses some attribute or characteristic that conveys a social identity that is devalued in some social context" (p. 213). The contexts from which attributions emerge are what Bourdieu (2013) would call a "field." Fields define what attributes are considered valuable and what attributes are stigmatized by giving meaning to objective social facts. These meanings help people determine *who* is valuable by measuring the positive attributes people have accrued: their "social capital." In this case, the objective reality is that bodies are heterogenous. Some people are slim and others are fat. Making meaning of that heterogeneity produces the stigmatizing attributions that determine a person's bodily capital, that is whether a body is perceived as a site of honor or a site of shame and whether a person is considered deserving of shame. In turn, bodily capital has an "exchange rate," where people can translate their favorable body into economic capital: money (Lebaron 2014).

Americans assign numerous negative attributes to people with larger bodies. Fat people are considered lazy, undisciplined, incompetent and disagreeable (Puhl and Brownell 2001), and fueled by American ideals of conservatism and individualism, they are considered to be in total control of their own body size and thus deserving of whatever ill-treatment befalls them (Crandall 1994; Puhl and Brownell 2003). Americans largely operate on the belief that "an imperfect body reflects and imperfect person" (Puhl and Brownell 2003, p. 801) and a 2019 study by Kerbergen and Robinson found that Americans actually consider fat people less evolved and less human and if they are asked to choose to minimize human or animal suffering they are less likely to prioritize human suffering over animals if the human is fat. In effect, low bodily capital diminishes a person's humanity, which Bourdieu (1997) described as one of the most pernicious impacts of the unequal distribution

of capital. This stigma and dehumanization has far reaching economic consequences for people with bigger bodies.

Lindeman et al. (2017) find that people who believe obesity is controllable are more likely to withhold a raise or promotion from a fat person relative to a thin person as a disciplinary measure. Although this impact may be minimized by an explicit disciplinary policy in the organization (Bellizzi and Hasty 2002), in the absence of such explicit protections fat people are vulnerable to mistreatment by employers at all stages of the employment process. A Swedish study (Rooth 2009) measured the impact of body size on applicants' chances of receiving an initial callback from a potential employer. While this study was not conducted in the United States, Sweden offers an ideal site to test this because it is common for applicants to include a picture on their resume. They found that, depending on the type of job, fat men were between seven and eleven percentage points less likely to receive a callback than their thinner counterparts and fat women were between seven and twenty-one percentage points less likely to receive a callback than thinner women. This initial discrimination contributes to other forms of economic discrimination. Fat women are often paid less than thinner women for the same work, and fat men tend to be sorted into lower paying occupations, like transportation, while being locked out of managerial and professional positions (Puhl and Brownell 2001). Moreover, employers may deny benefits to fat people, pressure them to lose weight, or even fire them because of their weight and suffer no legal consequences because anti-fat discrimination is legal almost everywhere in the country (Puhl and Brownell 2001). Ultimately, fat Americans find themselves suffering a severe income penalty relative to their thinner counterparts (Reece 2019).

However, body size attributions emerge from fields that are shaped by race. Two studies over two decades apart show that black women are perceived better at higher body weights than white women are at comparable body weights. First, Hebl and Heatherton (1998) found that white women penalize bigger white women more harshly than they do bigger black women. They rated bigger white women lower relative to smaller white women on attractiveness, intelligence, job success, relationship success, happiness, and popularity than they did for bigger black women relative to smaller black women. Second, Davies et al. (2020) found that while white women judged both underweight and overweight women as less likable than normal weight white women, black women did not judge other black women differently based on their body weight. Moreover, black Americans report higher ideal body weights than their white counterparts, are considerably less likely to consider themselves overweight, show less internalized anti-fat bias, and suffer a smaller decrease in attractiveness at higher body weights (Ali et al 2013; Fletcher 2014; Himmelstein et al. 2017).

These differential attributions lead to accumulations of bodily capital that shape the economic impact of body size. While white Americans on average continue to earn significantly more than black Americans, white people seem to suffer a more severe economic penalty for being fat. Slade (2017) found that for both white men and women body size was increasingly negatively associated with wages as income increased, while the effect of body size on wages was largely flat across the wage distribution for black men and increasingly positive at higher wages for black men.

Maralani and McKee (2017) found that while an older cohort of black people suffered a wage penalty for their body size, the association dissipated for a younger cohort. Fletcher (2014) found that black people suffered a smaller wage penalty than white people and suggested that the wage penalty for fatness may be primarily concentrated among white women. And Reece (2019) found that while white people suffered a large income penalty for being fat, black people as a whole did not, and any income penalty among black people may be limited to lighter skinned black people. In total, this work supports the idea that divergent body size attributions produce divergent economic outcomes, but these attributions did not develop in a vacuum. Fields are malleable and historically contingent. Therefore, it is important to understand how the United States' culture and history of racial antagonism intersects with its conservatism and individualism to produce racially divergent body size attributions.

## Constructing the field: the history behind race and body size attributions

Bourdieu (1997) argues that people often contest the meanings that emerge from the field even as they are socialized into their position in it. Over time, that can lead to a situation where a field becomes bifurcated and people occupying similar positions in mirroring fields may have different meanings attached to those positions. In *Fearing the Black Body* (Strings 2019a) Sabrina Strings explains how the development of weight stigma in the United States was a fundamentally racialized process whereby thinness became attached to whiteness and moral virtue, setting the stage for modern differences in body size attributions that facilitate differential treatment and differential economic impacts. According to Strings, thin was not always "in" in the West. Through the Renaissance women were encouraged to maintain a full figure and corpulence for men was considered a sign of health. This started to change during the nineteenth century as the Trans-Atlantic Slave Trade made exposure to black Africans a more consistent part of life for many white Westerners. The introduction of enslaved Africans into their societies forced white people to consider their relationships to themselves and their connections to this new group of people who they had deemed inherently inferior. After all, if Africans were like Europeans that made enslaving them immoral. White people responded by trying to racially distance themselves from Africans by emphasizing real and imagined differences between the two groups to underscore Africans' inferiority and highlight the Europeans' superiority. One avenue of racial distancing was through their relationship with food and the body.

Westerners portrayed Africans as possessing essential differences from themselves physically: bigger, hardier, and more animalistic in appearance and in appetite. Arthur de Gobineau, a prominent French aristocrat, remarked in 1853.

> "The negroid variety is the lowest, and it stands at the foot of the ladder. The animal character appears in the shape of the pelvis…Many of his senses, especially taste and smell, are developed to an extent unknown to the other two

> races. The very strength of his sensations is the most striking proof of his inferiority. All good is good food in his eyes, nothing disgusts or repels him. What he desires is to eat, to eat furiously and to eat excess" (as cited in Strings 2019a, pp 156).

These ideas set body standards that white people were then challenged to meet in order to prove that they were actually different and superior to Africans and enslaved blacks. The devaluation of fat bodies emerged as a direct response to the increased visibility of black people and these ideas would become cemented in American culture over the following century and facilitate the divergent body size attributions of black and white Americans.

Around the same time in the United States, women's magazines were increasing in popularity. Magazines like *Cosmopolitan* grew in prominence by instructing middle and upper class white women on the best ways to maintain their racial and gender status, including controlling their bodies and their diets. By controlling what they ate and remaining thin and delicate they could simultaneously prove that they were different from the purportedly savage, gluttonous blacks but also compete with the supposedly thicker Eastern European women for their potential husbands' affection. In this way, for the first time, thinness became a marker of appropriate whiteness (Fraser 2009; Stoll 2019; Strings 2019b). Ideas about body size that we may recognize as modern were beginning to emerge as larger bodies began to be devalued. Ideas about maintaining control of the body and the body as a reflection of the worth of a person's inner self became increasingly prominent. Weight stigma as a system of blaming fat people for their submission to a devalued position would rapidly proliferate throughout the United States over the early decades of the twentieth century.

By the 1930s and 40 s, the idea that being fat was bad had become rooted in American culture, policy, and commerce. The 1950s saw the rise of the infamous "fat camps;" the 1960s saw diet pill sales peak, the proliferation of commercial weight loss programs, the Presidential Fitness Test, and the emergence of the now ubiquitous before-and-after pictures, and the 1970s saw an explosion of commercial fitness, all marketed toward middle and upper class white people (Rasmussen 2012; McPhail 2017; Gagliardi 2018). Black people seemed suspiciously absent as targets of weight loss marketing, following reasoning that had been developing over the previous century. If black people were naturally fat and lacked the ability to control their urges and appetites, it did not make sense to encourage them to lose weight or waste the marketing budget trying to sell them weight loss products. They lacked the discipline and biology to be included in the weight loss crusade. Instead, weight loss products preyed on white people's need to signal their affluence, morality, and racial purity by controlling the size of their bodies, regardless of the possible health consequences.

The sharp racial bifurcation of fields of body size was a direct result of America's anti-black sentiments. If weight stigma is predicated on the belief that people are in control of their weight and weight is a reflection of inner worth, the idea that black people are inherently worthless and not in control of their bodies and weight made them unfit targets of weight stigma. This made black people's lack of weight stigma

a reflection of the anti-black racism undergirding the entire body size project. Black people were not *worthy* of weight stigma.

However, black Americans were not passive in the process of racializing body size. On one hand, they recognized that they were being cast unfairly and embarked on a reclamation campaign to seize control over their image and counter mainstream narratives about body size and race. The "Black is Beautiful" movement emerged in the 1960s, but in the decades prior, it had been nursed by black periodicals such as *Ebony, Jet*, and the *Chicago Defender* (Matelski 2012; Camp 2015). In 1952, an article on successful fat women in *Jet* proudly proclaimed "[S]lenderness in itself is no criterion for success in a woman's world" (as cited in Matelski 2012). Periodicals sought to affirm the attractiveness of black Americans, which meant emphasizing the beauty of non-straight hair, darker skin tones, bigger bodies, and, for black men in particular, disconnecting body size from a perceived propensity for violence (Usiekniewicz 2016). Again, in a 1955 article in *Ebony* blues singer Big Maybell remarked, "I'm not worried about gaining weight—I don't want to lose a pound. I think I'm prettiest when I'm fat" (as cited in Matelski 2012). On the other hand, some middle and upper class black women, particularly in the early twentieth century, recognized the connection between whiteness, affluence, and thinness and sought to position themselves as worthy citizens by adhering to the thin body standards of white people (Purkiss 2017). They recognized that fatness may have been an unfortunate consequence of racial oppression, but they thought the way to racial uplift was to shed fatness in favor of white body ideals that increasingly attached thinness to citizenship and worthiness. Yet, even when black women seek to lose weight, they still strive for higher body weights than white women (Daufin 2020). Through this complex reclamation project black Americans constructed their own field with their own set of body size attributions that differed from those of white Americans. While white people saw black people as unworthy of weight stigma, black people worked to divorce themselves from white body size standards. As a result both black and white people are more lenient when judging black people based on their body size.

By the time Ancel Keys coined body mass index in 1972 after referring to fat people as "ugly," "disgusting," "repugnant," and "hard on furniture," (Strings 2019a) black and white Americans were set on different paths of body standards. From the Commodores "Brick House" to Sir Mix-A-Lot's "Baby Got Back," black popular culture continued to extol the virtues of bigger bodies, while the lead characters in the famously white "Sex and the City" obsessed over every pound. White Americans succeeded at making thinness the dominant body ideal of the nation through stigmatizing black people and fat people. Simultaneously, black Americans attempted to counter that narrative to carve out a different set of body standards for themselves. This history is responsible for the complex fields of racial body weight attributions and economic impacts where white people ultimately earn more on average than black people but are penalized for body size to a larger degree. However, body size is not the only site of bodily capital accumulation. Next, I will turn my attention to physical attractiveness and its intersections with body size, race, and economic disparities.

## Attractiveness, race, and body size

Bodily capital accumulation also hinges on other aspects of the body, in particular physical attractiveness. Consistent with the idea that the outer body reflects inner value, people who are considered physically attractive tend to be perceived more favorably which translates to greater economic success. Attractive adults are considered more occupationally competent, more socially appealing, more interpersonally competent, better adjusted (Langlois et al. 2000), and, even more to the point, are viewed as more favorable job applicants (Przygodzki-Lionet et al. 2010). This leads to higher occupational success and larger incomes through a number of pathways. Not only do researchers find a direct effect of physical attractiveness on occupational success and income (Frieze et al. 1991; Hosoda et al. 2006), they find an indirect effect of physical attractiveness on income through attractive people's higher levels of education (Judge et al. 2009). From a young age, children who are considered attractive receive more encouragement, attention, and praise from educators, strangers, and their families, which leads to more positive educational experiences and helps them accrue more education and in turn more economic stability (Ritts et al. 1992; Parks and Kennedy 2007; Judge et al. 2009). Ultimately, through a meta-analysis, Langlois et al. (2000) find that roughly 68 percent of attractive adults achieve above average occupational success, while only about 32 percent of unattractive adults achieve above average occupational success.

However, although people generally agree on who is and is not attractive (Langlois et al. 2000) perceptions of physical attractiveness are not evenly distributed across the population (Monk et al. 2021). Race and body size (and a wide variety of other physical characteristics) influence who is considered attractive and who is not in ways that often seem counterintuitive at first glance. Because attractiveness and worthiness have typically been defined by proximity to whiteness and thinness, we may expect black people to experience a "double burden" of blackness and fatness that makes them appear particularly unattractive, but that has not been the case. The meanings attributed to black people's body sizes, that their bodies are out of their control, and the cultural embrace of large bodies mean that black people do not suffer the dramatic decreases in attractiveness and related outcomes that befall their white counterparts. Black people consider themselves more attractive and are considered more attractive at higher body weights, and, in turn, suffer a smaller body size penalty on marriage (Fletcher 2014). Indeed, Carmalt et al. (2008) find that while the odds of obese white women having a physically attractive partner are half those of normal weight white women, weight did not matter for black women's odds of having an attractive partner. Moreover, Ali et al (2013) find that a higher percentage of "overweight" and "obese" black girls were considered attractive than "overweight" and "obese" white girls. These results grow from complex processes that complicate our predictions of how body size, race, and attractiveness may interact to shape economic outcomes.

Body size and physical attractiveness may overlap in many cases in that fat people are often considered less attractive than thin people, but they may also

collide in that people may be considered fat and attractive or thin and unattractive. In these cases, we are presented with competing attributions: the negative attributions of fatness meeting the positive attributions of physical attractiveness or the positive attributions of thinness with the negative attributions of being physically unattractive. There are innumerable possible outcomes. Fatness may mute the impact of being physically attractive such that all fat people, regardless of attractiveness, suffer similar economic penalties. Attractive fat people may be advantaged relative to unattractive fat people but remain disadvantaged relative to thin people. Conversely, being unattractive may mute the positive attributions of thinness such that unattractive thin people experience economic outcomes similar to fat people, or they may still find themselves better off than fat people but disadvantaged relative to attractive thin people. And these interactions are further complicated by race, which dramatically transforms perceptions of body size; perhaps, for example, blackness may be more important than body size *and* physical attractiveness such that neither shapes economic outcomes for black people. Indeed, according to Monk et al. (2021) "…body capital is unlikely to function perfectly as currency; instead its value is likely to be inextricably linked to the value of its bearer…Members of stigmatized social categories, by definition, are likely to be relatively deprived of symbolic capital regardless of their overall portfolio of capital…" (p. 204). As stigmatized categories, how much bodily capital do black people and fat people stand to gain by being attractive, and because fatness is less stigmatized among black people, how might they capitalize on their relatively lower stigma.

Michael Gill (2020) tells a childhood story of when he was called a "little fat kid" while in a store with his older brother. When he returned visibly upset to his mother who had been waiting in the car she attempted to console him by saying:

> "Next time someone tells you that, Michael, you look at him in the eye and reply, 'I'd rather be fat than ugly'" (p. 208).

Gill goes on to question this logic:

> "Ugly beats fatness in the competition of life? Body size pitted against attractiveness" (p. 208).

His story raises important questions that sit near the center of this study: is it better to be fat or ugly, and what role does race play in that equation. Attractiveness for white people seems largely contingent on thinness so what does it mean for them to be fat and attractive as Gill's mom described him? Smith (2012) describes being fat and white as "a sign of failure as a white person" (p. 158):

> "To project fat stigma onto a white person…is to deem that person a letdown, a shame to the race, a pariah, a minority in hegemonic clothing" (p. 158).

If, indeed, fatness is failure as a white person fat white people may be stripped of the privileges of physical attractiveness that accompany being white. This would not necessarily mean that body size is a proxy for attractiveness but that,

for white people at least, they are interconnected in a way that means thinness is a prerequisite for enjoying the benefits of physical attractiveness, including the favorable associations that lead to economic success.

Similar questions are in play for black people. Although fat black people suffer a smaller decrease in perceived attractiveness than their white counterparts, again, that does not necessarily mean they receive the favor typically afforded to attractive people. Smith (2012) argues that although white people have accepted the fact that black people adhere to different beauty standards, those beauty standards function as another marker of racial inferiority. He writes:

> "[T]he place of fat stigma in minority communities can be understood as a subcategory of general racism: those minorities are 'supposed' to be less than the mainstream culture; size is just one more reason to look down on them" (p. 158).

This means that white people's judgements of black attractiveness in relation to their body size is not a sign of leniency as much as it is dismissiveness. This dismissiveness may modify the attributions applied to attractive black people, especially attractive fat black people. Rather than receiving the economic favor typically afforded to people considered attractive, fat black people may have their relative attractiveness ignored.

How then are the economic benefits of physical attractiveness distributed when they meet racialized body size attributions? This study seeks to expand our understanding of the intersection of race, body size, and physical attractiveness by examining whether the economic benefits of physical attractiveness are conferred similarly across body sizes and how race further impacts the relationship between body size, physical attractiveness, and economic success. I build on Monk et al. (2021) who find that the benefits of attractiveness are unevenly distributed by race and gender. They find that the earnings gap between attractive and unattractive people, whether white men, white women, black men, or black women, is larger than the black-white earnings gap, and attractive black people receive higher premiums for attractiveness than their attractive white counterparts. Indeed, attractive black women reach earnings that match or exceed those of attractive white women. However, black people are judged as attractive less frequently, which drags down their overall earnings. While Monk et al. control for body size in their models, I use body size as an additional axis of comparison to understand how returns on perceived physical attractiveness vary at the intersections of race, gender, and body size. This will offer insight into how competing attributions shape economic outcomes and ultimately an answer to Michael Gill's question "is it better to be fat or ugly?".

## Methods

The data for this study come from the National Study of Adolescent to Adult Health (AddHealth), a nationally representative longitudinal survey that has followed a cohort of adolescents through four waves of data collection since 1994.

My sample includes every person who identified as black or white in Wave 3. I excluded people who identified as multiracial and those missing key covariates.

### Dependent variables

My primary dependent variable is *individual annual income* in Wave 4. I excluded roughly 15 percent of respondents who did not report an income and respondents who reported "0" income.

### Focal independent variables

My focal independent variables are perceived attractiveness and body size.

I used two measurements of perceived attractiveness. *Perceived attractiveness* is the interviewers' response to the question "how physically attractive is the respondent?" on a five-point scale where "1" is very unattractive, "2" is unattractive, "3" is about average, "4" is attractive and "5" is very attractive. In some analyses I use a dichotomized variable for whether a respondent is considered *attractive* or not, which is a score of "4" or "5". Although respondents were rated at each wave, I used perceived attractiveness scores from Wave 3 because it is the point where all of the respondents are adults and it is measured before my dependent variable in Wave 4. By using Wave 3 attractiveness I can avoid relying on the childhood attractiveness scores of Waves 1 and 2 and limit endogeneity issues with measuring attractiveness and income during the same interview. While perceived attractiveness is an inherently subjective measure, I deployed measures to make it more reliable. Although Langolis et al. (2000) found that in general interviewers rate respondents' attractiveness relatively consistently their meta-analysis revealed that most studies of attractiveness to that point did not account for gender bias in ratings. Since then, Nedelac and Beaver (2011) and Monk et al. (2021) found small race and gender biases in how the AddHealth interviewers rated physical attractiveness. With that in mind I included variables for interviewers' characteristics that I detail below.

I measure body size using two dummy variables with data from Wave 3: one for whether the respondent falls into the body mass index (BMI) range labeled "overweight" ($BMI > 24.9$ kg/m$^2$) and one for whether the respondent falls into the body mass index range labeled "obese" ($BMI > 29.9$ kg/m$^2$). Body mass index is admittedly a crude measure of body size that falls well short of being a useful diagnostic tool for clinicians. While it is designed to capture a person's overall body mass it cannot capture how that mass is distributed or account for differences in fatty tissue, muscle tissue, or bone density. However, in broad categories like I use here it is adequate to capture the differences in body size and fatness that may result in divergent social and economic outcomes. I excluded people who were "underweight" ($BMI < 18$) because there were too few cases to measure meaningful differences.

### Control variables

I also control for other factors that may influence how respondents are perceived as attractive and their annual income.

First, I included other measures of attractiveness: *personality attractiveness* and *grooming*. Other studies using AddHealth data (e.g., Robins et al 2011) have found that personality attractiveness and grooming moderate the relationship between physical attractiveness and social outcomes so I include them both here, not only for empirical and theoretical consistency but because I will test racial and gender differences which may reveal varying relationships between physical attractiveness, personality attractiveness, and grooming. Personality attractiveness is a progressive five-point scale for how attractive the interviewer found the respondent's personality during Wave 3. Grooming is a progressive five-point scale for how well-groomed the interviewer found the respondent at Wave 3.

Next, I added a series of variables for interviewer effects to account for the aforementioned biases in how interviewers of different races and gender rated respondents' attractiveness. I added a dummy variables for whether the Wave 3 interviewer was a woman and for whether the interviewer was white. I also added a variable for interviewer's education measured on a scale from 1 to 4 where "4" indicates post graduate education, "3" indicates a college graduate, "2" indicates some college, and "1" indicates high school graduate.

Finally, I included a set of standard demographic variables that may affect individual income: age in Wave 4; a dummy variable for whether the respondent had two parents in the home as an adolescent; mother's education, father's education, and respondents' education in Wave 4, all measured in total years of schooling; and number of hours worked in a typical week in Wave 4. I did not need a variable for gender because I disaggregated my analyses by gender.

See Table 1 for descriptive statistics.

### Analytical strategy

I us a multipronged analytical approach to gain a fuller picture of the relationship between race, gender, body size, and attractiveness.

First, I used binary logistic regression to estimate the odds of respondents of various races and body sizes receiving a rating of "attractive." This allowed me to understand how the benefits of attractiveness may be distributed. For example, if attractive overweight white women receive an income boost, but overweight white women are unlikely to be considered attractive we can gain a better sense of the complex ways attractiveness shapes the lives of overweight white women. Here, I estimated two series of models: one for women and one for men, but each followed the same format. I created dummy variables for intersections of race and body size: white and normal weight, white and overweight, white and obese, black and normal weight, black and overweight, black and obese. I estimated four total models for each gender using these variables. I estimated two models

**Table 1** Descriptive statistics by race and gender

| | All $n=8445$ | | Black women $n=1215$ | | Black men $n=832$ | | White women $n=3447$ | | White men $n=4725$ | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Income | 32,998 | 848.69 | 23,791 | 1320.44 | 28,675 | 1876.11 | 27,037 | 886.44 | 41,616 | 1236.28 |
| Overweight | 0.50 | – | 0.61 | – | 0.49 | – | 0.46 | – | 0.52 | – |
| Obese | 0.25 | – | 0.35 | – | 0.24 | – | 0.26 | – | 0.22 | – |
| Perceived attractiveness | 3.48 | 0.02 | 3.46 | 0.03 | 3.38 | 0.04 | 3.58 | 0.03 | 3.42 | 0.02 |
| Attractive | 0.46 | – | 0.46 | – | 0.38 | – | 0.53 | – | 0.41 | 0.01 |
| Personality attractiveness | 3.63 | 0.01 | 3.62 | 0.04 | 3.50 | 0.05 | 3.73 | 0.03 | 3.55 | 0.02 |
| Grooming | 3.47 | 0.02 | 3.49 | 0.04 | 3.34 | 0.03 | 3.57 | 0.03 | 3.40 | 0.02 |
| Age | 28.53 | 0.11 | 28.69 | 0.19 | 28.81 | 0.20 | 28.40 | 0.12 | 28.56 | 0.12 |
| Woman interviewer | 0.78 | – | 0.76 | – | 0.71 | – | 0.82 | – | 0.76 | – |
| White interviewer | 0.76 | – | 0.54 | – | 0.59 | – | 0.81 | – | 0.79 | – |
| Interviewer education | 2.54 | 0.04 | 2.49 | 0.09 | 2.60 | 0.09 | 2.55 | 0.04 | 2.53 | 0.04 |
| Two parent household | 0.70 | – | 0.42 | – | 0.43 | – | 0.75 | – | 0.76 | – |
| Mother's education | 12.66 | 0.11 | 12.26 | 0.22 | 12.77 | 0.22 | 12.74 | 0.14 | 12.65 | 0.14 |
| Father's education | 9.80 | 0.22 | 5.89 | 0.30 | 5.92 | 0.33 | 10.40 | 0.23 | 10.82 | 0.20 |
| Respondent education | 14.07 | 0.08 | 14.00 | 0.17 | 13.17 | 0.17 | 14.36 | 0.09 | 13.97 | 0.10 |
| Weekly hours worked | 40.65 | 0.34 | 37.53 | 0.60 | 40.17 | 0.92 | 37.99 | 0.41 | 44.09 | 0.43 |

using white and normal weight as the reference category to examine the odds of respondents' receiving a rating of attractive relative to white, normal weight respondents. In the first model, I excluded personality attractiveness and grooming, then I added them in the second model to test its moderating effects on the relationship between race/body size and perceived attractiveness. I repeated those two models with black and normal weight as the reference category to understand the odds of receiving an attractive rating relative to black, normal weight respondents. Using these two different reference categories is particularly important because it offers insight into questions of intersectionality raised by previous research and theoretical guidance. For example, if black women receive a lower attractiveness penalty for being overweight than white women, are overweight black women considered just as attractive as normal weight white women or is black women's attractiveness consistently muted because of their race? I exclude the demographic variables in these models.

In the second stage of my analysis I used OLS regression to test the association between body size and perceived attractiveness and income. To that end I estimated four series of models: one for black women, one for black men, one for white women, and one for white men, but they all follow the same format. In model 1, I add the variables for body size: overweight and obese, excluding normal weight as the reference category. This model serves as a baseline to compare my remaining models. In model 2, I add the variable for perceived attractiveness to test whether it moderates the relationship between body size and income. In model 3, I add the variables for personality attractiveness and grooming to test whether they moderate the relationship between perceived attractiveness and income. In model 4, I add the variables for interviewer effects: white interviewer, woman interviewer, interviewer education. This allows me to account for biases in how interviewers rate attractiveness. Finally, in model 4, I add the demographic variables to ensure my results are robust to other socio-economic factors.

In the third and final stage of my analysis I used the final model specification from stage two of the analysis to generate predicted values for income. Then for each gender I conduct direct comparisons for each combination of race, body size, and attractiveness—white/normal weight/attractive, white/normal weight/unattractive, white/overweight/attractive, white/overweight/unattractive, white/obese/attractive, white/obese/unattractive, black/normal weight/attractive, black/normal weight/unattractive, black/overweight/attractive, black/overweight/unattractive, black/obese/attractive, black/obese/unattractive. I present these comparisons in a $12 \times 12$ table where each cell shows the ratio of mean predicted income for the two groups that meet in that cell and I highlight where the ratios represent statistically significant differences. These two tables provide my most comprehensive depictions of how of how race, body size, and attractiveness combine to shape relative income.

Throughout my analyses I used PROC SURVEYLOGISTIC and PROC SURVEYREG in the SAS statistical software to account for AddHealth's sampling design, which requires researchers to identify "cluster," "strata," and "weight" variables. Of the weight options provided, I used the "GSWGT4" weight variable because my analyses include variables drawn from multiple waves.

## Results

My results reveal a multifaceted relationship between body size, race, and attractiveness. While people with larger bodies seem to be less likely to be considered attractive, those that *are* considered attractive appear to earn similar incomes to their attractive, smaller bodied counterparts. Meanwhile, attractive black people only earn incomes comparable to unattractive white people of the same body sizes.

### Who is attractive?

See Table 2 for odds ratios for perceived attractiveness. The results not only reveal racial differences in perceptions of attractiveness by body size but racial differences in how physical attractiveness is shaped by personality and grooming.

**Table 2** Odds-ratios for perceived attractiveness by gender

| | Model 1<br>OR (95% CI) | Model 2<br>OR (95% CI) | Model 3<br>OR (95% CI) | Model 4<br>OR (95% CI) |
|---|---|---|---|---|
| Women | | | | |
| White, normal weight | – | – | 1.57 (1.17–2.10) | 1.37 (0.95–1.96) |
| White, overweight | 0.44 (0.34–0.57) | 0.44 (0.31–0.61) | 0.69 (0.49–0.98) | 0.60 (0.38–0.95) |
| White, obese | 0.49 (0.35–0.67) | 0.53 (0.37–0.77) | 0.49 (0.35–0.67) | 0.53 (0.37–0.77) |
| Black, normal weight | 0.64 (0.48–0.85) | 0.73 (0.5–1.05) | – | – |
| Black, overweight | 0.54 (0.39–0.73) | 0.64 (0.4–0.95) | 0.84 (0.5–1.12) | 0.88 (0.57–1.35) |
| Black, obese | 0.46 (0.31–0.68) | 0.38 (0.2–0.60) | 0.46 (0.3–0.68) | 0.38 (0.24–0.60) |
| Age | 0.97 (0.91–1.03) | 0.93 (0.8–1) | 0.97 (0.91–1.03) | 0.93 (0.87–1) |
| Personality attractiveness | – | 2.83 (2.3–3.42) | – | 2.83 (2.34–3.42) |
| Grooming | – | 3.68 (3.0–4.51) | – | 3.68 (3.00–4.51) |
| Woman interviewer | 0.84 (0.66–1.07) | 0.78 (0.6–1.04) | 0.84 (0.66–1.07) | 0.78 (0.61–1.04) |
| White interviewer | 1.16 (0.89–1.51) | 1.24 (0.9–1.67) | 1.16 (0.89–1.51) | 1.24 (0.92–1.67) |
| Interviewer education | 1.07 (0.96–1.20) | 1.05 (0.9–1.19) | 1.07 (0.96–1.20) | 1.05 (0.92–1.19) |
| Men | | | | |
| White, normal weight | – | – | 1.02 (0.71–1.47) | 0.95 (0.59–1.52) |
| White, overweight | 1.44 (1.12–1.85) | 1.51 (1.14–2.00) | 1.47 (1.01–2.15) | 1.43 (0.89–2.32) |
| White, obese | 0.33 (0.24–0.45) | 0.30 (0.21–0.43) | 0.33 (0.24–0.45) | 0.30 (0.21–0.43) |
| Black, normal weight | 0.98 (0.68–1.41) | 1.05 (0.66–1.69) | – | – |
| Black, overweight | 1.27 (0.86–1.88) | 1.62 (1.06–2.48) | 1.30 (0.80–2.10) | 1.54 (0.87–2.73) |
| Black, obese | 0.45 (0.28–0.73) | 0.34 (0.19–0.58) | 0.45 (0.28–0.73) | 0.34 (0.19–.58) |
| Age | 0.99 (0.93–1.05) | 0.99 (0.92–1.06) | 0.99 (0.93–1.05) | 0.99 (0.92–1.06) |
| Personality attractiveness | – | 3.32 (2.62–4.21) | – | 3.32 (2.62–4.21) |
| Grooming | – | 3.02 (2.24–4.08) | – | 3.02 (2.24–4.08) |
| Woman interviewer | 1.64 (1.22–2.21) | 1.60 (1.12–2.28) | 1.64 (1.22–2.21) | 1.60 (1.12–2.23) |
| White interviewer | 1.09 (0.84–1.42) | 1.11 (0.81–1.52) | 1.09 (0.84–1.42) | 1.11 (0.81–1.52) |
| Interviewer education | 1.02 (0.90–1.16) | 1.03 (0.90–1.19) | 1.02 (0.90–1.16) | 1.03 (0.90–1.18) |

In model 1 for women, the odds of white, normal weight women being considered attractive are considerably higher than all other groups of women. However, in model 2 when I include the variables for personality attractiveness and grooming, the odds of black, normal weight women being considered attractive are statistically indistinguishable from white, normal weight women (the confidence interval includes "1"). But for all other groups the odds of being considered attractive are less than normal weight white women. The odds of overweight white women being considered attractive are about 44 percent of normal weight white women, and the odds of obese white women are about 53 percent. The odds of overweight black women being considered attractive are about 64 percent of normal weight white women, which are the second highest odds behind normal weight black women. However, obese black women have the lowest odds of being considered attractive relative to normal weight white women at about 38 percent.

Models 3 and 4 use normal weight black women as the reference category. Here, in contrast to models 1 and 2, which use normal weight white women as the reference category, personality attractiveness and grooming do not change the estimates very much so I will focus on model 4. Again, the odds of normal weight white women being considered attractive are statistically indistinguishable from those of normal weight black women. Similarly, the odds of overweight black women being considered attractive are statistically indistinguishable from normal weight black women, but the odds of obese black women being considered attractive are only 38 percent of normal weight black women, the lowest of any women in the analysis. The odds of overweight and normal weight white women being considered attractive relative to normal weight black women are 60 percent and 53 percent respectively.

Taken together, these results suggest that at normal weights, black and white women are equally likely to be considered attractive and overweight black women suffer a smaller penalty in attractiveness than overweight white women, indeed they are just as likely to be considered attractive as normal weight black women and only slightly less than normal weight white women. However, obese black women suffer a severe penalty in their odds of being considered attractive relative, and overweight and obese white women also suffer a sizeable, if smaller, penalty.

For men, the results converge and diverge with women in notable ways. First, personality attractiveness and grooming have a smaller impact on perceptions of attractiveness. Second, most men, regardless of race and body size, have statistically indistinguishable odds of being considered attractive. However, obese men suffer large penalties similar to obese women.

Turning to model 2 for men, the odds of being considered attractive relative to normal weight white men are statistically indistinguishable for overweight white men, normal weight black men, and overweight black men. For obese white men and obese black men the odds of being considered attractive were 30 percent and 34 percent, respectively, of normal weight white men's. In model 4, normal weight black men are the reference category, but the results are largely the same. The odds of being considered attractive are statistically indistinguishable for normal weight white men, overweight white men, and overweight black men, but only 30 percent and 34 percent for obese white men and obese black men.

**Table 3** OLS estimates for income for black women

| | Model 1<br>$\beta$ (SE) | Model 2<br>$\beta$ (SE) | Model 3<br>$\beta$ (SE) | Model 4<br>$\beta$ (SE) | Model 5<br>$\beta$ (SE) |
|---|---|---|---|---|---|
| Intercept | 25,961.08*** (2041.51) | 14,589.43** (4278.24) | 5783.85 (5762.74) | − 5246.45 (28,251.09) | − 97,988.91*** (16,865.72) |
| Overweight | − 1154.14 (2107.41) | − 1003.69 (2030.13) | − 1249.87 (1985.74) | − 1334.80 (2191.88) | − 661.29 (2036.31) |
| Obese | − 4190.83* (1983.69) | − 3298.68 (2055.81) | − 3567.19 (2007.71) | − 3709.72 (1980.61) | − 2118.39 (1756.08) |
| Perceived attractiveness | | 3152.20* (1435.34) | 604.00 (1445.21) | 747.74 (1504.50) | 668.49 (1419.61) |
| Personality attractiveness | | | 2372.19** (867.37) | 2637.33** (854.01) | 2276.23** (754.12) |
| Grooming | | | 2633.02* (1286.73) | 2501.10* (1231.46) | 914.09 (835.49) |
| Age | | | | 290.55 (910.14) | 1222* (493.61) |
| Woman interviewer | | | | 24.13 (2372.90) | 65.81 (1530.29) |
| White interviewer | | | | − 2869.65 (2490.89) | − 2635.75 (1736.79) |
| Interviewer education | | | | 1308.47 (873.57) | 684.40 (701.71) |
| Two parent household | | | | | − 2911.72 (4320.78) |
| Mother's education | | | | | 584.19** (220.00) |
| Father's education | | | | | 274.23 (281.06) |
| Respondent education | | | | | 3623.21*** (369.37) |
| Weekly hours worked | | | | | 398.49*** (85.24) |
| Adjusted r-squared | 0.01 | 0.02 | 0.03 | 0.04 | 0.18 |

***$p < 0.0001$, **$p < 0.01$, *$p < 0.05$

### Income and moderators

Tables 3–6 show OLS estimates for income, using a nested model strategy to test moderation effects. To varying degrees the models show the same patterns regardless of race and gender: perceived attractiveness moderates the effect of body size; personality attractiveness moderates the effect of perceived attractiveness; interview characteristics have no effect.

Table 3 shows the estimate for black women. Model 1 establishes a baseline. The coefficient for the obese variables is negative and significant, meaning on average obese black women earned lower incomes than normal weight black women. In model 2, I add perceived attractiveness, which is positive and significant, but the obese variable becomes nonsignificant. This suggests that the negative effect of body size on income may be shaped by divergent perceptions of attractiveness, where more attractive people earn higher incomes. Taken with the results from Table 2, that obese black women are considerably less likely to be considered attractive this makes sense. In model 3, I add variables for personality attractiveness and grooming. Both are positive and significant, meaning black women who were considered better groomed and with better personalities earn higher incomes, but the effect of perceived attractiveness goes away, which suggests physical attractiveness may reflect personality attractiveness and grooming. In model 4, I add interviewer characteristics, which elicits no significant changes, and each interviewer characteristic is negative and significant. In model 5, I add demographic characteristics, which causes grooming to become nonsignificant. This may mean that characteristics such as education are associated with grooming. However, personality attractiveness remains positive and significant, while my other focal independent variables are nonsignificant.

Table 4 shows OLS estimates for black men. In model 1, the overweight variable is positive and significant, meaning overweight black men tend to earn more money than their normal weight counterparts. The obese variable was nonsignificant, which suggests black men do not suffer an income penalty for their body size even though obese black men are less likely to be considered attractive. In model 2 I add the variable for perceived attractiveness, which is also positive and significant, meaning black men who are more attractive tend to earn higher incomes. However, in contrast to black women the body size variables remain the same, namely the overweight variable is still positive and significant. This suggests that body size and attractiveness may have independent effects. In model 3, I add personality attractiveness and grooming, which although they are nonsignificant also cause perceived attractiveness to become nonsignificant, suggesting a connection between these variables. In model 4 I add interviewer characteristics, which are nonsignificant and do not otherwise change the results, but in model 5 I add demographic variables, which cause the overweight variable to become nonsignificant. This may suggest the effect of body size on income for black men may be a result of differing levels of education or hours worked.

Table 5 shows OLS estimates for white women. In model 1 the overweight variable is negative and significant, meaning that on average overweight white women earn lower incomes than their normal weight counterparts. The obese variable was

**Table 4** OLS estimates for income for black men

| | Model 1<br>$\beta$ (SE) | Model 2<br>$\beta$ (SE) | Model 3<br>$\beta$ (SE) | Model 4<br>$\beta$ (SE) | Model 5<br>$\beta$ (SE) |
|---|---|---|---|---|---|
| Intercept | 24,405.93*** (1982.42) | 2055.28 (7323.70) | − 7658.41 (8366.66) | − 34,718.07 (21,529.12) | − 92,578.09*** (22,101.59) |
| Overweight | 9496.70** (3327.48) | 9767.58** (3311.51) | 9862.52** (3293.86) | 8965.40* (4068.86) | 5370.81 (2904.30) |
| Obese | − 2171.74 (4497.72) | − 1042.87 (4563.72) | − 1307.44 (4610.39) | − 3516.24 (4068.86) | − 3989.99 (3657.71) |
| Perceived attractiveness | | 6521.60** (1995.81) | 4322.45 (2458.09) | 2774.65 (1505.34) | 776.66 (1285.80) |
| Personality attractiveness | | | 2412.84 (1842.90) | 2228.75 (1751.29) | 1256.66 (1327.90) |
| Grooming | | | 2580.07 (2072.76) | 2192.25 (2052) | 869.80 (1767.69) |
| Age | | | | 1104.41 (730.44) | 1493.66* (630.46) |
| Woman interviewer | | | | − 1917.09 (2732.60) | − 912.94 (2397.89) |
| White interviewer | | | | − 2054.47 (2477.79) | 540.15 (2196.33) |
| Interviewer education | | | | 2066.28 (1073.23) | 2054* (935.33) |
| Two parent household | | | | | 3859.54 (11,681.00) |
| Mother's education | | | | | 283.29 (626.05) |
| Father's education | | | | | 187.33 (756.66) |
| Respondent education | | | | | 2194.17** (675.58) |
| Weekly hours worked | | | | | 619.94*** (64.85) |
| Adjusted r-squared | 0.02 | 0.05 | 0.05 | 0.06 | 0.19 |

***$p < 0.0001$, **$p < 0.01$, *$p < 0.05$

**Table 5** OLS estimates for income for white women

| | Model 1<br>$\beta$ (SE) | Model 2<br>$\beta$ (SE) | Model 3<br>$\beta$ (SE) | Model 4<br>$\beta$ (SE) | Model 5<br>$\beta$ (SE) |
|---|---|---|---|---|---|
| Intercept | 29,500.19*** (1213.54) | 17,207.97*** (2197.77) | 12,819.90*** (2951.23) | 7106.10 (18,114.85) | − 60,406.41** (19,087.20) |
| Overweight | − 3876.90* (1491.11) | − 2848.62* (1414.65) | − 2801.71 (1452.86) | − 3025.78 (1537.01) | − 2136.65 (1527.24) |
| Obese | − 2791.90 (1605.66) | − 1902.99 (1654.15) | − 1741.37 (1648.53) | − 1554.98 (1684.29) | 363.17 (1495.88) |
| Perceived attractiveness | | 3241.76*** (596.08) | 2141.05* (894.87) | 2423.92* (925.74) | 2027.80* (813.29) |
| Personality attractiveness | | | 479.16 (743.46) | 185.25 (792.33) | 368.15 (712.56) |
| Grooming | | | 1815.50 (1202.10) | 1931.25 (1289.68) | 365.82 (76) |
| Age | | | | 274.12 (563.48) | 462.71 (494.28) |
| Woman interviewer | | | | 1060.74 (1847.03) | 740.62 (1554.63) |
| White interviewer | | | | − 970.91 (1700.13) | − 668.60 (1450.88) |
| Interviewer education | | | | − 879.02 (987.66) | − 664.12 (968.28) |
| Two parent household | | | | | 859.40 (3028.24) |
| Mother's education | | | | | 357.20* (153.75) |
| Father's education | | | | | 8.48 (220.92) |
| Respondent education | | | | | 2943.35*** (381.35) |
| Weekly hours worked | | | | | 501.66*** (64.67) |
| Adjusted r-squared | 0.01 | 0.02 | 0.02 | 0.02 | 0.13 |

***$p < 0.0001$, **$p < 0.01$, *$p < 0.05$

nonsignificant. In model 2 I add the variable for perceived attractiveness, which is positive and significant, meaning more attractive white women tend to earn higher incomes. The overweight variable remains negative and significant, but the coefficient decreases considerably. This suggest that while body size and attractiveness have independent effects, part of the effect of body size on income may be reflected through differences in perceived attractiveness. However, in model 3 when I add personality attractiveness and grooming, the overweight variable becomes nonsignificant even though personality attractiveness and grooming are also nonsignificant. This implies a connection between personality attractiveness, grooming, and body size. Moreover, the coefficient for perceived attractiveness shrinks, also suggesting a connection between personality attractiveness and grooming. In model 4 and model 5 I add interviewer characteristics, which are nonsignificant in both models, and demographic variables, neither of which change the results of the focal independent variables.

Table 6 shows OLS estimates for white men. In model 1, the overweight variable is positive and significant, meaning overweight white men earn higher incomes on average than their normal weight counterparts. In contrast, the variable for obesity is negative and significant, meaning obese white men earn lower incomes than normal weight white men. Taken together they suggest a point of diminishing returns for positive increases in body sizes among white men. In model 2, I add the variable for perceived attractiveness, which is positive and significant, meaning more attractive white men tend to earn higher incomes. However, both the overweight and obese variables become nonsignificant. This suggests the effect of body size on income for white men reflects differences in perceived attractiveness, which, again, makes sense given the differences in attractiveness I observed in Table 2. In model 3 I add variables for personality attractiveness and grooming. Although personality attractiveness is nonsignificant, grooming is positive and significant, meaning white men who were judged to be better groomed tend to earn higher incomes. Moreover, the variable for perceived attractiveness becomes nonsignificant, which suggests that perceived attractiveness may be a reflection of differences in grooming. In model 4, the added interviewer characteristics are nonsignificant and do not change the other variables. In model 5, I add demographic characteristics, which decrease the coefficient size of the grooming variable although it remains positive and significant. This, again, suggests differences in perceptions of grooming may be partially shaped by factors such as education.

### Predicted income and direct comparisons

Tables 7 and 8 allow me to make direct income comparisons between combinations of race, body size, and attractiveness. Each column provides the income ratio of the category in that column relative to the category in that row, and differences that are statistically significant are shaded. For example, in Table 7 the first column shows income ratios for normal weight, attractive white women. Two rows down, the ratio is 1.26, which means the predicted incomes of normal weight, attractive white women are 1.26 times—or 26 percent higher than—normal weight,

**Table 6** OLS estimates for income for white men

| | Model 1<br>$\beta$ (SE) | Model 2<br>$\beta$ (SE) | Model 3<br>$\beta$ (SE) | Model 4<br>$\beta$ (SE) | Model 5<br>$\beta$ (SE) |
|---|---|---|---|---|---|
| Intercept | 40,177.91*** (1606.45 | 22,839.06** (6000.50) | 17,156.55* (6588.10) | − 62,661.50** (23,384.40) | − 119,597.20*** (20,800.12) |
| Overweight | 5304.53* (2534.22) | 4731.05 (2435.01) | 4702.25 (2424.64) | 3310.55 (2621.29) | 2482.03 (2618.27) |
| Obese | − 6180.44* (2890.65) | − 4499.43 (2638.72) | − 4269.05 (2579.20) | − 2594.86 (2656.37) | − 1576.24 (2545.03) |
| Perceived attractiveness | | 5042.18** (1769.62 | 3980.41 (2110.18) | 4395.04 (2308.52) | 3990.80 (2160.33) |
| Personality attractiveness | | | − 498.49 (1332.96) | − 245.54 (1402.99) | − 1274.71 (1300.74) |
| Grooming | | | 3246.47* (1276.46) | 3223.51* (1316.84) | 2501.58* (1134.19) |
| Age | | | | 2628.57** (673.15) | 2298.44** (589.63) |
| Woman interviewer | | | | 2587.13 (2160.28) | 2873.05 (2064.48) |
| White interviewer | | | | − 875.88 (2062.02) | − 94.26 (1980.24) |
| Interviewer education | | | | 756.95 (1259.78) | 1245.34 (1273.90) |
| Two parent household | | | | | − 1876.67 (5853.10) |
| Mother's education | | | | | − 645.72 (812.53) |
| Father's education | | | | | 205.53 (523.10) |
| Respondent education | | | | | 3526.26** (930.75) |
| Weekly hours worked | | | | | 673.18*** (113.94) |
| Adjusted r-squared | 0.003 | 0.01 | 0.01 | 0.02 | 0.06 |

***$p < 0.0001$, **$p < 0.01$, *$p < 0.05$

**Table 7** Ratios of mean predicted income for women (top row is the numerator)

| | White, normal weight, attractive | White, normal weight, unattractive | White, overweight, attractive | White, overweight, unattractive | White, obese, attractive | White, obese, unattractive | Black, normal weight, attractive | Black, normal weight, unattractive | Black, overweight, attractive | Black, overweight, unattractive | Black, obese, attractive | Black, obese, unattractive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| White, normal weight, attractive | 1 | 0.79 | 0.97 | 0.71 | 0.90 | 0.68 | 0.78 | 0.56 | 0.74 | 0.56 | 0.71 | 0.54 |
| White, normal weight, unattractive | 1.26 | 1 | 1.22 | 0.90 | 1.13 | 0.86 | 0.99 | 0.71 | 0.93 | 0.70 | 0.89 | 0.67 |
| White, overweight, attractive | 1.04 | 0.82 | 1 | 0.74 | 0.93 | 0.70 | 0.81 | 0.58 | 0.77 | 0.58 | 0.73 | .55 |
| White, overweight, unattractive | 1.40 | 1.11 | 1.35 | 1 | 1.26 | 0.95 | 1.10 | 0.79 | 1.04 | 0.78 | 0.99 | 0.75 |
| White, obese, attractive | 1.11 | 0.89 | 1.08 | 0.80 | 1 | 0.76 | 0.88 | 0.63 | 0.83 | 0.62 | 0.79 | 0.60 |
| White, obese, unattractive | 1.47 | 1.17 | 1.42 | 1.05 | 1.32 | 1 | 1.15 | 0.83 | 1.09 | 0.82 | 1.04 | 0.79 |

**Table 7** (continued)

| | White, normal weight, attractive | White, normal weight, unattractive | White, overweight, attractive | White, overweight, unattractive | White, obese, attractive | White, obese, unattractive | Black, normal weight, attractive | Black, normal weight, unattractive | Black, overweight, attractive | Black, overweight, unattractive | Black, obese, attractive | Black, obese, unattractive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Black, normal weight, attractive | 1.28 | 1.01 | 1.23 | 0.91 | 1.14 | 0.87 | 1 | 0.72 | 0.94 | 0.71 | 0.90 | 0.68 |
| Black, normal weight, unattractive | 1.78 | 1.41 | 1.71 | 1.27 | 1.59 | 1.21 | 1.39 | 1 | 1.31 | 0.99 | 1.26 | 0.95 |
| Black, overweight, attractive | 1.35 | 1.07 | 1.30 | 0.96 | 1.21 | 0.92 | 1.06 | 0.76 | 1 | 0.75 | 0.96 | 0.72 |
| Black, overweight, unattractive | 1.80 | 1.42 | 1.73 | 1.28 | 1.61 | 1.22 | 1.41 | 1.01 | 1.33 | 1 | 1.27 | 0.96 |
| Black, obese, attractive | 1.41 | 1.12 | 1.37 | 1.01 | 1.27 | 0.96 | 1.11 | 0.80 | 1.05 | 0.79 | 1 | 0.76 |
| Black, obese, unattractive | 1.87 | 1.48 | 1.80 | 1.33 | 1.67 | 1.27 | 1.46 | 1.05 | 1.38 | 1.04 | 1.32 | 1 |

**Table 8** Ratios of mean predicted income for men (top row is the numerator)

| | White, normal weight, attractive | White, normal weight, unattractive | White, overweight, attractive | White, overweight, unattractive | White, obese, attractive | White, obese, unattractive | Black, normal weight, attractive | Black, normal weight, unattractive | Black, overweight, attractive | Black, overweight, unattractive | Black, obese, attractive | Black, obese, unattractive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| White, normal weight, attractive | 1 | 0.86 | 1.08 | 0.88 | 1.06 | 0.86 | 0.75 | 0.59 | 0.89 | 0.67 | 0.96 | 0.64 |
| White, normal weight, unattractive | 1.16 | 1 | 1.24 | 1.03 | 1.23 | 1 | 0.87 | 0.68 | 1.04 | 0.77 | 1.11 | 0.74 |
| White, overweight, attractive | 0.93 | 0.80 | 1 | 0.82 | 0.98 | 0.80 | 0.70 | 0.55 | 0.83 | 0.62 | 0.89 | 0.59 |
| White, overweight, unattractive | 1.13 | 0.98 | 1.21 | 1 | 1.20 | 0.97 | 0.85 | 0.67 | 1.01 | 0.75 | 1.08 | 0.72 |
| White, obese, attractive | 0.94 | 0.81 | 1.02 | 0.84 | 1 | 0.81 | 0.71 | 0.56 | 0.84 | 0.63 | 0.90 | 0.60 |
| White, obese, unattractive | 1.17 | 1 | 1.25 | 1.03 | 1.23 | 1 | 0.88 | 0.69 | 1.04 | 0.78 | 1.11 | 0.74 |

**Table 8** (continued)

| | White, normal weight, attractive | White, normal weight, unattractive | White, overweight, attractive | White, overweight, unattractive | White, obese, attractive | White, obese, unattractive | Black, normal weight, attractive | Black, normal weight, unattractive | Black, overweight, attractive | Black, overweight, unattractive | Black, obese, attractive | Black, obese, unattractive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Black, normal weight, attractive | 1.32 | 1.15 | 1.43 | 1.17 | 1.40 | 1.14 | 1 | 0.79 | 1.19 | 0.89 | 1.27 | 0.85 |
| Black, normal weight, unattractive | 1.69 | 1.46 | 1.82 | 1.50 | 1.79 | 1.45 | 1.27 | 1 | 1.51 | 1.13 | 1.62 | 1.08 |
| Black, overweight, attractive | 1.12 | 0.97 | 1.20 | 0.99 | 1.19 | 0.96 | 0.84 | 0.66 | 1 | 0.75 | 1.07 | 0.72 |
| Black, overweight, unattractive | 1.50 | 1.29 | 1.61 | 1.33 | 1.59 | 1.29 | 1.13 | 0.89 | 1.34 | 1 | 1.43 | 0.96 |
| Black, obese, attractive | 1.05 | 0.90 | 1.13 | 0.93 | 1.11 | 0.90 | 0.79 | 0.62 | 0.94 | 0.70 | 1 | 0.67 |
| Black, obese, unattractive | 1.56 | 1.35 | 1.68 | 1.38 | 1.66 | 1.34 | 1.18 | 0.92 | 1.40 | 1.04 | 1.49 | 1 |

unattractive white women. It is also shaded, which means that is a statistically significant difference.

The values in Table 7 reveal a distinct pattern that supports the results above. In the relatively rare cases that overweight and obese white women are judged as attractive, their incomes are statistically indistinguishable from the incomes of normal weight white women, and the main factor shaping their incomes is attractiveness. Attractive white women, regardless of body size, earn between 22 and 47 percent more than unattractive white women. Obese, attractive white women are a slight exception as their salaries are statistically indistinguishable from unattractive, normal weight white women, but they still earn 26 percent and 32 percent more than overweight and obese unattractive white women, respectively. Similarly, while body size does not matter much for the incomes of normal weight and overweight unattractive white women, white women who are obese and unattractive seem to suffer the combined burden of body size and perceived attractiveness. They earn lower incomes than all white women except those overweight and unattractive.

When adding black women to the analysis another pattern emerges. Attractive white women almost uniformly earn more than black women, regardless of the black women's body size or level of attractiveness. The only exception here is that obese, attractive white women have incomes that are statistically indistinguishable from normal weight, attractive black women. Attractive white women earn between 21 and 87 percent more than black women, with the largest gaps between attractive white women and unattractive black women, where they earn between 59 and 87 percent more. In general, attractive black women only earn roughly as much as unattractive white women (again, with the exception of normal weight, attractive black women and obese white women), and unattractive black women suffer considerable disadvantages across the board. With the exception of normal weight, unattractive black women relative to obese unattractive white women, all groups of unattractive black women earn considerably less than all groups of white women. And despite the racial disadvantages faced by attractive black women, they still earn more than their unattractive counterparts, with the exception of obese, attractive black women who only earn more than obese, unattractive black women. Otherwise, attractive black women can earn between 31 and 46 percent more than unattractive black women.

Table 8 shows ratios of predicted income for men. The patterns regarding attractiveness are similar to those of women, but the body size connections differ. In general, attractive overweight men are advantaged relative to their normal weight counterparts. I also exclude attractive obese black men from the following discussion because the small number of them in the sample, roughly 50, yielded large standard errors that made it hard to gauge statistical significance. However, the low number of attractive obese black men is consistent with the results in Table 2, and I will discuss the implications in greater detail in the discussion section of this paper.

For white men, physical attractiveness is also a defining factor shaping their incomes, but overweight, attractive white men receive an additional advantage as they earn more than normal weight, attractive white men. Otherwise, attractive white men, regardless of body size earn between 13 and 25 percent more than unattractive white men. When including black men in the analysis, the results are unequivocal:

with the exception of attractive, overweight black men (and attractive, obese black men, who are excluded for the aforementioned reasons), no black men, regardless of body size or attractiveness, earn as much as any white men, regardless of body size or attractiveness. Overweight black men's salaries reach parity with unattractive white men and normal weight, attractive white men, but are only about 83 percent of the salaries of attractive overweight and obese white men. At the low extremes, unattractive black men earn as low as 55 percent of the salaries of some white men.

When I compare black men to other black men, attractiveness again stands out as a defining factor, but there are also some notable body size differences. Attractive black men, regardless of body size, earn between 18 and 51 percent more than unattractive black men. Overweight attractive black men earn the most, 19 percent more than normal weight attractive black men, 51 percent more than unattractive, normal weight black men, 34 percent more than unattractive, overweight black men, and 40 percent more than unattractive, obese black men. I discuss the implications of these findings below.

## Discussion: the complex intersections of race and body size

My results expose some of the complexities that underlie the contours of race, attractiveness, and body size. While some other studies have taken for granted the idea that black people, particularly black women, are protected from the ravages of weight stigma, that does not seem to be the case even though they are affected to a lesser degree than their white counterparts.

### On women…

My findings support the idea that black women are subject to less body size stigma than white women, but it is not entirely absent. While normal weight and overweight black women are equally likely to be rated as attractive, obese black women suffer an attractiveness penalty. This differs from the stepwise decrease in attractiveness white women experience where both overweight and obese white women are rated less attractive than normal weight white women. Overweight and obese white women are even rated less attractive than normal weight black women. This demonstrates the severity of fat stigma for white women as they almost seem to lose some of the benefits of whiteness if they are fat. This is not to say that white women with bigger bodies are viewed as black or black-like, but as Americans have historically conflated blackness and fatness, a fat white body is deemed unruly similar to a black body.

However, Table 7 shows that when we disaggregate body size by attractiveness the pattern among white women compared to black women becomes more complex. While overweight and obese white women are unlikely to be deemed attractive, when they are considered attractive, their incomes are indistinguishable from those of thin white women and considerably higher than unattractive white women of all body sizes. This suggests that for white women attractiveness might provide

an escape hatch or a buffer for the troubles of fat stigma. Meanwhile, black women suffer a severe income race penalty that is exacerbated when viewed in combination with attractiveness and body size. Black women earn roughly as much as unattractive white women in the same weight category and unattractive white women in the weight category immediately above. For example, attractive, normal weight black women's incomes are comparable to the incomes of unattractive, normal weight white women and unattractive, overweight white women. Simply put, for black women the impact of blackness mutes the potential benefits of attractiveness when compared to the benefits white women receive. Compared to other black women, attractiveness seems to be the primary point of departure with attractive black women almost universally earning more than unattractive black women regardless of weight.

We should not take any of this to mean that weight stigma is not a problem for black women, nor is this a case where we should advocate for attractive black women to receive the same treatment as attractive white women. Instead, we should address the ideologies and systems that lead to all types of body discrimination. While black women have developed strategies and counterframes for coping with fat stigma (Justin and Jette 2021) that have led them to higher levels of body satisfaction (Lowy et al.), rather than seek to deconstruct the ideologies upholding fat stigma they have simply moved the goal posts.

## Shifting the goal posts: fatness vs thickness

The primary way black women learn to cope with the pervasive anti-fatness of American society is through valorizing of "thickness," which generally refers to a curvy frame, particularly with large hips, legs, and buttocks. Gentles-Peart (2020) coin the term "emancipatory thick body politics" to describe how black women "reclaim…thick bodies from colonialist rhetoric and practice" (p. 309). However, they acknowledge that the focus on thickness can obscure or undermine discussions of black women's battles with eating disorders and body dissatisfaction. Hughes (2021) finds that although black women attach thickness to community belonging and familial ties, this attachment alienates women who fail to meet the thick standards laid out for them. Their friends and families also policed their bodies, seeking to ensure they were eating enough to avoiding becoming thin but not so much as to become too fat. One respondent in a study by Justin and Jette (2021) said:

> If you are black, that means you have to have hips and thighs and butt. If I don't have any hips and thighs I think it would impact who I am. So am I still African? Everyone in my family has it. I'm pretty sure I'd be teased. As the lady that has "not butt, not ass" (p. 10).

This shows that black women have not escaped fat stigma as much as they have given it a facelift. Indeed, black women seem to endorse the same type of hourglass body type as white women, they simply prefer a thicker hourglass (Overstreet et al 2010; Lowy et al 2021).

Counterframes are useful for helping people manage stigma, but we must be careful not to create new types of stigma in the process. Black women who are unable to present the thick hourglass ideal—big buttocks, wide hips and thighs, smaller waist and belly—either because they are too big or too small risk exclusion and ridicule from their communities, which is inimical to the goals of thick counterframing. These systems of body stigma must be dismantled rather than shifted if we are to ensure equitable futures for everyone.

### On men…

The results for men reveal as much complexity as those for women even if the details diverge considerably. Perhaps most notably overweight men are considered more attractive than their normal weight counterparts and earn more money, findings that are consistent across race. This highlights an ongoing limitation with using BMI as a measure of fatness. Because BMI is an index of total body mass that does not distinguish between bone density, muscle tissue, and the adipose tissue we typically associate with fatness, we cannot know whether men's advantages for being overweight reflect looser body standards for men in regards to fatness or benefits afforded to muscular men. Perhaps the overweight men most likely to be judged as attractive and receive the benefits of such are those with more muscle mass. Indeed, other research suggests that a "muscularity ideal" is emerging among men that prizes being fit and muscular over being thin (e.g., Fatt et al 2019). My data offers enough support for this idea to warrant further testing. Because while overweight men may be considered as attractive or more attractive than normal weight men, there is a considerable decrease in perceived attractiveness for obese men.

Hebl and Turchin (2005) find that thin white men are viewed more positively than larger white men, and although medium and thin black men are viewed roughly the same, fat black men were viewed less positively. However, my results in Table 8 show that overweight attractive men tend to earn more than their peers. These seemingly divergent findings again point to BMI as a limitation in measuring how men navigate body standards.

### Black men, fatness, and threat

Black men find themselves in a unique position. On one hand they also participate in the type of counterframing that black women use to manage body stigma. They are also viewed less negatively for their weight than white men. In fact, fat white men are viewed less positively than fat black men (Hebl and Turchin 2005) and even subject to similar stereotypes (Sim et al 2022). The same study by Sim et al (2022) found that obese black men are viewed as less threatening than other black men because of stereotypes about obese men's inability to be physically capable. On the other hand, obese black men are more likely than other black men to be considered lazy, amplifying a stereotype common among both black men and obese men (Sim et al 2022). Moreover, bigger black men experience higher risk of violence at the hands of law enforcement (Milner et al. 2016). These findings are apparent

contradictions. They force us to ask how black men, fat black men in particular, can simultaneously be lazy, non-threatening, and a threat.

The simplest explanation may be context. Law enforcement officials encounter black men in contexts where they are primarily concerned about physicality and perhaps draw on stereotypes about black men and violence that are enhanced when the black man in question is bigger (Milner et al. 2016). Indeed, black men are considered bigger and stronger than white men of the same size (Wilson et al 2017). When primed to focus on physicality and supposed "life-or-death" situations, law enforcement may see fat black men as more threatening. An alternate explanation is The Teddy Bear effect, which posits that black men with baby faces may be viewed as less threatening than black men without baby faces (Livingston and Pearce 2009). This idea emerged from a study of black male CEOs where Livingston and Pearce (2009) found that baby faced black men CEOs earned higher salaries and led more prestigious corporations, even when controlling for skin tone, attractiveness, and height. The researchers did not adjust for weight, which means it remains an outstanding question. However, differences in baby-facedness may be at least a partial explanation for the disparity in how fat black men are perceived.

But research on black men and their bodies, especially on how black men perceive their own bodies, is limited relative to women. This leaves gaping holes in our understanding of fat stigma among men and how they are impacted by it and less theoretical precedent to help us explain empirical findings. This study builds on this limited research, but it is only a small step in the right direction.

### On bodily capital

This work also builds directly on recent research by Monk et al. (2021) who find similarly large gaps between attractive and unattractive people. My added element of body size contributes to their discussion of bodily capital and how body size shapes who is and is not considered attractive, worthy, and offered advantages. And regarding black Americans, this paper follows Reece (2019) where he examines the intersection of body size and skin tone, and Ryabov's (2019) examination of the intersection of skin tone and attractiveness. To continue to build a comprehensive understanding of bodily capital, particularly for black people, we must begin to assemble all of the available pieces of this puzzle.

Race transforms bodily capital in ways that we are only just beginning to understand in their totality. Indeed, being black seems to be one of the foundational factors determining how other aspects of the body such as fatness and attractiveness will be perceived. All other aspects of the body hinge on whether the person is black. If symbolic capital is about "honorability" (Bourdieu 1972) black people rarely achieve such honor. Regardless of whether they accumulate other valuable types of bodily capital, they never seem to rise to the level of whiteness.

However, again, it is important to note that this research does not demand black people are treated like their appropriate white counterpart. That is to say, I am not suggesting thin, attractive black people receive the same advantages of thin, attractive white people. Instead, we must recognize that any system of

bodily capital is inherently stigmatizing and we should begin to explore the best ways to dismantle such a system.

## Conclusion

Returning to a story from earlier, Michael Gill's mom said, "It's better to be fat than ugly," and turns out she may be right according to these data. Physical attractiveness seems to trump body size. Respondents' incomes seem to be largely dependent on their attractiveness and attractiveness may even function as a mediator for the relationship between body size and income. However, Gill's mom could not account for how body size shapes who is considered attractive. For women, in particular, although attractive women with larger bodies earn just as much as their thinner counterparts and more than unattractive women of comparable body sizes, it is relatively rare for larger women to receive high attractiveness ratings. Moreover, race trumps both attractiveness and body size. Even though when controlling for personality attractiveness and grooming, black people of normal and overweight are roughly as likely as white people to be considered attractive they are not afforded the same financial benefits of attractiveness. Indeed, the income gaps between black and white people of similar body sizes rival the gaps between attractive and unattractive white people such that attractive black people generally only earn incomes comparable to their unattractive white counterparts. And because the gap between attractive and unattractive black people is similarly large they suffer a unique burden with incomes sometimes nearly as low as half of attractive white people. Largely these results are explained by one of the central axioms of attribution theory, that an imperfect body reflects and imperfect person, and these intersecting levels of imperfection: blackness, unattractiveness, and fatness function to severely disadvantage people in those social locations.

**Acknowledgements** This research was supported by grant, P2CHD042849, Population Research Center, awarded to the Population Research Center at The University of Texas at Austin by the Eunice Kennedy Shriver National Institute of Child Health and Human Development. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

**Funding:** This research was supported by grant, P2CHD042849, Population Research Center, awarded to the Population Research Center at The University of Texas at Austin by the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

**Data availability** The data that support the findings of this study are available from the Carolina Population Center at the University of North Carolina at Chapel Hill but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available.

**Code availability** Code is available from the author upon reasonable request.

## Declarations

**Conflict of interest** The author has no relevant financial or non-financial interests to disclose.

## References


Alexis JT, Jette S (2021) 'That chart ain't for us': how black women understand 'obesity', health, and physical activity. Health. 26:605

Ali MM, Rizzo JA, Heiland FW (2013) Big and beautiful? Evidence of racial differences in the perceived attractiveness of obese females. J Adolesc 36(3):539–549

Bellizzi JA, Hasty R (2002) The effects of a stated organizational policy on inconsistent disciplinary action based on salesperson gender and weight. J Pers Sell Sales Manag 21(3):189–198

Bourdieu P (1972) Esquisse d'une the´orie de la pratique, pre´ce´de´ de trois e´tudes d'ethnologie Kabyle. Droz, Gene`ve

Bourdieu P (1997) Me´ditations pascaliennes. Seuil, Paris

Bourdieu P (2013) Symbolic capital and social classes. J Class Sociol 13(2):292–302

Camp SMH (2015) Black is beautiful: an American history. J South Hist 81(3):675–690

Carmalt JH, Cawley J, Joyner K, Sobal J (2008) Body weight and matching with a physically attractive romantic partner. J Marriage Fam 70:1287–1296

Crandall CS (1994) Prejudice against fat people: ideology and self-interest. J Pers Soc Psychol 66(5):882–894

Daufin EK (2020) This sistahs and heavy disprivilege: black women, intersectionality, and weight stigma. In: Friedman M, Rice C, Rinaldi J (eds) Thickening fat: fat bodies, intersectionality, and social justice. Routledge, New York, pp 160–170

Davies AE, Burnette CB, Mazzeo SE (2020) Black and white women's attributions of women with underweight. Eating Behav 39. https://doi.org/10.1016/j.eatbeh.2020.101446.

Fatt SJ, Fardouly J, Rapee RM (2019) #malefitspo: links between viewing fitspiration posts, muscular-ideal internalization, appearance comparisons, body satisfaction, and exercise motivation in men. New Media Soc 21(6):1311–1325

Fletcher JM (2014) The interplay between gender, race and weight status: self perceptions and social consequences. Econ Hum Biol 14:79–91

Forth CE (2019) Fat: a cultural history of the stuff of life. Reaktion Books, London

Fraser L (2009) The inner corset: a brief history of fat in the United States. In: Rothblum E, Solovay S (eds) The fat studies reader. New York University Press, New York, pp 877–964

Frieze IH, Olsen JE, Russell J (1991) Attractiveness and income for men and women in management. J Appl Soc Psychol 21(13):1039–1057

Gagliardi N (2018) Dieting in the long sixties: constructing the identity of the modern American dieter. Gastronomica J Crit Food Stud 18(3):66–81

Gentles-Peart K (2020) 'Fearfully and wonderfully made': black caribbean women and the decolonization of thick black female bodies. Fem Psychol 30(3):306–323

Gill M (2020) Hey, little fat kid:' my impaired, fat, hairy, white, male body. In: Rinaldi J, Rice C, Friedman M (eds) Thickening fat: fat bodies, intersectionality, and social justice. New York, NY: Routledge, pp 209–218

Hebl MR, Heatherton TF (1998) The stigma of obesity in women: the difference is black and white. Pers Soc Psychol Bull 24(4):417–426

Hebl MR, Turchin JM (2005) The stigma of obesity: what about men? Basic Appl Soc Psychol 27(3):267–275

Himmelstein MS, Puhl RM, Quinn DM (2017) Intersectionality: an understudied framework for addressing weight stigma. Am J Prevent Med 53(4):421–431

Hosoda M, Stone-Romero EF, Coats G (2006) The effects of physical attractiveness on job-related outcomes: a meta-analysis of experiential studies. Pers Psychol 56(2):431–462

Hughes E (2021) 'I'm supposed to be thick': managing body image anxieties among black American women. J Black Stud 52(3):310–330

Judge T, Hurst C, Simon LS (2009) Does it pay to be smart, attractive, or confident (or all three)? relationships among general mental ability, physical attractiveness, core self-evaluations, and income. J Appl Psychol 94(3):742–755

Langlois JH, Kalakanis L, Rubenstein AJ, Larson A, HaUam M, Smoot M (2000) Maxims or myths of beauty? a meta-analytic and theoretical review. Psychol Bull 126(3):390–423

Latner JD, Barile JP, Durso LE, O'Brien KS (2014) Weight and health-related quality of life: the moderating role of weight discrimination and internalized weight bias. Eat Behav 15:586–590

Lebaron F (2014) Symbolic capital. Encyclopedia of quality of life and well-being research. Springer, Dordrecht
Lindeman MIH, Crandall AK, Finkelstein LM (2017) The effects of messages about the causes of obesity on disciplinary action decisions for overweight employees. J Psychol 151(4):345–358
Livingston RW, Pearce NA (2009) The teddy-bear effect: does having a baby face benefit black chief executive officers. Psychol Sci 20(10):1229–1236
Lowy AS, Rogers RF, Franko DL, Pluhar E, Webb JB (2021) Body image and internalization of appearance ideals in Black women: an update and call for culturally-sensitive research. Body Image 39(2021):313–327
Maralani V, McKee D (2017) Obesity is in the eye of the beholder: BMI and socioeconomic outcomes across cohorts. Sociol Sci 4:288–317
Matelski E (2012) (Big and) black is beautiful: body image and expanded beauty ideals in the African American Community, 1945–1968. Essays Hist 45:1–33
McPhail D (2017) Contours of the nation: making "Obesity" and imagining "Canada", 1945–1970. University of Toronto Press, Toronto
Miliner A, George BJ, Allison DB (2016) Black and hispanic men perceived to be large are at increased risk for police frisk, search, and force. PLoS ONE 11(1):e0147158
Monk J, Ellis P, Esposito MH, Lee H (2021) Beholding inequality: race, gender, and returns to physical attractiveness in the United States. Am J Sociol 127(1):194–241
Nedelec JL, Beaver KM (2011) Beauty is in the sex of the beholder: an examination of the effects of interviewer characteristics on assessments of respondent attractiveness. Personal Individ Differ 51(8):930–934
Overstreet NM, Quinn DM, Bede Agocha V (2010) Beyond thinness: the influence of a curvaceous body ideal on body dissatisfaction in black and white women. Sex Roles 63(2010):63–91
Parks FR, Kennedy JH (2007) The impact of race, physical attractiveness, and gender on education majors' and teachers' perceptions of student competence. J Black Stud 37(6):936–943
Puhl R, Brownell KD (2001) Bias, discrimination, and obesity. Obes Rev 9(12):788–805
Puhl R, Brownell KD (2003) Psychosocial origins of obesity stigma: toward changing a powerful and pervasive bias. Obes Rev 4(3):213–227
Purkiss A (2017) Beauty secrets: fight fat: black women's aesthetics, exercise, and fat stigma, 1900–1930. J Women's Hist 29(2):14–37
Przygodzki-Lionet N, Oliver J, Desrumauz P (2010) The effects of facial attractiveness, sex, internality of applicants on hiring descisions for managerial and non-managerial jobs. Stud Psychol 52(1):53–57
Rasmussen N (2012) Weight stigma, addiction, science, and the medication of fatness in mid-twentieth century America. Sociol Health Illn 34(6):880–895
Reece RL (2016) What are you mixed with: the effect of multiracial identification on perceived attractiveness. Rev Black Polit Econ 43(2):139–147
Reece RL (2019) Coloring weight stigma: on race, colorism, weight stigma, and the failure of additive Intersectionality. Sociol Race Ethn 5(3):388–400
Richmond TK, Bryn Austin S, Walls CE, Subramanian SV (2012) The association of body mass index and externally perceived attractiveness across race/ethnicity, gender and time. J Adolesc Health 50(1):74–79
Ritts V, Patterson ML, Tubbs ME (1992) Expectations, impressions, and judgments of physically attractive students: a Review. Rev Educ Res 62(4):413–426
Robins PK, Homer JF, French MT (2011) Beauty and the labor market: accounting for the additional effects of personality and grooming. Labour Rev Labour Econ Ind Rel 25(2):228–251
Rooth D-O (2009) Obesity, attractiveness, and differential treatment in hiring: a field experiment. J Hum Resour 44(3):710–735
Ryabov I (2019) How much does physical attractiveness matter for blacks? Linking skin color, physical attractiveness and black status attainment. Race Soc Probl 11(1):68–79
Sim M, Almaraz SM, Hugenberg K (2022) Stereotyping at the intersection of race and weight: diluted threat stereotyping of obese Black men. J Exp Soc Psychol 99:104274
Slade Peter (2017) Body mass and wages: new evidence from quantile estimation. Econ Human Biol 27(A):223–240
Stoll LC (2019) Fat is a social justice issue, too. Humanit Soc 43(4):421–441
Strings S (2019a) Fearing the black body: the racial origins of fat phobia. New York University Press, New York

Strings S (2019b) Women (Re)making whiteness: the sexual exclusion of the fat 'Black' Irish. Ethnic Racial Stud. 43:672
Smith C (2012) The confounding of fat, control, and physical attractiveness for women. Sex Roles 66:628–631
Usiekniewicz M (2016) Dangerous bodies: blackness, fatness, and the masculinity dividend. J Queer Stud 11a:19–45
Wilson JP, Hugenberg K, Rule NO (2017) Racial bias in ments of physical size and formidability: from size to threat. J Pers Soc Psychol 113(1):59–80