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Lindsay Renee Kraynak
Syracuse University

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Abstract

While overweight and obesity are problems for many adults, there are significant racial disparities, such that Blacks suffer higher rates than Whites. A number of health conditions that are linked to overweight and obesity, including diabetes and hypertension are also more prevalent among Blacks than among Whites (Glover, Greenlund, Ayla, & Croft, 2005; Pleis & Lethbridge-Çejku, 2007). With the knowledge that the Center for Disease Control and Prevention has suggested that there are psychological components to obesity, this research aims to investigate psychological components that may contribute to the weight/health disparity between Blacks and Whites. Other research has demonstrated that Blacks perceive race-related prejudice and discrimination in the health domain (Blocker et al., 2006; LaVeist, Nickerson, & Bowie, 2000; Lillie-Blanton, Brodie, Rowland, Altman, & McIntosh, 2000). Yet, it is unknown how they cope with racism in this domain, and whether the voluntary strategies of discounting, disengagement, and devaluing (Major & O'Brien, 2005) have unintended consequence that contribute to weight disparity between Blacks and Whites.

This study was designed as a conceptual replication of Major, Spencer, Schmader, Wolfe, & Crocker (1998, study 1). The design included giving participants false feedback on an ostensible assessment of their risk for developing excess visceral fat. The primary goal was to examine whether the coping strategies mentioned above, which are commonly used among Black students in an academic domain, would be used by Black adults upon receiving negative feedback in the health domain. The sample included 79 Black and White adults recruited from the City of Syracuse, ages 18-44. While the majority of these participants had a Body Mass Index (BMI) of $< .30$, the cut-off for obesity, error resulted in the inclusion of eight obese participants. Results of hierarchical regression analyses indicate that Black participants did not report greater use of

these coping strategies when confronted with feedback that they were at increased risk of developing excess visceral fat (compared to Whites in this same feedback condition and Blacks and Whites in the control condition). Instead, race did not seem to affect devaluing or disengagement, and negative feedback resulted in less, not more, discounting among Blacks than Whites who also received negative feedback. Although, the finding from one study cannot act as conclusive evidence, results of this study suggest that differences in self-reported use of these three coping strategies does not suggest an explanation for the weight disparity. However, differences in reported beliefs regarding health-promoting behaviors offer insight into how future research projects can examine potential mediation between race and negative health outcomes.

COPING WITH NEGATIVE FEEDBACK IN THE HEALTH DOMAIN: ARE RACE
DIFFERENCES IN COPING RELATED TO WEIGHT DISPARITIES AMONG BLACKS
AND WHITES?

by

Lindsay R. Kraynak

B.S., Geneva College, 2006

Thesis

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*Coping with Negative Feedback in the Health Domain: Are Race Differences in Coping
Related to Weight Disparities among Blacks and Whites?*

Overweight and obesity have become an epidemic. According to the Center for Disease Control and Prevention (CDC) and the National Center for Health Statistics (NCHS) (2002), obesity is a “complex, multi-factorial chronic disease involving environmental, genetic, physiologic, metabolic, behavioral and psychological components.” This chronic and preventable disease is the second leading cause of death in the United States (CDC, 2002) where over 72 million adults are obese (Ogden, Carroll, McDowell, & Flegal, 2007). In addition, both overweight and obesity have been linked to a number of health conditions including cardiovascular disease, type 2 diabetes, hypertension, stroke, dyslipidemia, osteoarthritis, and various types of cancer (Must et al., 1999; The National Heart, Lung, and Blood Institute (NHLBI), 2007b). In order to understand how obesity might be prevented it is important to look to potential causes.

Racial Disparities

Although obesity is widespread, Blacks suffer higher rates of both overweight and obesity than Whites (Flegal, Carroll, Ogden, & Johnson, 2002). These racial disparities between Blacks and Whites are driven by the high prevalence rates for Black females. Although Black females have higher prevalence rates of overweight (78%), obesity (50.8%), and severe obesity (15.1%) than White females (57.5%, 30.6%, and 4.9%, respectively), Black males (60.1%) have lower rates of overweight than White males (67.5%) and do not significantly differ in prevalence rates of obesity (28.8% vs. 27.7%, respectively) or severe obesity (3.5% vs. 3%, respectively) (American Obesity Association, 2005; Ogden et al., 2007; Schoenborn, Adams, & Barnes, 2002). And even though SES has been shown to be a

predictive factor in overweight and obesity, (Schoenborn et al., 2002), the differences in prevalence rates among Black and White women is not explained away by differences in SES. In fact, Gordon-Larsen, Adair, & Popkin (2003) found that prevalence rates of overweight and obesity decrease among White women as family SES increases, but disparities among Black and White women exist at all income levels, including the mid-income levels at which Black women have their lowest prevalence rates.

Disparity in Disease Prevalence

Perhaps not surprisingly then, Black Americans are disproportionately likely to suffer from health conditions that are linked to obesity. Diabetes and hypertension, for example, affect Blacks at higher rates than Whites. The National Center for Health Statistics (Pleis & Lethbridge-Çejku, 2007) reports that less than 8% of Whites have diabetes, while approximately 12% of Blacks suffer from the disease. The development of diabetes in minority communities is becoming so prevalent that individuals have begun to casually refer to the disease as “getting the sugar” or “having the sweet blood” (Kleinfield, 2006). Among those who have diabetes, Blacks are more likely to be hospitalized for complications (e.g. heart disease, stroke, lower limb amputation, and kidney failure) than are Whites (James, Thomas, Lillie-Blanton, & Garfield, 2007). The age-adjusted prevalence rate of hypertension, or high blood pressure, among Blacks is just above 40%; this is more than 1.5 times the prevalence rate among Whites (Glover, Greenlund, Ayla, & Croft, 2005). Consistent with rates of obesity, hypertension is more widespread among Black females than White females (Burt et al., 1995). Among Blacks, the high prevalence of obesity and obesity-related conditions such as type-II diabetes and hypertension, are factors reported to

contribute to their high death rate from coronary heart disease (American Obesity Association, 2005; Sowers, Epstein, & Frohlich, 2001).

Causes of Overweight and Obesity

Undoubtedly, some combination of genes, diet, and physical activity level play a role in causing overweight and obesity. However, given that genes have remained relatively stable while rates of overweight and obesity are on the rise, the effect of genes on metabolic rate, for example, is not adequate to explain why millions of Americans have been gaining weight (Marti, Moreno-Aliaga, Hebebrand & Martinez, 2004; Weinsier, Hunter, Heini, Goran & Sells, 1998). The CDC (2004) indicates that from the early 1970s to the year 2000 men and women have increased daily calorie consumption by 168 and 335 calories, respectively. Calories consumed today are also more likely to be in the form of refined grains and added sugars or sweeteners than unprocessed foods, fruits, and vegetables. Another common source of calories are fats, which contain 5 more calories per gram than the 4-calorie per gram carbohydrate (S.N.A.C., 2005). This leads to consuming more calories without eating a greater quantity of food. Modern conveniences have lessened the demand of physical work, and sedentary activities (e.g. sitting in front of the TV or computer, driving rather than walking short distances) have increased as these changes in diet have taken place (National Heart Lung and Blood Institute, 2007a). Thus, decreased levels of physical activity paired with increased food consumption is likely to result in weight gain and help to explain why overweight and obesity are on the rise in general. However, they fail to explain the persistence of racial disparity in rates of obesity. In order to address this issue it is important to look at what differences between Blacks and Whites may be contributing to the weight disparity.

Why the Weight Disparity?

Norms associated with culture and environmental factors that are more commonly found in Black communities may contribute to greater prevalence of overweight and obesity in the Black population. For instance, limited physical activity, especially among Blacks of lower SES, may have some grounding in the social environment and the segregated neighborhoods that Blacks face (Williams, Neighbors, & Jackson, 2003). Crime and violent behavior is often prevalent in these environments (Peterson & Krivo, 2009); because the perception of neighborhood safety is positively correlated with physical exercise (Weinstein, Feigley, Pullen, Mann, & Redman, 1999), feeling unsafe in one's environment could potentially interfere with engagement in exercise. Additionally, having lower quality and quantity of recreational facilities (Estabrooks, Lee, Gyurcsik, 2003; Powell, Slater, & Chaloupka, 2004) may further impede measures individuals could take to live a more active lifestyle.

Diet may also be affected by culture and neighborhood conditions. In low SES, segregated neighborhoods where many Blacks live, nutritious foods are not as readily available (Bolen & Hecht, 2003). Thus, solutions like adding more fresh vegetables to meals may not always be easily accomplished. Calories from fats are one of the potential reasons for increased rates of overweight and obesity. When combined with the decrease in physical activity mentioned above, the traditional Black, American diet, which is high in fat and sodium, and often prepared using fried cooking methods, (Goodman & Blake, 2005) may contribute to the continued weight disparity among Black and White Americans. This has become of such great concern that the National Institutes of Health (1997) has published a cook-book titled *Heart-Healthy Home Cooking African American Style*, which suggests ways

for Blacks to stay true to their culture while preparing foods lower in saturated fat, cholesterol, and sodium.

Additionally, the ‘thin is in’ mindset that has become culturally normative among Whites, may not have as strong of an impact on the Black subculture. Fitzgibbon, Blackman, and Avellone (2000) found that while White women report body image discrepancy (BD) at body mass indexes (BMI) below the criterion for overweight, Black women do not report BD until they are overweight, suggesting that the ideal body image may be a heavier figure in the Black community. Further evidence that there may be different cultural standards regarding weight comes from research demonstrating that although Black women do not evaluate large Black women negatively, they do evaluate large White women negatively (but less negatively than White women rate large White women) (Hebl & Heatherton, 1998). Black men are also more apt than White men to prefer a heavier woman (Cunningham, Roberts, Barbee, Druen, & Wu, 1995). The evidence that Blacks have different views about weight than Whites is likely to be related to the norms of their subculture and affect their motivation to live a lifestyle that promotes behaviors to reduce weight.

Motivation to Practice Health Behaviors

Any individual within a social group is likely to have many goals or values associated with family, occupation, social interaction, etc. Although social groups are often heterogeneous, individuals within a group are more likely to share goals or at least see themselves as having more common values and goals than individuals across groups (e.g. Jackson, 2002 Turner, Oakes, Haslam, & McGarty, 1994). Norms and rules within the group and goals that foster the continuance of the group are therefore likely to influence the goals of individuals highly identified with the group (Barnum & Markovsky, 2007; Jackson,

Colquitt, Wesson, & Zapata-Phelan, 2006), and to affect whether an individual has certain expectations or believes his/her goals are capable of being accomplished. It is thus important to assess whether particular behaviors are in line with both personal and group norms and goals. It is improbable that individuals will practice behaviors that are not in line with these beliefs about what is important.

With health disparities between Blacks and Whites in mind, it is vital to determine how important being healthy or engaging in health promoting behaviors is to one's racial group. Determining the beliefs of the group may be more important for Blacks than Whites, as race is more likely to be a central or identity defining characteristic among Blacks (e.g. Phinney, 1992; Phinney, Dupont, Espinosa, Revill, & Sanders, 1994). Blacks also report greater ingroup attachment than Whites, whose reports of attachment may vary by situation (e.g. Kaiser, Eccleston, Hagiwara, 2008). In addition, Blacks are more likely to feel that they represent their race and that their actions will be construed as generalizable to other members of their race (Sekaquaptewa, Waldman, & Thompson, 2007). Working under the framework of the identity-based motivation model, Oyserman, Fryberg, and Yoder (2007) propose that whether or not someone chooses to engage in health promoting behaviors is a matter of "social identity-infused habits" (p. 1011) rather than just the result of personal choices one makes in the moment. The results of several studies (Oyserman et al., 2007; studies 1-6) indicate that healthy behaviors were more likely to be seen as 'White, middle-class' and therefore less likely to be incorporated into the lifestyle of minority individuals. This was especially likely when boundaries between the ingroup and the outgroup were made salient. This social identity salience resulted in less accessibility of health knowledge and viewing unhealthy behaviors as more ingroup defining than healthy behaviors. This suggests that if

health-promoting behaviors are seen by racial and ethnic minorities as White and middle-class behaviors, individuals belonging to the minority groups will choose not to exercise or eat nutritious foods. Although it is unlikely that anyone has a goal of putting his/her health at risk, Oyserman et al. (2007) suggest that people are less likely to practice healthy behaviors when they are not seen as 'identity congruent'. What is it that drives this need, especially among minorities, to practice 'identity congruent' behaviors?

Prejudice and Discrimination

Some individuals possess an attribute or characteristic which leads them to be devalued in a particular social context (Crocker, Major, & C. Steele, 1998), "a kind of fate, a shared and inescapable experience" (S. Steele, 1998 p. 71). For Blacks, that stigmatizing characteristic is their race. Blacks are negatively stereotyped (e.g. aggressive, unintelligent, poor, lazy) (Devine & Elliot, 1995; Katz & Braly, 1933; Sager & Schofield, 1980; Schlenker, Bonoma, Hutchinson, & Burns, 1976) and believe that Whites see them in a negative light (Sigelman & Welch, 1994; Sigelman & Tuch, 1997). Blacks are also more likely to face discrimination based on their race (Bobo & Fox, 2003; Feagin & McKinney, 2003); for example Black students are given less attention and more often referred for disciplinary action in classrooms than their White peers (e.g. Zimmerman, Khoury, Vega, & Gill, 1995) and Black employees earn lower salaries than Whites doing the same jobs and are less likely to be promoted than Whites (Tomkiewicz, Brenner, & Adeyemi-Bello, 1998).

In addition to general negative life events, Blacks are subjected to negative life events related to their race (see Hunt, Wise, Jipguep, Cozier, & Rosenberg, 2007; Myers, 1982). Race-related stress is defined as "the race-related transactions between individuals or groups and their environment that emerge from the dynamics of racism, and that are perceived to tax

or exceed existing individual and collective resources or threaten wellbeing” (Harrell, 2000, p. 44). This could come from members of the outgroup, people of a different race/ethnicity, or the ingroup, people of the same race/ethnicity (Clark, Anderson, Clark, & Williams, 1999). One type of race related stress is discrimination. Because the extent to which events are due to prejudice and discrimination is likely to be ambiguous, (Major, Quinton, McCoy, 2002; Major, Quinton, Schmader, 2003) there is variability in the extent to which stigmatized people perceive discrimination and find it stressful. Nonetheless, self-reports of discrimination have been linked to negative health outcomes (see Major & O’Brien, 2005) including poor psychological health (e.g. depression) and poor physical health (e.g. heart disease, stroke).

Race-related stress in the medical domain

Within the health domain in particular, Blacks’ historical and personal experiences with discrimination may contribute to stress. Using a random-digit dialing method, Lillie-Blanton, Brodie, Rowland, Atman, and McIntosh (2000) surveyed nearly 4,000 adults (ages 18 and older) on racial differences in health care and other domains. They found that when Black and White Americans were asked about the effects of racism in several public sectors, racism was seen as either a major or minor problem by approximately 75% of respondents. Blacks were significantly more likely than Whites to make claims that the treatment people receive from the health care community is affected by their race; this included routine care (62% v. 46%), specialty/surgery (62% v. 48%), and health insurance (60% v. 47%). For Black respondents evidence of mistreatment and disrespect based on their race came from both events where they were personally mistreated and knowledge of someone they know having been mistreated. What is perhaps more troubling than perceiving oneself as a victim

is that the individuals who believe that they are receiving poorer quality health care do not anticipate that the system will change.

Coping with the Stress of Prejudice and Discrimination

Facing an environment in which one perceives mistreatment based on some aspect of the self has been thought to impact self-esteem. Specifically, it may be expected that people would have lower self-esteem the more devalued their group is by the majority group, (Mead, 1934; Cartwright, 1950). Yet, in spite of devaluation, on average, Blacks have higher levels of self-esteem than Whites (Gray-Little & Hafdahl; Twenge & Crocker, 2002). This suggests that they are coping with the stress of prejudice and discrimination somehow. Common methods of coping with devalued group membership include striving even harder to compensate, embracing group membership (Allport, 1954), and looking to role models (e.g. Marx & Roman, 2002). To cope with the race-related stress of prejudice and discrimination they face in the medical domain, Blacks may (1) deny or discount the feedback they receive, (2) view the domain as less important for self-evaluation, or (3) attribute negative outcomes to discrimination (Crocker & Major, 1989; Major, Quinton, & Schmader, 2003; Major & Schmader, 1998).

Discounting, or believing that the information one receives does not apply to oneself, is one route to maintaining feelings of self-worth. Individuals may develop a sense of self that is not related to the feedback that they receive if they feel that such feedback is biased against them. This strategy may be more likely to be used when it is plausible for the person to believe his/her group is targeted by prejudice and discrimination in the domain (see Crocker, Voelkl, Testa & Major, 1991). They can more easily say the information is not accurate if they believe it is due to prejudice and discrimination.

In the academic domain, Cokely, Komarraju, King, Cunningham, and Muhammad (2003) found that Black students do not generally believe that their performance will be rewarded with good grades. If Black students believe that the effort they put in has little to do with their academic performance, the effect of poor performance on self-esteem may be buffered (Crocker & Major, 1989). One can extrapolate from this to thinking about how self-esteem may be buffered in the health domain. Given the history of health care issues such as the Tuskegee incident (Smith, 1999), Blacks may feel that the system is biased against them; this lack of trust may lead them to be especially likely to discount suggestions from White health care professionals when feedback is negative. Furthermore, the pervading distrust of the medical system among Blacks at all income levels (e.g. Earl & Penney, 2001; Freedman, 1999) may make it easier to discount the information one receives.

Disengagement, temporarily ceasing to view the domain as important for self-evaluation or reducing the importance of the domain in defining the self (Crocker et al., 1998; Major & Schmader, 1998; Schmader, Major, and Gramzow, 2001) has specifically been used in the past to describe a lack of relationship between academic self-esteem and global self-esteem, a buffer between the self and academic evaluation (Osborne, 1997; C. Steele, 1992). C. Steele (1992) suggests the Black student resists measuring himself against [academics'] values and goals. In a similar vein, Black Americans may not allow the "broader cultural"/"White" standard to affect the view of the self, or even other members of the minority group.

When an individual is identified with healthy living, he or she will place value on health promoting behaviors, leading to more success in obtaining and maintaining a healthy ideal (cf. Finn, 1989). If, however, Blacks encounter a situation where they are not able to

successfully meet the healthy ideal that has been set before them by a medical establishment that they do not trust, they may discount that information as not relevant to the self. There is also a chance that they will disengage, or resist measuring themselves, against the thin standard. By disengaging one's self-esteem from the thin-ideal, one can buffer the self from the effects of appearance-related pressure and evaluation. The resistance to measure oneself against the thin standard could partially account for the Fitzgibbon et al. (2000) finding that Black women report less body dissatisfaction than White women of similar size/shape. This becomes a greater health issue if Blacks disregard the information they receive about links between overweight and obesity and health problems and do not rely on such information when deciding whether or not to perform health promoting behaviors.

In addition to discounting information presented to them and resisting measuring oneself against the standards of weight in the health domain to maintain self-worth, people may devalue, or decrease the desirability of obtaining positive outcomes in, domains in which they personally (James, 1890; Taylor & Brown, 1988; Tesser & Campbell, 1980) or members of their social group (Crocker & Major, 1989; Schmader & Major, 1999) experience negative outcomes. In the same way that some Blacks have defined academics as anti-Black, they may define the thin ideal as anti-Black. Ogbu (1991) suggests that in academics this is done in order to reduce the threat of not performing well in the domain. Others, however, have indicated that Blacks may feel that they have to choose between rejecting academics and rejecting their own culture in order to achieve academic, financial, and social success in mainstream America (Fordham, 1988; Rowley & Moore, 2002; Tatum, 1992). Regardless of argument used, however, it is difficult to devalue academics, a domain that is important for upward mobility. The same difficulty may not be true of devaluing being

thin given that for Blacks compared to Whites there are fewer negative characteristics associated with being overweight (e.g. Hebl & Heatherton, 1998).

Unintended Effects of Coping with the Stress of Prejudice and Discrimination

Even if everyone is hearing similar health-related messages, Blacks might feel that messages regarding weight are not directed at them or relevant to them. Just because an individual hears a message about how exercise and eating healthy can help them maintain or lose weight does not mean that the person believes that message is applicable to him/her. It is additionally possible that Blacks think that information linking weight to diseases that disproportionately affect their communities is an attempt by the society at large to get them to give up part of their culture and submit to the broader societal standards. For example, Crocker, Luhtanen, Broadnax, & Blaine (1999) found that Blacks were more likely than Whites to believe that suggested government conspiracies (e.g., that the virus that causes AIDS was created in a laboratory to infect Black people) against Blacks were potentially true. An interaction between race and system blame indicated that system blame, or “the extent to which participants attributed various problems facing the Black community to prejudice,” (p. 944) was a more powerful predictor of belief in conspiracy theories among Black than White students (p. 948). In addition, having seen the vast numbers of people in their communities affected by various diseases, Blacks may begin to feel that it is inevitable that they will end up in the same situation. Both the belief that they cannot trust the advice and diagnoses given to them by the medical system and that living a ‘preventive healthy lifestyle’ would not affect their health outcomes may lead Blacks to fail to take actions that could buffer the development of disease.

Lillie-Blanton et al. (2000) suggest that the results of their survey support findings of other researchers who “have shown minority Americans are more distrustful of the healthcare system than are Whites” (p. 233). They further suggest that this is a problem given that trust can be a strong motivator to behavior and that lack of trust may compromise the “provider-patient relationship.” Extending this idea, trust in one’s health care provider may predict whether a patient is compelled to follow-through with treatment plans once they have visited (see Van Houtven et al., 2005). If minorities are less trusting of the healthcare system, they may be more likely to delay seeking treatment and be uncertain about the validity of ‘doctor’s orders.’ In turn, this may lead to differences in behaviors that contribute to health disparities between Blacks and Whites.

Current Study

Weight disparities among Blacks and Whites are driven by differences among females. These weight disparities are a factor in other racial health disparities. In addition to differences in lifestyle, including food choices and limited access to safe places to exercise, cultural norms about weight may contribute to Black women being heavy. However, the processes that contribute to these disparities, particularly reactions to discrimination in the health domain, may not differ by gender.¹ For example, Blacks may cope with perceived racial prejudice and discrimination within the medical system by attributing negative feedback to discrimination or finding ways to otherwise discount the information.

This study attempted to examine how coping strategies may promote disparities between Blacks and Whites in health, and in particular weight. There is evidence, although mostly qualitative, (see Lillie-Blanton et al., 2000 for exception) that Blacks do not trust the

¹ The only significant gender effect was in predicting body state self-esteem $F(1,76) = 4.82, p < .03$. This indicates that both males and females may be combined in further analyses.

health care system and that they experience discrimination based on their race when trying to utilize the system. If Blacks believe that feedback they receive in the medical setting is affected by prejudice and discrimination and they have developed coping strategies to manage this prejudice and discrimination, this may affect how they respond to and are affected by this feedback.

The idea that perceptions of bias affect the way people respond to and are affected by feedback was examined in a study conducted by Major et al. (1998, study 1) where Black and White students were given success or failure feedback on an ostensible standardized test of intellectual ability. Prior to the standardized test, participants responded to the Rosenberg (1965) global self-esteem measure. Following the feedback, they responded to those same items as well as a state-measure of self-esteem and questions related to how biased the test was and whether they had a disadvantage due to their race. As hypothesized, the self-esteem of White participants was more affected by feedback on the test than was the self-esteem of Black participants. In particular, White students had higher scores on performance self-esteem following success feedback than failure feedback, but the performance self-esteem of Black students was not affected by feedback. A second study demonstrated that students who were chronically disengaged (i.e. those who reported academic disengagement scores above the median on a disengagement scale administered as part of a mass testing session prior to the start of the experiment) were less likely to suffer lower self-esteem following failure feedback, but this was only true among Black students. Pre-experiment disengagement scores had no effect on the self-esteem of White students.

The current study is a conceptual replication of the study conducted by Major and colleagues. The current study examined whether and how weight-related negative feedback

would affect the self-esteem of individuals receiving the feedback. We hypothesized that while the self-esteem of Whites would be contingent upon the weight feedback they received, for Blacks self-esteem would not be contingent upon weight feedback. That is, Blacks would be more likely to be disengaged. In addition to looking at whether the self-esteem of Blacks was more likely to be disengaged from feedback about visceral fat, this study examined perceptions of the feedback and the domain. That is, were Blacks more likely to discount the feedback after perceiving that the feedback is biased against people like them? Or, would they simply devalue the importance of having a healthy body composition? We also looked at whether coping, measured by discounting information, disengagement of self-esteem from the domain, or devaluing the importance of having a healthy body composition, predicted attitudes towards health promoting behavior (e.g. viewing healthy behaviors as middle-class white behaviors).

Method

Participants

Participants targeted for this study were City of Syracuse residents. A community sample was preferable given that the majority of research related to group based mistrust and health disparities is conducted using adult community members, and there is insufficient evidence to suggest that the arguments presented would apply to a relatively wealthy sample of students from a private university. The decision to focus recruitment on the city was guided by information published by the Greater Syracuse Chamber of Commerce (2008). While the City of Syracuse is approximately 25% Black/African American, the rest of Onondaga County is about 9.4% Black/African American. This suggested that localizing the recruitment efforts would maximize the benefit (i.e. receiving calls from both Black and

White potential participants) compared to the costs associated with recruitment, especially time costs.

Participants were recruited from various downtown Syracuse locations including retail and grocery stores and bus stops. In addition to hanging fliers in these various locations, mini-fliers were handed out by the researcher and research assistants. Fliers advertised that Social Relations Lab in the psychology department at Syracuse University was interested in studying the health behaviors of City of Syracuse residents between the ages of 18 and 40 who are in relatively good health.² The fliers also indicated that there would be a phone screening for eligibility. Mini-fliers included additional information about location and compensation for participation (See Appendix J). Participants over the age of 40 were excluded based on concerns related to changes in metabolism and behavior (e.g., during menopause in women; Poehlman, Toth, & Gardner, 1995) that may have differentially influenced their beliefs about the feedback participants' received in the study.

Phone calls were fielded by the researcher and another graduate student colleague using the approved script (See Appendix K). This resulted in a record of 131 phone calls of participants interested in this study. Of these interested callers, approximately 0.8% refused to answer the prescreening questions, 3.1% of callers were ineligible based on self-report of race/ethnicity other than White/Caucasian or Black/African American, 15.3% were ineligible based on self-reported height and weight exceeding a calculated BMI of 30, and 6.9% were ineligible based on age. Only 6 eligible callers chose not to make an appointment. Of the

² The original age range was 25-40, citing work by Lian, Shediac-Rizkallah, Celentano, & Rohde (1999), which suggests that adults 18-24 years of age are less likely to engage in preventive health behaviors for the purpose of prevention, and they are more likely to engage in risky- behaviors. However, due to low recruitment numbers, the age range was extended mid-April, approximately 2.5 months into the 8 month recruitment, to include adults 18-24 years of age ($N = 15$). Data patterns were similar with and without these younger adults, so they were included in the analyses to avoid the loss of power that the reduction in sample size would bring.

remaining callers who were eligible based on their prescreening responses, all made an appointment. However, 12 people did not show up for a scheduled appointment or re-schedule for a later date.³

Participants included 79 Syracuse residents who met the age, BMI, and race eligibility criteria based on their prescreening responses. Demographics from the time of study participation indicated that 42 participants self-identified as Black/African American (21 men, 21 women) and 37 participants self-identified as White/Caucasian (19 men, 18 women). The actual age range of participants was 18-44 years of age. And BMI ranged from 19.04 to 37.49, with 8 participants whose BMI was greater than 30. Of these 79 participants, 2 participants refused to report their current weight at the time of the study and an additional 4 participants refused to report their estimated annual income. These 6 participants were excluded from any analysis where SES and BMI are relevant predictors.

Measures

Stress Thermometer. An LCD Digital Thermometer with a research grade temperature sensor was used to display participants' stress level to the nearest .10F. Skin temperature, a measure of tension/relaxation was used in the ostensible visceral fat assessment. Participants were able to see their temperature measurement as they responded to questions regarding their health-related behaviors and nutrition knowledge.

Global self-esteem (see Appendix A). The Rosenberg Self-Esteem Inventory (Rosenberg, 1965) was used to assess participants' global self-esteem, or self-worth. This inventory is comprised of ten items (e.g. "I am able to do things as well as most people"; "I satisfied with myself.") rated on a 7-point Likert-type scale, ranging from 1 (strongly

³ The gender-race breakdown of the 12 participants who did not show up for scheduled appointments is four Black females, two Black males, two White females, and four White males

disagree) to 7 (strongly agree). Chronbach's alpha for this and other scale variables can be found in Table 1.

State self-esteem scale (SSES; see Appendix B). The State Self-Esteem Scale is composed of three subscales used to assess performance self-esteem, social self-esteem, and appearance self-esteem (Heatherton & Polivy, 1991). For this study, the appearance self-esteem subscale was the only subscale administered (e.g. "I feel unattractive."; "I am dissatisfied with my weight."). Each item was rated on a 7-point, Likert-type scale with scores ranging from 1 (not at all) to 7 (extremely).

Health promotion endorsement (see Appendix C). This scale is made up of items related to health behaviors (e.g. sleeping 8 hours per night, limiting the number of high fat sweets eaten to 2 servings or less per week, engaging in physical activity for 15 minutes that would normally be spent in front of the computer). Participants were asked how much they believe performing each task would reduce their risk of developing excess visceral fat or help them to maintain a low risk of developing visceral fat. Agreement with each item was rated on a 7-point Likert-type scale, ranging from 1 (not at all) to 7 (Very Much).

Coping strategies (see Appendix D). This scale, with response options ranging from 1 (not at all) to 7 (Very Much) was adapted from Major & Schmader's (1998) domain specific engagement scale. It includes 3 constructs: discounting, disengagement, and devaluing. Participants indicated the extent to which they agreed or disagreed with 11 statements adapted to assess the extent to which participants say health questionnaires are diagnostic of one's future risk for disease based on the visceral fat risk assessment (discounting, e.g. I feel that this health assessment related to visceral fat is a good measure of my risk for disease.), the extent which they base how they feel about themselves on this kind

of information (disengagement, e.g. My score on a health assessment has little relation to how I feel about my actual health.), and the extent to which obtaining a positive body or weight-related outcome is important (devaluing, e.g. Maintaining a healthy body composition is important to me.). In addition to these strategies adapted from Major and Schmader (1998), we added questions concerning how reliable and valid participants believed this assessment to be when comparing how much they rely on medical information in general.

Group based medical mistrust (see Appendix E). Participants will be asked about their tendency to distrust the medical system, a system that does not represent their ethnic group based upon a legacy of racism or unfair treatment, by responding to the Group-Based Medical Mistrust Scale (GBMMS; Thompson, Valdimarsdottir, Winkel, Jandorf, & Redd 2004, p. 210). The three subscales that make up the GBMMS are suspicion, perception of group disparities in health care, and perceptions of lack of support from health care providers. Originally designed to look at the association between medical mistrust and breast cancer screening, this scale is useful in investigating the relationship between medical mistrust and other health care issues for which ethnic disparities have been observed (Thompson et al., 2004). Since medical mistrust is associated with doubts about the validity of medical tests and feedback, it may mediate the relationship(s) between race and feedback on any or all of the dependent variables (e.g. those who are more mistrustful may discount the validity of the assessment whether or not they receive negative feedback).

White middle-class behavior (see Appendix F). This scale assesses how much participants endorse the belief that some health behaviors are white, middle-class behaviors (e.g. eating nutritious foods, getting enough sleep). Agreement with each item was rated on a 7-point Likert-type scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Demographics (see Appendix G). This form will be used to collect information including age, current weight, height, race, and SES (measured as estimated annual income).

Procedure

Participants arrived at the lab one-at-a-time, and were met by a non-Black, female experimenter wearing a lab coat. The lab itself was located in a suite in a medical center in central New York. The participant was taken to a testing room where he or she was given an informed consent form. Each participant was informed that the task would be to complete a combination physiological measure and health questionnaire (see Appendix H) designed to predict a person's risk of developing visceral fat.

After the participant signed the form, the researcher began by attaching a stress thermometer to the index or middle finger of the participant's left hand. At this time, the researcher mentioned that the health topic the lab was interested in was visceral fat, a type of fat that is affected by the stress hormone, cortisol, and that the temperature reading would be used in the calculation of the participant's risk for developing excess visceral fat. Participants were told that the stress thermometer needed time to adjust from room temperature to body temperature and that during that time they would answer a few questions on the computer and read a short article about visceral fat. Participants were given brief instructions on using the computer program and, as their test questions; participants answered the ten items from the Rosenberg Self-Esteem Inventory (Rosenberg, 1965). Upon completion of those items a box appeared on the screen asking for a participant code. Participants had been told to expect this and had been instructed that upon seeing this box, they should then turn their attention to an "article" (see Appendix I) announcing that a doctor had uncovered a new and improved method to predict risk for visceral fat. This article explained why this discovery was

important by describing several causes and consequences of visceral fat and the link to overweight and obesity. Participants read that one of the dangers of visceral fat is that one cannot always see the problem developing. It stressed that eating foods with the wrong kind of fat combined with inactivity can influence one's risk of developing excess visceral fat. Additionally, the article reported that excess visceral fat had been "found to be related to such diseases as Type II diabetes, hypertension, various types of cancer, heart disease, and stroke." The article goes on to briefly describe that the risk assessment tool combines a measure of current health habits with a physiological measure of stress. Participants notified the researcher of their completion of the tasks using an intercom.

Upon returning to the room, the experimenter made note of the thermometer reading on the ostensible assessment sheet. She then sat down and explained the assessment. Included in this explanation was a statement that we find that people are more honest about their health behaviors when they express them aloud. In reality, this was part of the study design because it was believed that it would make the visceral fat assessment more face-valid to participants. The assessment would seem more like a doctor's appointment than a laboratory task. The experimenter, as outlined in the explanation, verbally presented participants with each of the demographics questions (Appendix G) followed by a series of questions about current health and eating behaviors (Appendix H), and finally a series of questions about nutrition and calorie burning. If at any point during the assessment the participant asked a question, the experimenter did her best to assure the participant that any specific questions would be addressed at the end of the study. On a few occasions the experimenter did clarify questions on the assessment for participants.

Once all questions had been answered to the best of the participant's knowledge and ability, the experimenter left the room to enter the assessment data into the master computer, which participants were told was networked to the computer in their testing room. After a short delay of approximately 2 minutes, the experimenter returned with a participant code in hand. This four-digit code was entered as encrypted text in the participant code box on the computer screen. Participants were told that they could press "continue" once the researcher had left the room. Thirty seconds after participants clicked "continue" they received a message about feedback related to their performance on the task. Half of the participants were presented with negative feedback, a message that said, "Preliminary results suggest that you are at risk for developing excess visceral fat." The other half of the participants saw a message that said, "Please proceed to the questionnaire portion of the study while your results are being tabulated."

Participants were then presented with a series of questionnaires. This included the Rosenberg Self-Esteem Inventory, the State Self-Esteem Scale, the coping measures, the health promotion endorsement questions, the Group Based Medical Mistrust questionnaire, and the White Middle-class Behavior questionnaire, in that order. When participants had come to the end of the computer questionnaire they once again notified the experimenter using an intercom.

The experimenter returned to the room to debrief the participant. She explained that previous research suggested that people process information differently. She also suggested to participants that this might be the case when people are given negative information about their health. Participants were given an opportunity to make comments or ask questions at this point. The experimenter went on to explain that while the risk of developing excess

visceral fat is increasing in the United States, the assessment used during the first part of the study was (to our knowledge) not an accurate assessment of a person's risk. Additionally, it was explained that participants had been randomly assigned to receive either feedback that was negative or to receive a message that they would have to wait for their results. Once again, the experimenter asked for participants' comments, reactions, or questions related to this information. When the participants had exhausted their comments and questions, the experimenter asked the participant to read through a written debriefing while she went to retrieve the participant's payment. Upon her return, the experimenter once again probed for comments or questions before providing the participant with a payment envelope and asking him/her to fill out a receipt and a ticket for a chance to win an additional \$100 in a drawing. At this point, the researcher also pointed out several National Institutes of Health Weight-control Information Network pamphlets, giving each participant the opportunity to take one of any or all of the three different pamphlets.⁴

Hypotheses

Hypothesis 1. Black participants will have higher post-manipulation self-esteem than White participants controlling for pre-manipulation self-esteem. This will be qualified by a significant race by feedback condition interaction; after controlling for pre-manipulation self-esteem, Whites will have significantly lower self-esteem in the negative feedback condition than in the no feedback condition while Blacks will not significantly differ in self-esteem across feedback conditions.

Hypothesis 2. Black participants will be more likely to report using each of the coping strategies (i.e. discounting, disengagement, and devaluing) than White participants.

⁴ The available pamphlets were "Energize Yourself and Your Family," "Changing Your Habits: Steps to Better Health," and "Tips to Help You Get Active."

This will be qualified by a significant race by feedback condition interaction. While Whites' scores on each of the coping measures will not significantly differ across feedback conditions, Blacks will have significantly higher scores on each of the coping measure in the negative feedback condition than in the no feedback condition.

Hypothesis 3. Black participants will be less likely than White participants to endorse the health promotion activities suggested after the task. This relationship will be moderated by feedback condition. Whites will be significantly more likely to endorse the health promotion activities in the negative feedback condition than the no feedback condition. Blacks, however, will be significantly less likely to endorse the health promotion activities in the negative feedback condition than in the no feedback condition.

Hypothesis 4. Participants' scores on the devaluing, discounting, and disengagement measures will predict whether they view healthy behaviors as middle-class white behaviors. This will be moderated by a race by coping measure interaction. White participants with higher scores on this coping measure will be less likely than those with lower scores on this coping measure to report that healthy behaviors are middle-class white behaviors. However, Black participants with higher scores on the coping measures will be more likely than those with lower scores to report that healthy behaviors are middle-class white behaviors.

Results⁵

Differences between Groups

Participants of each racial group were randomly assigned to feedback condition. However, it was possible that there were differences between racial groups on factors that may influence the outcome variables. Past research has suggested that SES is a predictive factor in overweight and obesity (Schoenborn et al., 2002). Black Americans also tend to be

⁵ All DVs were centered at 0, using the full sample, and the grand mean.

lower SES than White Americans, but disparities between Black and White women exist at all levels of SES (Gordon-Larsen, Adair, & Popkin, 2003). Given this, it was anticipated that participants who are lower SES and Black participants, who are more at risk for obesity may feel more threatened by negative weight-related feedback. ANOVA suggested that there were no racial differences in SES. However, there was an unanticipated marginal effect for condition, such that participants assigned to the negative feedback condition reported higher annual income than those in the no feedback condition, $F(1, 73) = 3.20, p = .08$. It was unclear what, if any effect this might have on the outcome variables. Because of this we thought it was important to control for any potential effects of SES.

Past research has also suggested that Blacks tend to report higher levels of self-esteem than Whites (Gray-Little & Hafdahl; Twenge & Crocker, 2002). In order to determine whether responses to feedback protected self-esteem for some participants, it was important to control for any differences in pre-manipulation self-esteem. Looking at pre-manipulation self-esteem, there was no significant main effect for race, $F(1, 78) = 0.22, n.s.$ Although participants were randomly assigned to experimental condition, White participants in the no feedback condition reported lower levels of self-esteem at the beginning of the study than did all other groups (See Table 2 for means). This race by condition effect was significant, $F(1,78) = 5.14, p < .05$. This difference prompted us to include pre-manipulation self-esteem as a covariate in the analyses.

We also tested for differences in body mass index because Blacks are more likely to be overweight and obese than are Whites (Flegal et al., 2002). BMI did not differ by race, condition, or the interaction of the two, all p 's $> .20$. Although there were no significant differences in BMI within the groups (See Table 2 for means), it is conceivable that some of

the variability in the outcomes is accounted for by differences in BMI. For example, participants with higher BMI may be more likely to believe the negative feedback that they are at risk for developing excess visceral fat than participants with lower BMI. Therefore, we chose to keep BMI as a moderator (See Table 2 for descriptive statistics).

Self-Esteem

We hypothesized that the self-esteem of Black participants would not be affected by receiving negative feedback. On the other hand, we expected that negative feedback would result in lowered self-esteem among White participants. The results of the hierarchical regression analysis failed to support the proposed hypothesis (See Tables 3 and 4). Black participants did not have significantly higher post-manipulation self-esteem than White participants. Additionally, there was no significant race by feedback condition interaction. However, the statistical covariate pre-manipulation self-esteem was a significant predictor of post-manipulation self-esteem. The R^2 for step 1 was significantly greater than zero, $F(5, 67) = 50.09, p < .001, R^2 = .79$.

Coping

We further hypothesized that devaluing, disengagement, and discounting would be means of coping with the potential stress of being told that one was at risk for developing excess visceral fat. Additionally, we expected that this would be especially true among Black participants for whom there is evidence to suggest that negative feedback about health may be viewed as a form of discrimination by the healthcare establishment. To test the proposed race by condition interaction effect on use of these coping strategies we conducted hierarchical regression analyses for each of these strategies.

We hypothesized that Black participants would be more likely than White participants to suggest that body composition had little to do with how they felt about themselves. We also suggested that feedback would affect the scores on the measure of devaluing, such that Black participants exposed to the negative feedback would report higher rates of devaluing than all other participants. The results of the hierarchical regression analysis failed to support the proposed hypothesis (See Tables 5 and 6). R^2 failed to reach significance at all steps of the model, all F 's < 1.5 , p 's $> .20$. Investigation of individual effects indicated a marginally significant effect of feedback condition at step 1, such that values were trending in the direction of greater devaluing among participants who had received negative feedback, $t(67) = 1.81, p = .08$ (See Figure 1).

We further hypothesized that Black participants would be more likely than White participants to suggest that the visceral fat health assessment was not a good way to measure their risk for disease. We also suggested that feedback would affect the scores on the measure of discounting, such that Black participants exposed to the negative feedback would report higher rates of discounting than all other participants. The results of the hierarchical regression analysis were contrary to the proposed hypothesis (See Tables 7 and 8). Results of step 1 of the hierarchical regression revealed no significant main effect of race $t(67) = -0.83, n.s.$ The $\Delta R^2 (.10)$ was marginally significant from step 1 to step 2 of the hierarchical regression, $\Delta F(1, 64) = 2.57, p = .06$. Investigation of the interaction effects indicated a significant race by feedback interaction. This interaction suggested that White, rather than Black, participants reported more discounting in the negative feedback condition than in the control condition $t(64) = -2.11, p < .05$ (See Figure 2). Results of step 3 [$\Delta R^2 (.05), \Delta F(1, 63) = 4.36, p < .05$] of the hierarchical regression indicate that this race by feedback

interaction may be qualified by a three-way BMI by race by feedback interaction. However, further investigation indicated that this interaction effect actually resulted in net suppression (see Cohen, Cohen, West, & Aiken, 2003), changing the sign of the coefficient for the race by feedback interaction to opposite its sign when compared to its correlation with the dependent variable. It would, therefore, be unwise to attempt to interpret that effect of the 3-way interaction.

Thinking about disengagement as a dependent variable, we hypothesized that Black participants would be more likely than White participants to report using disengagement as a coping strategy. We also suggested that feedback would affect the scores, such that Black participants exposed to the negative feedback, more so than all other participants, would report higher levels of apathy regarding what the assessment said about their risk of developing disease. The results of a hierarchical regression did not support the above stated hypothesis (See Tables 9 and 10). However, step2 of the hierarchical regression analysis revealed a significant main effect of condition, $t(64) = 2.26, p < .05$, such that participants who received negative feedback reported greater disengagement than participants in the control condition. The main effect was qualified by a marginally significant feedback by BMI interaction, $t(64) = -1.82, p = .07$. This trend in the data suggests that participants with lower BMI were less likely to disengage in the negative feedback condition than in the control condition (See Figure 3). In step 3 of the regression analysis we find that the 3-way interaction between BMI, race, and feedback again results in a suppressor effect. As stated above, it would, therefore, be imprudent to attempt to interpret the effect.

Health Promoting Behaviors

We hypothesized that Black participants would be less likely than White participants to endorse health promotion activities as a way to reduce or maintain low risk of developing excess visceral fat. We additionally predicted a cross-over interaction: Whites in the negative feedback condition would report higher levels of endorsement than Whites in the control condition. Blacks in the negative feedback condition would report lower levels of endorsement than Blacks in the control condition. While step 1 of the hierarchical regression analysis suggests that the overall fit of the model is not statistically significant, $F(5, 67) = 1.39, n.s.$, race appeared to be a significant predictor of endorsement of health promotion behaviors, $t(67) = -2.29, p < .05$. This main effect, as predicted, suggests that Blacks are significantly less likely to endorse health promotion behaviors as a way to reduce or maintain a low risk of developing excess visceral fat. Contrary to hypothesis, this main effect was not qualified by a race by feedback interaction, $t(64) = -0.05, n.s.$ In step 3 of the hierarchical regression, we once again find the deceptive suppressor effect. See Tables 11 and 12 for additional information regarding this hierarchical regression.

White Middle-Class Behaviors

We believed that each of the coping strategies: devaluing, discounting, and disengagement would predict the extent to which participants endorsed that certain health promotion behaviors were thought to be “white middle-class behaviors.” We further believed that this coping effect would vary by race of the participant. We predicted that White participants who reported high levels of devaluing, discounting, and disengagement, and Black participants who predicted low levels of devaluing, discounting, and disengagement would be less likely to report agreement than their counterparts. A correlation analysis revealed that the extent to which participants endorsed certain health promotion behaviors as

white, middle-class was not significantly correlated with the coping strategies (devaluing, discounting, or disengagement), race, or the interaction of race and the individual coping strategies (See Table 13). Since none of the predictors are significantly correlated with the outcome variable, there is no statistical need to perform the regression analyses, and the hypothesis is not supported.

Additional Analyses

Trust in the Assessment

The goal of this analysis was to determine whether participants varied in the amount that they trusted this feedback from this ostensible health assessment compared to other health information. There was no main effect for race [$F(1,78) = .02, n.s.$] or feedback [$F(1,78) = .35, n.s.$]. The interaction of race and feedback also failed to reach significance [$F(1,78) = 1.80, n.s.$]. This suggests that receiving negative feedback did not influence participant trust in the assessment any more than having to wait for feedback, and this did not differ by participant race.

Self-Esteem

Because we were interested in determining whether BMI could differentially effect participants' general self-esteem, we performed separate regression analysis across feedback condition to test whether the effect of BMI on predicting general self-esteem differed by feedback condition. Analyses revealed that among participants in the no feedback condition BMI ($\beta = -.04, p < .05$) was a significant predictor of general self-esteem $t(32) = -2.14$, above the effect of pre-manipulation self-esteem ($\beta = 0.79; t(32) = -2.14, p < .001$). This indicates that individuals higher in BMI reported lower general self-esteem when given no threatening feedback. However, among participants in the negative feedback condition BMI

($\beta = -.01$, *n.s.*) was not a significant predictor of general self-esteem $t(33) = -0.33$, above the effect of pre-manipulation self-esteem ($\beta = 1.12$; $t(33) = 11.01$, $p < .001$).

State Self-Esteem

Although BMI, race, and feedback condition did not predict general self-esteem post-manipulation, body specific self-esteem could still have been affected by these factors. An additional hierarchical regression was performed to test these effects (See Table 14). The R^2 for step 1 was significantly greater than zero, $F(5, 67) = 16.07$, $p < .001$, $R^2 = .55$.

Investigation of individual predictors revealed significant main effects for pre-manipulation self-esteem [$t(67) = 7.18$, $p < .001$] and BMI [$t(67) = -3.93$, $p < .001$]. Higher general self-esteem (pre-manipulation) predicted higher body state self-esteem (post-manipulation).

Alternatively, higher BMI predicted lower body state self-esteem. No other predictors reached significance.

Group Based Medical Mistrust

One reason that Black participants may have been less likely to report that performing health promotion behaviors might reduce or maintain low risk of developing excess visceral fat is group based mistrust of the medical establishment, especially suspicion. A two-step hierarchical regression was used to test whether GBMMS interacts with race to predict endorsement of health promotion behaviors for health maintenance and reduction of health risk. Neither model was a good fit to the data F 's < 1.5 , p 's, *n.s.* Race was the only significant predictor of endorsement of health promotion behaviors ($\beta = -.25$, $t(67) = -2.04$, $p < .05$).

White Middle-Class Behaviors

Although we did not find the hypothesized coping strategy by race interactions, I close look at the distribution of means lead me to perform an alternative analysis in an attempt to predict differences in agreement that certain behaviors are “white middle-class behaviors. A 2 (Race: White or Black) x 2 (Feedback: None or Negative) ANCOVA with SES, pre-manipulation self-esteem, and BMI as covariates was used to determine whether the interaction would predict agreement with certain behaviors being “white middle class behaviors”. The results of that ANCOVA revealed that willingness to report agreement that certain behaviors are white middle-class behaviors showed a significant main effect of threat condition ($F(1, 72) = 11.83, p < .01$) such that participants in the negative threat condition were less likely to report agreement. This main effect was qualified by a race by feedback condition interaction ($F(1, 72) = 9.73, p < .01$). White participants’ agreement (negative feedback, $M = 3.67, SD = 1.19$; no feedback, $M = 3.98, SD = 1.55$) did not differ by condition ($F(1, 34) = 1.06, n.s.$). However, Blacks in the negative feedback condition ($M = 2.94, SD = 1.71$) reported less agreement than Blacks in the no feedback condition ($M = 5.06, SD = 1.59; F(1, 38) = 14.18, p < .01$).

Discussion

Self-Esteem

A primary goal of this project was to examine whether strategies that have been used by racial and ethnic minorities to protect self-esteem in the academic domain would be activated by a threat in the domain of health. The results were somewhat surprising; for both Black and White participants, self-esteem appeared to be unaffected by being told that one was at risk for developing excess visceral fat.

One possibility is that the manipulation failed to be threatening enough to evoke a change in self-esteem. For example, if participants already knew that they were at increased risk for obesity-related problems, then being told that they were at risk for developing excess visceral fat would not be surprising.⁶ Additionally, those who were in the “control condition” believed that they were waiting for feedback, and some of these participants may have self-imposed negative feedback even though the computer program never told them they were at risk. This would mean that the manipulation would have been no more threatening than the “control,” and therefore not threatening enough to evoke a self-esteem difference across conditions. Another possibility is that participants just did not believe the negative feedback they received. Bringing these points to the attention of the reader as possibilities, without evidence, suggests the absence of a manipulation check that could have assessed the nature of participants’ feelings and beliefs following the feedback, either to wait while results were being tabulated or that one was at risk. This manipulation check could have been another self-report measure such as an affect measure or a physiological measure like change in temperature on the stress thermometer. Unfortunately, we have no such manipulation check.

Even if the negative feedback was threatening, this does not mean that general self-esteem would necessarily have been affected. Participants who received negative feedback could have drawn from an alternate source of self-esteem. Tesser (2000) suggests that this can happen without conscious awareness. Dodgson and Wood (1998) demonstrated that among those high in self-esteem, positive qualities were recruited and weaknesses were repressed when participants were given failure feedback. Therefore, in the current study,

⁶ We attempted to avoid this situation by including in our recruitment fliers that we were seeking individuals who were in “relatively good health.” We used our phone prescreening to ensure that none of the participants had already been diagnosed with diabetes, cardiovascular disease, or cancer, all of which have been shown to be related to excess visceral fat and overweight and obesity.

participants with high general self-esteem would be able to maintain this self-esteem in the face of threat by recalling positive qualities in domains other than health or weight. And when threatened, participants who are higher in BMI, compared to those lower in BMI, would be willing to admit low body self-esteem while maintaining high general self-esteem (i.e. BMI would not be related to general self-esteem). The hypothesized hierarchical regression models predicting post-manipulation self-esteem indicated that BMI was not related to general self-esteem. However, the additional self-esteem analyses did indicate that BMI significantly predicted self-esteem in the no feedback condition, but not in the negative feedback condition. This suggests that the recruitment of positive qualities may be a viable explanation for why receiving negative feedback did not negatively impact one's view of the self. Still, it should be acknowledged that this study provides no direct evidence that participants were recruiting positive qualities from other domains when they were told negative information about their bodies.

Disengagement

In designing this study, we anticipated that Black participants would be able to maintain their self-esteem when they received negative feedback because they would employ (dis)engagement strategies in order to cope with the threat. Further, we expected that there would be relative consistency between the three types of strategies, discounting, disengaging, and devaluing. This idea was based on previous research that demonstrated that (in the academic domain) Black students who receive failure feedback place less value on their performance, are less likely to view the domain as important for the self-concept, and are less likely to believe that negative information is based on the performance of the self (Major, Quinton, & Schmader, 2003; Major & Schmader, 1998; Schmader, Major, & Gramzow,

2001; Steele, 1992). The results of the study, however, suggest that there was divergence between the different strategies

Looking at the amount of value participants placed on health assessments, participants in the control condition placed less value on health assessments than participants in the negative feedback condition. One possible explanation for this finding is that participants in the control condition did not want to pass a negative judgment on the assessment when they had not yet received any information based on their responses. Additionally, theory would suggest that there would only be need to use devaluing as a coping strategy if the information one was receiving was threatening.

When examining discounting as a way of coping, a different pattern emerged. The results suggested that, in general, Black and White participants were equally likely to indicate that health assessments are a good way to measure risk for future disease. But when Black participants were given negative feedback related to their own assessment, they were less likely to discount the assessment and the information obtained from it than Black participants in the no feedback condition. The findings suggest that neither Black nor White participants discount the information they receive when given negative feedback on a health assessment. Instead, Black participants discount less when they receive negative feedback.

Given that the materials the participants received tied visceral fat to a number of health complications, we suggested that just as it is difficult for Black students to devalue academics, a domain that is important for upward mobility, it would be difficult for Black participants in this study to devalue the health domain. But results are unclear as to whether this was the case. The results related to beliefs about health promotion behaviors could help clarify this matter. Black participants were less likely than White participants to report a

belief that the health promotion behaviors we presented via the computer questionnaire could help to reduce or maintain a low risk of developing visceral fat or keep the risk low. This could contribute to decreased desirability to obtain positive outcomes in this domain, across threat conditions. For White participants, however, it appeared that they were expressing greater discounting in the threat condition compared to Blacks who received negative feedback. Nonetheless, White participants are still willing to suggest that some behaviors may help to alleviate the risk of visceral fat development, indicating that Blacks, at the very least, place less value on health promotion behaviors as a strategy for health risk maintenance. This could mean that Blacks are more fatalistic about their health than Whites when looking at prevention and/or treatment of disease.

While we believed that group based medical mistrust could help account for the race difference in beliefs about the health promotion behaviors suggested in the study materials, additional analysis did not support this proposed explanation. Future research designs should include projects to examine the potential mediators between race and the agreement that health promotion behaviors can reduce risk. For example, we previously suggested that race is more likely to be a central or identifying characteristic for Blacks than for Whites (e.g., Phinney, 1992; Phinney et al., 1994). However, there is always within group variability on ingroup identification. This suggests that a measure of group identification such as attachment (see Jackson, 2002) could have provided more information than race alone. Level of identification could have influenced not only the endorsement of these health promotion behaviors but the practice of using devaluing, discounting, and disengagement as coping strategies, the ability to reflect on and self-report the use of these strategies, as well as perception of group-based wrongdoing by the medical establishment. Discovering that group

identification or some other trait that mediates the effect between race and health promotion behavior is a valuable future direction such that individuals who believe that the behaviors can help may be more willing to perform said behaviors and, in fact, reduce risk for excess visceral fat (or overweight and obesity).

Another example could be that future research might focus on health fatalism as one of the potential mediators between health promotion behaviors and the views individuals express regarding health assessment. There is a tendency for lay people to attach social and cultural meaning to instances of health and illness, which are, in turn, difficult for medical professionals to contradict (Straughan & Seow, 1998). This ‘lay epidemiology’ (Straughan & Seow) feeds health fatalism, the belief that some health issues are beyond human control (Davison et al., 1992), or that some things in life are predestined and efforts to change those things are futile (Straughan & Seow, 1998). To that end, what some people see as an irrational response to information regarding living a preventive, healthy lifestyle is actually the most rational response for a person with fatalistic explanations for illness and death. After all, it would not be rational for someone who believes that whether or not a person is overweight is inevitable to spend time exercising or worrying about consumption of calories when his/her time could be spent in the pursuit of other goals. This could help to explain why some individuals can devalue health promoting behaviors but not necessarily assessments of their health.

Racial Bias

The questionnaire portion of the ostensible visceral fat risk assessment was designed so that some of the questions in the assessment of behaviors could have been interpreted as asking about stereotypical Black behaviors (e.g. drinking Kool-Aid, eating fried food).

Because of the ambiguous nature of the prejudice related to one portion of the assessment, Black participants may have refrained from suggestions that the assessment was “biased against members of their racial/ethnic group.” After all, members of chronically stigmatized groups are likely aware of the social costs associated with making claims of discrimination. This includes the risk of being called hypersensitive, emotional, irritating, trouble making and complaining (Kaiser & Miller, 2001a). Given that the feedback was ostensibly coming from multiple sources, the extent to which it could have been attributed to those stereotype items may have been ambiguous.

On the other hand, the instructions for the white-middle class behaviors questionnaire clearly stated that some people have suggested that the behaviors participants were about to see are White, middle-class behaviors. For Black participants who had received negative feedback about their health, rejection of this explicit stereotype may have provided a means of dealing with the rejection they faced. This may have seemed the safest way to distance themselves from stereotypes that Blacks are lazy and unhealthy in their food choices. Evidence of similar distancing behavior has been observed among women who have been forewarned about impending prejudice and women who suffer from chronic pain (Kaiser & Miller, 2001b; Werner, Widding Isaken, & Malterud, 2004). Future research may wish to examine racial identification as either an outcome of negative feedback or as a potential moderator of the effect of race on the reaction to ambiguous and blatant stereotype related bias in the health domain. Other directions include examining traits used to describe the self and the group after some negative health-related feedback has been given. If stereotypical traits are avoided by Black participants, this would lend support to the theory of distancing from the stereotype.

Conclusions

Originally, we argued that Blacks would be more likely than Whites to use the active coping strategies of discounting, disengagement, and devaluing when presented with negative feedback related to their health (i.e., risk for development of excess visceral fat). This hypothesis was based on literature in the academic domain that suggested these coping strategies were used for self-esteem maintenance in the face of a negative academic evaluation. One factor that we may have failed to take into consideration is the greater stability of general self-esteem among adults in my sample compared to the samples from the student population who are used in the research on coping strategies in the academic domain (for comments on crystallization of self-esteem see Sears, 1986). Data from this sample, at least, show little movement in self-esteem from pre- to post-manipulation, regardless of race. Additionally, average reported use of each of these strategies was near or below the mean for the scales. This suggests that even differences in usage of these strategies cannot be interpreted as active use of the strategy. Rather, some participants are just using these strategies more than others. That Blacks are not discounting or devaluing health messages or disengaging their self-perception from the health domain is promising for organizations who wish to disseminate health information to Blacks. For example, with the exception of a handful of participants in this study, participants took at least one of the healthy-living pamphlets we provided from NIDDK.

Still, significant differences between Blacks and Whites on measures of health-promoting behavior suggest that these beliefs may offer some mediating factor between race and future negative health outcomes. However, this project does not offer a means to explore these beliefs as a mediating factor. We can only offer a suggestion that future research should

examine the influence of manipulating beliefs about health-promotion and health-promoting behaviors on people's intentions to perform these behaviors and their actual performance of health-promoting behavior.

Limitations

While limitations such as the self-report nature of the measures and participant self-selection were mentioned within the discussion, there are two other major limitations to this study that we would like to address. The first is related to the recruitment strategy. The second is a matter of defining SES. We will address each of these in turn.

As it is clear from the introduction, neighborhood characteristics are a contributing factor in the prevalence of overweight and obesity. While we reasoned that the City of Syracuse was a more likely target than Onondaga County, as a whole, for attempting to get an equal sample of Black and White participants, this does not mean that the City of Syracuse is an ideal location. The median income for the City of Syracuse is just under \$31,000, while the median salary for New York State is just over \$56,000 and for the United States is just over \$52,000 (Greater Syracuse Chamber of Commerce, 2010). The reduced median salary of City of Syracuse residents is just one indicator that the results of this study may not generalize to the all Blacks and Whites. However, it may give us a glimpse into what is happening in similar communities across the state of New York and the United States.

In this study we have narrowly defined SES as estimated annual income. This limits the study in a variety of ways. Within the study, it is problematic such that some participants' reporting low income may be doing so after a recent job loss while others' low income may be longstanding. The results of this study are additionally limited when attempting to

compare across studies given that many other researchers have used multi-item measures of SES (e.g., income, education, and occupation as outlined by the Census Bureau or the Hollingshead index of social position; e.g., Hollingshead, 1975).

These factors work together to show the difficulty of accurately portraying the make-up and character of any group based upon income or socioeconomic status. Particularly, those qualities are limited by sampling from the population of a single city or county. In the future, research must be done that takes a broader look at a population so as to not limit itself based upon uncontrollable characteristics of a small region. Also, said research, must ensure that it does not narrowly define SES and thereby skew the data without taking into account long-term versus short-term economic trends.

Appendix A

INSTRUCTIONS: For the following questions, please select the number that best represents how you feel about yourself RIGHT NOW. There are no right or wrong answers.

- 1 strongly disagree
- 2 disagree
- 3 somewhat disagree
- 4 neither agree nor disagree
- 5 somewhat agree
- 6 agree
- 7 strongly agree

Right now,

1. ____ I feel that I am a person of worth, at least on an equal basis with others.
2. ____ I feel that I have a number of good qualities.
3. ____ I am inclined to think I am a failure.
4. ____ I am able to do things as well as most people.
5. ____ I feel that I do not have much to be proud of.
6. ____ I have a positive attitude toward myself.
7. ____ I am satisfied with myself.
8. ____ I wish I could have more respect for myself.
9. ____ I feel useless.
10. ____ I feel I am no good at all.

Appendix B

Using the following scale, place a number on the line to the right of the statement that indicates what is true for you at this moment:

1 = not at all - 4 = somewhat - 7 = extremely

1. I feel satisfied with the way my body looks right now. _____
2. I feel that others respect and admire me. _____
3. I am dissatisfied with my weight. _____
4. I feel good about myself. _____
5. I am pleased with my appearance right now. _____
6. I feel unattractive. _____

Reverse score: 3, 6

Appendix C

For the following items, please assess how much you believe that performing each task would reduce your risk of obesity or help to maintain a low risk for obesity?

1(Not at all)—7(Very Much)

1. Walk for the amount of time it would take me to eat a snack. _____
2. Keep my caloric intake to what the doctor recommends. _____
3. Limit myself to 2 servings of chips and/or fries per week. _____
4. Limit the amount of high fat sweets I eat to 2 servings or less per week. _____
5. Eat one extra serving of fruits and vegetables per day. _____
6. Switch to nonfat or 1% milk. _____
7. Limit the amount of meat I eat to 2-3 small servings per week. _____
8. Limit how often I eat rich breads like croissants or donuts to twice a week or less. _____
9. Sleep 8 hours per night. _____
10. Spend 20 minutes per day exercising at an appropriate level. _____
11. Spend 15 minutes of the time you would normally spend in front of the computer each day, engaged in physical activity instead. _____

Appendix D

Rate the extent to which you agree or disagree with each of the following statements using a scale from 1 (disagree strongly) to 7 (agree strongly).

Discounting

I feel that this health assessment related to visceral fat is a good measure of my risk for disease.

In general, I feel that a health assessment related to body composition, specifically visceral fat, is a good way to measure the risk for disease.

This visceral fat assessment does not measure a person's true risk for disease.

I feel that this health assessment is definitely biased against me.

Disengagement

I really don't care what this assessment says about my risk of developing disease.

No health assessment will ever change my beliefs about my risk of developing disease in the future.

My score on a health assessment has little relation to how I feel about my actual health.

Devaluing

Not being fat is an important part of who I am.

Maintaining a healthy body composition is important to me.

My beliefs about my body composition generally affect how positive I feel about myself.

It usually doesn't matter to me one way or the other whether I am fat.

*Adapted from Major, B. & Schmader, T. (1998). Coping with stigma through psychological disengagement. In J. Swim & C. Stangor (Eds.), *Prejudice: The Target's Perspective*, The Academic Press, 219-241.

We are interested in assessing how much people believe they can rely on the information they receive from this questionnaire in reference to how much they rely on medical information in general. Please answer each of the following questions using a scale from 0 (not at all) to 5 (extremely)

1. How much do you trust the feedback you received from this health assessment?
2. How reasonable is it to assess someone's future risk of obesity based on the information provided in the health assessment?
3. How valid do you believe this method to be?
4. To what extent do you agree with the statement "I think this health questionnaire is biased against racial minorities."?

Appendix E

Group-Based Medical Mistrust Scale:

Please rate the extent to which you agree or disagree with each of the following statements. Use the response options available for each question.

1. Doctors and health care workers sometimes hide information from patients who belong to my ethnic group.
2. Doctors have the best interests of people of my ethnic group in mind. (R)
3. People of my ethnic group should not confide in doctors and health care workers because it will be used against them.
4. People of my ethnic group should be suspicious of information from doctors and health care workers.
5. People of my ethnic group cannot trust doctors and health care workers.
6. People of my ethnic group should be suspicious of modern medicine.
7. Doctors and health care workers treat people of my ethnic group like “guinea pigs.”
8. People of my ethnic group receive the same medical care from doctors and health care workers as people from other groups. (R)
9. Doctors and health care workers do not take the medical complaints of people of my ethnic group seriously.
10. People of my ethnic group are treated the same as people of other groups by doctors and health care workers. (R)
11. In most hospitals, people of different ethnic groups receive the same kind of care. (R)
12. I have personally been treated poorly or unfairly by doctors or health care workers because of my ethnicity.

1 (Strongly disagree) to 7 (Strongly agree)

Suspicion: items 3, 4, 5, 6, 7, 9

Group disparities in health care: items 8, 10, 11

Lack of support from health care providers: items 1, 2, 12

From Thompson, H. S., Valdimarsdottir, H. B., Winkel, G., Jandorf, L., & Redd, W. (2004). The Group-Based Medical Mistrust Scale: Psychometric properties and association with breast cancer screening. *Preventive Medicine*, 38, 209-218.

Appendix F

Some people have suggested that the following behaviors are White, middle-class behaviors.

To what extent do you believe that each of the following behaviors is a White, middle-class behavior?

Scale 1 (strongly disagree) to 7 (strongly agree)

1. Watching ones diet. _____
2. Eating nutritious food. _____
3. Eating fruits and vegetables. _____
4. Exercising. _____
5. Getting enough sleep. _____

From Oyserman, D., Fryberg, S. A., Yoder, N. (2007). Identity-based motivation and health.

Journal of Personality and Social Psychology, 93, 1011-1027.

Appendix G

Please choose the option that BEST describes your standing on each characteristic or fill-in the blank.

1. Sex: ____Female ____Male
2. What is your age in years? _____
3. What is your height? ____ feet ____ inches
4. What is your weight in pounds? _____
5. Race/Ethnicity:
____ African American/ Black
____ Asian American
____ Latino American
____ Native American
____ Caucasian/ White
____ Multiracial/Other (please specify) _____
____ International Student (please specify) _____
6. What is your estimated annual income? _____
 - Less than \$2,500
 - \$2,501-\$5,000
 - \$5,001-\$7,500
 - \$7,501-\$10,000
 - \$10,001-\$12,500
 - \$12,501-\$14,500
 - \$14,501-\$16,000
 - \$16,001-\$18,500
 - \$18,501-\$20,000
 - \$20,000-\$40,000
 - \$40,001-\$60,000
 - \$60,001-\$80,000
 - \$80,001-\$100,000
 - \$100,001-\$120,000
 - \$120,001-\$140,000
 - \$140,001-\$160,000
 - \$160,001-\$180,000
 - \$180,001-\$200,000
 - \$200,001-\$250,000
 - \$250,001 or more

Appendix H

Please rate the extent to which each of the following statement is true of you. This questionnaire is interested in your current way of life, not what you intend to do. Please answer each question as accurately as possible by indicating how often you engage in each behavior.

N= Never, S= Sometimes, R= Routinely

- | | | | | |
|-----|---|---|---|---|
| 1. | I take time to relax each day. | N | S | R |
| 2. | I get 8 hours of sleep per night. | N | S | R |
| 3. | I eat 2-5 servings of fruits and vegetables each day. | N | S | R |
| 4. | I eat dessert after dinner. | N | S | R |
| 5. | I eat when I feel stressed out. | N | S | R |
| 6. | I exercise at least 20 minutes a few days per week. | N | S | R |
| 7. | Instead of falling asleep when I lay down at night, I think about the day's events. | N | S | R |
| 8. | I eat meals alone. | N | S | R |
| 9. | I eat salads. | N | S | R |
| 10. | I spend at least 2 hours per day in front of the computer. | N | S | R |
| 11. | I eat 2-3 servings of meat, poultry, fish, eggs, dried beans, and nuts per day. | N | S | R |
| 12. | I have friends and family to provide me with emotional support. | N | S | R |
| 13. | I snack between meals. | N | S | R |
| 14. | I drink 64oz. (approximately 4 bottles) of water each day. | N | S | R |
| 15. | I eat the recommended 6-11 servings of bread cereal, rice, and pasta each day. | N | S | R |
| 16. | I eat breakfast. | N | S | R |
| 17. | I limit my intake of saturated fat and cholesterol. | N | S | R |
| 18. | I eat within 2 hours of going to bed. | N | S | R |
| 19. | I drink at least one caffeinated beverage per day. | N | S | R |
| 20. | I drink sugary beverages (e.g. Kool-Aid®). | N | S | R |
| 21. | I describe myself as stressed out | N | S | R |
| 22. | I drink alcohol. | N | S | R |
| 23. | I eat fried foods. | N | S | R |

24. I allow negative life events to consume my thoughts N S R
25. I feel I should eat everything that is on my plate N S R
26. I drink 2% or whole milk. N S R
27. On average, how many calories do you consume per day?
28. According to Federal Guidelines, what percentage of you daily caloric intake should come from breakfast?
29. According to Federal Guidelines, what percentage of you daily caloric intake should come from an afternoon meal?
30. According to Federal Guidelines, what percentage of you daily caloric intake should come from an evening meal?
31. What percentage of your daily caloric intake actually comes from between meal snacking?
32. As people age, loss in muscle tissue and hormonal and neurological changes slow the rate at which people burn calories. What is the term for the rate at which people burn calories?
33. There are different types of carbohydrates. Can you name the special kind of carbohydrate that helps people feel fuller faster and longer and helps keep blood sugar levels even.
34. What is the recommended dietary allowance for protein among women ages 19-70+/ men 19-50 (in grams per day)?
35. A healthy diet allows for how many grams of trans fats per day?
36. Caffeine consumption should be limited to how many mg per day.
37. When eating for health, people should consume more grains, especially this type of grain which is mineral rich and easy to digest.
38. Nutrition guidelines recommend that the average person limit sodium intake to how many milligrams per day? Or you can tell me approximately how many tsp. of salt that would be per day.
39. How many calories do you think you burn during 30 minutes of aerobic exercise at a moderate level?
40. How many calories do you think you burn during 60 minutes of watching television?
41. How many calories do you think you burn during 30 minutes of dancing?
42. How many calories do you think you burn during 5 minutes climbing stairs?

Appendix I



**Dr.
McLaughlin
Discovers
New
Method to
Assess Risk
for Excess Visceral Fat**

Are your health habits putting you at risk?

Diabetes, Nutrition, & Metabolism, Vol. 34, Issue 2, p.9

Visceral fat, a type of fat that surrounds the vital organs, is primarily located in the abdominal cavity. As this type of fat begins to accumulate in the body, an individual may still appear thin to average weight, which is one of the real dangers. “An individual may not realize there is a problem because he or she cannot see the problem developing,” says Dr. McLaughlin. He continued by saying that on the other hand, someone could be overweight but not have a visceral fat problem.

One of the determining factors is, of course, genetics. Where a person carries excess fat is in part determined by where his or her parents carry their excess fat deposits. It is generally the case that family also influences what foods people eat and what constitutes appropriate leisure activity. The fact that Americans today are eating more foods that contain refined sugars and the wrong kinds of fat than ever before coupled with increases in sedentary lifestyle is cause for concern. The advent of advanced technology has given people the opportunity to work less hard to accomplish the same goals. Hours in front of televisions and computer screens are taking away from time spent engaged in physical activity. So, more calories are going in while less are needed for daily activities.

Most Americans just aren’t burning as many calories as they are consuming.

None of this would be of concern though if there were not a variety of potential consequences. Although there is some debate about this, there is a lot of consensus in the medical community about the dangers of living with excess visceral fat. For example, visceral fat has been found to be related to such diseases as Type II diabetes, hypertension, various types of cancer, heart disease, and stroke. While the research is not definitive that having excess visceral fat causes these other health related problems, it is true that persons with more visceral fat are also at higher risk of developing these other diseases.

While body scans (e.g. CT scans) that allow doctors to look at body composition can determine the amount of visceral fat an individual has, these scans can be time intensive and monetarily expensive. So, Dr. McLaughlin went to work to try to determine another way to assess risks of developing excess amounts of visceral fat. His research has suggested that by having adults answer a series of questions related to their current health habits and combining those results with physiological measurements of stress, he can assess whether they are at risk for the development of excess visceral fat. His health assessment asks about a variety of areas, but is short enough that even busy individuals would have time to answer the questions. A computer program easily tabulates the score and feedback is nearly immediate. Dr. McLaughlin is hopeful that this will be just the first step in informing people about their risks of developing this type of fat that is associated with such negative health outcomes. Dr. McLaughlin is confident that his method of early detection is going to revolutionize the way the medical community deals with the harsh realities of overweight and obesity, which are eventual side effects of visceral fat.

Appendix J

Seeking...

Would you like to earn money by participating in research?

The Social Relations lab in the psychology department at Syracuse University is interested in studying health behaviors of **City of Syracuse residents**, ages **18-40**, who are in **relatively good health**. This is a great opportunity to find out more about research that is being conducted by faculty and students at Syracuse University.

In order to be eligible to participate in these paid experiments, you must be at least 18 years of age. Once you provide us with contact and demographic information, we will ask you a few questions about your current health status and inform you whether you are eligible to participate in the current study. Even if you are eligible for participation, you are under no obligation to participate.

If you have any additional questions about this research or think you might be interested in participating, please contact the Social Relations Lab at **(315)-443-2698**.

[FRONT]

Would you like to earn money by participating in research?

The Social Relations lab in the psychology department at Syracuse University is interested in studying health behaviors of **City of Syracuse residents, ages 18-40, who are in relatively good health**. This is a great opportunity to find out more about research that is being conducted by faculty and students at Syracuse University.

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If you have any additional questions about this research or think you might be interested in participating, please contact the Social Relations Lab at
(315)-443-2698.

[BACK]**Research Opportunity:**

Sign up for a new research study.

The Social Relations Lab of the Department of Psychology is interested in studying eating and other health-related habits.

You will be paid at least **\$15** if you complete this study, and you will be entered into a drawing for a 1 in 10 chance of winning \$100.

Call us at (315) 443 - 2698

Monday – Friday from 9am to 5pm to set up an appointment. Located across from Crouse Hospital, near Varsity Pizza.

Appendix K

Phone eligibility screening:

Thank you for contacting the Social Relations Lab at Syracuse University, this is _____ speaking. How may I help you?

May I ask you where you heard or read about this study?

Ok. So, there are a few questions that we ask everyone who expresses interest in participating in this study. Answering these questions is voluntary but it is necessary to determine your eligibility for our current study. Do you have a few minutes now to answer?

(If not, ask if there is a better time to call back? Ask for name and phone number where he/she can be reached at that time.)

(If yes,)...

Could I please have your first and last name?

Do you identify as male or female?

What is your race/ethnicity?

And how old are you?

How tall are you?

What is your best estimate of your current weight?

Are you currently pregnant?

Have you ever received a diagnosis of any of the following: cardiovascular disease, diabetes, or cancer?

(Determine from answers whether individual is eligible...

If no,

I am sorry, but according to one or more of your responses it appears that you do not qualify for the current study. Thank you so much for your interest and your time.

If yes,

According to your responses it appears that you are qualified to participate in the current study. Let me tell you a little more about it. In this study, you will be presented with an assessment of your health behavior habits. After you provide the researcher with answers to each of the questions, you will receive some information about your health. Following the

presentation of this information, you will use a computer to answer a series of questions about your impressions of the process and your general opinions about some other health behaviors. Completion of this study should take less than 1 hour. You will be compensated \$15 if you complete the study and your name will be entered into a drawing for a 1-in-10 chance to win \$100.)

Would you like to schedule an appointment?

Ok. Your appointment is _____. We are located in the Central New York Medical building at 739 Irving Ave. Suite 340B. And just so you know, we will validate your parking if you park in the CNY medical building garage.

One more thing, we like to remind participants of their scheduled appointments the day prior to the appointment. Could you please provide me with a phone number where you might be reached?

Reminder:

May I please speak with _____?

_____ this is _____ with the Social Relations lab at Syracuse University. I am just calling to remind you of your appointment tomorrow at _____. Do you have any questions I can answer?

Ok. See you tomorrow at _____.

Tables

Table 1.
Reliability Coefficients, Means, and Standard Deviations for Scale Measures

Measures	Chronbach's Alpha	Overall Mean (SD)	Whites		Blacks	
			Control Mean (SD)	Experimental Mean (SD)	Control Mean (SD)	Experimental Mean (SD)
Self Esteem:						
Body State	.87	4.78 (1.35)	4.48 (1.48)	4.75 (1.14)	5.41 (1.07)	4.54 (1.48)
Pre-manipulation	.91	5.70 (0.97)	5.26 (1.29)	6.07 (0.54)	5.86 (0.73)	5.70 (1.18)
Post-manipulation	.84	5.78 (1.02)	5.33 (1.19)	6.05 (0.68)	6.07 (0.73)	5.72 (1.18)
Coping Mechanisms:						
Devalue	.56	2.74 (1.14)	2.13 (0.95)	3.19 (1.23)	2.91 (1.12)	2.89 (1.07)
Disengage	.74	2.21 (1.23)	1.87 (0.69)	2.55 (1.22)	2.16 (1.53)	2.25 (1.35)
Discounting	.70	2.79 (0.91)	2.58 (0.59)	3.25 (0.88)	2.86 (0.97)	2.47 (1.15)
Group Based Medical Mistrust:						
Suspicion	.85	2.20 (1.21)	2.01 (0.74)	1.94 (1.05)	2.68 (1.62)	2.15 (1.23)
Group Disparity (HC)	.78	4.75 (1.60)	4.60 (1.74)	5.51 (1.10)	4.21 (1.58)	4.76 (1.70)
Lack of Support (HCP)	.42	2.84 (1.22)	2.41 (0.76)	2.59 (1.08)	3.44 (1.36)	2.91 (1.40)
Health Promotion Behaviors	.81	5.36 (1.01)	5.55 (1.10)	5.69 (0.63)	5.14 (0.97)	5.14 (1.14)
White Middle Class Behavior	.92	3.88 (1.70)	3.98 (1.55)	3.67 (1.19)	5.06 (1.59)	2.94 (1.71)

Note. For White control $N = 20$; White experimental $N = 17$; Black control $N = 19$; Blacks experimental $N = 22$. Thus, overall means are based on $N = 78$.

Table 2.
Descriptive Statistics for Demographic Variables

Demographic Variables	Overall Mean (SD)	Whites		Blacks	
		Control Mean (SD)	Experimental Mean (SD)	Control Mean (SD)	Experimental Mean (SD)
Age	31.23 (7.13)	29.95 (7.23)	31.76 (5.63)	33.16 (6.69)	30.32 (8.41)
Body Mass Index (BMI)	25.83 (4.06)	24.95 (4.17)	26.02 (3.86)	25.57 (4.21)	26.75 (4.07)
Income ^a	6.47 (3.96)	6.83 (4.20)	7.41 (3.86)	4.50 (3.85)	7.10 (3.58)

Note. Sample sizes differed across condition. For Whites in the control condition $N = 20, 20,$ and 18 for age, BMI, and Income, respectively. For Whites in the experimental condition $N = 17$. For Blacks in the control condition $N = 19, 19,$ and 18 for age, BMI, and Income, respectively. For Blacks in the experimental condition $N = 22, 21,$ and 20 for age, BMI, and Income, respectively. Thus, overall means are based on age $N = 78,$ BMI $N = 77,$ and Income $N = 73$.

^a Income was considered as a continuous variable based on the demographics questionnaire. Possible range is 0-20. Although this is not an ideal way to look at this variable, participants reported their income as within some range. And treating this variable as categorical was not feasible given the number of participants that would have fallen within each category.

Table 3.

Post-manipulation Self-Esteem: The Relationship Between Post-manipulation Self-esteem, SES, BMI, Pre-Manipulation Self-esteem, Negative Feedback, and Race (N = 73).

Variable	Zero-Order <i>r</i>									
	SES	Self-Esteem	BMI	Race	FB	BMI x Race	BMI x FB	Race x FB	BMI x Race x FB	Post-Self-Esteem
SES		.07	-.09	-.16	.20*	-.16	.20*	.10	.10	-.02
Self-esteem			-.10	.08	.15	.07	.17	-.02	.00	.88***
BMI				.07	.12	.23	.26	.13	.22	-.15
Race					.04	.98	.06	.59	.58	.11
Feedback						.06	.98	.61	.60	.05
BMI x Race							.10	.60	.62	.09
BMI x FB								.61	.63	.07
Race x FB									.99	-.09
BMI x Race x FB										-.07
LS Mean	6.47	5.72	26.01							.00
SD	3.96	.95	4.06							1.01

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); FB is feedback, which is dichotomous (0=control, 1=negative); x indicates an interaction effect. *** $p < .001$, * $p < .05$, † $p < .10$

Table 4.
Predicting Post-Manipulation Self-Esteem

		<i>b</i>	<i>SE b</i>	β
<i>Step 1</i>				
	Constant	-4.85	0.54	
	SES	-0.02	0.02	-0.07
	Self-Esteem	0.94	0.061	0.89***
	BMI	-0.01	0.01	-0.06
	Race	0.08	0.12	0.04
	Feedback	-0.13	0.12	-0.07
<i>Step 2</i>				
	Constant	-4.51	0.87	
	SES	-0.02	0.02	-0.07
	Self-Esteem	0.90	0.07	0.85***
	BMI	-0.02	0.03	-0.09
	Race	0.60	0.75	0.30
	Feedback	-0.82	0.77	-0.41
	BMI x Race	-0.01	0.03	-0.19
	BMI x Feedback	0.03	0.03	0.44
	Race x Feedback	-0.29	0.24	-0.13
<i>Step 3</i>				
	Constant	-4.15	0.97	
	SES	-0.02	0.02	-0.07
	Self-Esteem	0.90	0.07	0.85***
	BMI	-0.04	0.03	-0.14
	Race	-0.01	1.03	0.00
	Feedback	-1.53	1.14	-0.76
	BMI x Race	0.01	0.4	0.13
	BMI x Feedback	0.06	0.04	0.82
	Race x Feedback	0.98	1.50	0.43
	BMI x Race x FB	-0.05	0.06	-0.60

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); Feedback is dichotomous (0=control, 1=negative); x indicates an interaction effect *** $p < .001$, * $p < .05$, † $p < .10$

Table 5.

Devaluing as a Coping Strategy: The Relationship Between Devaluing, SES, BMI, Self-esteem, Negative Feedback, and Race
($N = 73$).

Variable	Zero-Order r									
	SES	Self-Esteem	BMI	Race	FB	BMI x Race	BMI x FB	Race x FB	BMI x Race x FB	Devalue
SES		.07	-.09	-.16	.20*	-.16	.20*	.10	.10	-.02
Self-esteem			-.10	.08	.15	.07	.17	-.02	.00	.18
BMI				.07	.12	.23	.26	.13	.22	-.06
Race					.04	.98	.06	.59	.58	.11
Feedback						.06	.98	.61	.60	.22*
BMI x Race							.10	.60	.62	.08
BMI x FB								.61	.63	.22
Race x FB									.99	.06
BMI x Race x FB										.05
LS Mean	6.47	5.72	26.01							.01
SD	3.96	.95	4.06							1.15

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); FB is feedback, which is dichotomous (0=control, 1=negative); x indicates an interaction effect. *** $p < .001$, * $p < .05$, † $p < .10$

Table 6.
Predicting Devaluing as a Coping Strategy

		<i>b</i>	<i>SE b</i>	β
<i>Step 1</i>				
	Constant	-.53	1.29	
	SES	-.02	.04	-.07
	Self-Esteem	.16	.14	.13
	BMI	-.02	.03	-.08
	Race	.20	.27	.09
	Feedback	.51	.28	.22†
<i>Step 2</i>				
	Constant	-.85	2.03	
	SES	-.01	.04	-.04
	Self-Esteem	.08	.16	.07
	BMI	-.04	.06	-.02
	Race	2.57	1.74	1.12
	Feedback	-.19	1.80	-.08
	BMI x Race	-.072	.07	-.85
	BMI x Feedback	.05	.07	.55
	Race x Feedback	-.93	.57	-.36
<i>Step 3</i>				
	Constant	-1.24	2.28	
	SES	-.01	.04	-.04
	Self-Esteem	.09	.16	.07
	BMI	.01	.07	.03
	Race	3.23	2.41	1.41
	Feedback	.59	2.67	.26
	BMI x Race	-.10	.09	-1.16
	BMI x Feedback	.02	.10	.19
	Race x Feedback	-2.32	3.53	-.90
	BMI x Race x FB	.05	.14	.57

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); Feedback is dichotomous (0=control, 1=negative); x indicates an interaction effect *** $p < .001$, * $p < .05$, † $p < .10$

Table 7.

Discounting as a Coping Strategy: The Relationship Between Discounting, SES, BMI, Self-esteem, Negative Feedback, and Race
($N = 73$).

Variable	Zero-Order r									
	SES	Self-Esteem	BMI	Race	FB	BMI x Race	BMI x FB	Race x FB	BMI x Race x FB	Discount
SES		.07	-.09	-.16	.20*	-.16	.20*	.10	.10	.26*
Self-esteem			-.10	.08	.15	.07	.17	-.02	.00	.17†
BMI				.07	.12	.23	.26	.13	.22	-.10
Race					.04	.98	.06	.59	.58	-.12
Feedback						.06	.98	.61	.60	.10
BMI x Race							.10	.60	.62	-.14
BMI x FB								.61	.63	.06
Race x FB									.99	-.16†
BMI x Race x FB										-.20*
LS Mean	6.47	5.72	26.01							-.06
SD	3.96	.95	4.06							1.19

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); FB is feedback, which is dichotomous (0=control, 1=negative); x indicates an interaction effect. *** $p < .001$, * $p < .05$, † $p < .10$

Table 8.
Predicting Discounting as a Coping Strategy

		<i>b</i>	<i>SE b</i>	β
<i>Step 1</i>				
	Constant	-0.94	1.32	
	SES	0.07	0.04	0.22†
	Self-Esteem	0.18	0.15	0.15
	BMI	-0.2	0.04	-0.07
	Race	-0.23	0.28	-0.10
	Feedback	0.11	0.27	0.05
<i>Step 2</i>				
	Constant	-2.62	2.04	
	SES	0.08	0.04	0.28*
	Self-Esteem	0.15	0.16	0.12
	BMI	0.04	0.06	0.12
	Race	0.51	1.75	0.22
	Feedback	3.38	1.81	1.43†
	BMI x Race	0.00	0.07	-0.04
	BMI x Feedback	-0.10	0.07	-1.17
	Race x Feedback	-1.20	0.57	-0.45*
<i>Step 3</i>				
	Constant	-0.59	2.21	
	SES	0.08	0.04	0.27*
	Self-Esteem	0.13	0.15	0.10
	BMI	-0.04	0.07	-0.13
	Race	-2.86	2.35	-1.21
	Feedback	-0.61	2.60	-0.26
	BMI x Race	0.13	0.09	1.47
	BMI x Feedback	0.05	0.10	0.61
	Race x Feedback	5.87	3.43	2.21†
	BMI x Race x FB	-0.27	0.13	-2.81*

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); Feedback is dichotomous (0=control, 1=negative); x indicates an interaction effect *** $p < .001$, * $p < .05$, † $p < .10$

Table 9.
Disengagement as a Coping Strategy: The Relationship Between Disengagement, SES, BMI, Self-esteem, Negative Feedback, and Race (N = 73).

Variable	Zero-Order <i>r</i>									
	SES	Self-Esteem	BMI	Race	FB	BMI x Race	BMI x FB	Race x FB	BMI x Race x FB	Disengage
SES		.07	-.09	-.16	.20*	-.16	.20*	.10	.10	-.05
Self-esteem			-.10	.08	.15	.07	.17	-.02	.00	-.09
BMI				.07	.12	.23	.26	.13	.22	-.15†
Race					.04	.98	.06	.59	.58	.02
Feedback						.06	.98	.61	.60	.14
BMI x Race							.10	.60	.62	.01
BMI x FB								.61	.63	.07
Race x FB									.99	.02
BMI x Race x FB										-.04
LS Mean	6.47	5.72	26.01							.01
SD	3.96	.95	4.06							1.25

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); FB is feedback, which is dichotomous (0=control, 1=negative); x indicates an interaction effect. *** $p < .001$, * $p < .05$, † $p < .10$

Table 10.
Predicting Disengagement as a Coping Strategy

	<i>b</i>	<i>SE b</i>	β
<i>Step 1</i>			
Constant	2.54	1.40	
SES	-.03	.04	-.09
Self-Esteem	-.18	.16	-.14
BMI	-.06	.04	-.20
Race	.04	.30	.02
Feedback	.50	.30	.20
<i>Step 2</i>			
Constant	.94	2.20	
SES	-.01	.04	-.05
Self-Esteem	-.16	.17	-.12
BMI	-.01	.07	-.04
Race	-.61	1.89	-.25
Feedback	4.40	1.95	1.78*
BMI x Race	.04	.07	.44
BMI x Feedback	-.14	.08	-1.5†
Race x Feedback	-.71	.62	-.26
<i>Step 3</i>			
Constant	3.29	2.38	
SES	-.02	.04	-.06
Self-Esteem	-.16	.17	-.12
BMI	-.01	.07	-.04
Race	-.61	1.89	-.24
Feedback	-0.21	2.79	-0.09
BMI x Race	0.19	0.10	2.10†
BMI x Feedback	0.04	0.11	0.47
Race x Feedback	7.46	3.69	2.69*
BMI x Race x FB	-0.32	0.14	-3.11*

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); Feedback is dichotomous (0=control, 1=negative); x indicates an interaction effect *** $p < .001$, * $p < .05$, † $p < .10$

Table 11.

Health Promotion Behaviors: The Relationship Between Health Promotion Behaviors, SES, BMI, Self–esteem, Negative Feedback, and Race (N = 73).

Variable	Zero-Order <i>r</i>									
	SES	Self-Esteem	BMI	Race	FB	BMI x Race	BMI x FB	Race x FB	BMI x Race x FB	HPB
SES		.07	-.09	-.16	.20*	-.16	.20*	.10	.10	-.03
Self-esteem			-.10	.08	.15	.07	.17	-.02	.00	.06
BMI				.07	.12	.23	.26	.13	.22	.13
Race					.04	.98	.06	.59	.58	-.24*
Feedback						.06	.98	.61	.60	.05
BMI x Race							.10	.60	.62	-.23*
BMI x FB								.61	.63	.09
Race x FB									.99	-.12
BMI x Race x FB										-.08
LS Mean	6.47	5.72	26.01							-.01
SD	3.96	.95	4.06							1.00

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); FB is feedback, which is dichotomous (0=control, 1=negative); x indicates an interaction effect. *** $p < .001$, * $p < .05$, † $p < .10$

Table 12.
Predicting Health Promotion Behavior

		<i>B</i>	<i>SE b</i>	β
<i>Step 1</i>				
	Constant	-1.14	1.12	
	SES	-0.02	0.03	-0.72
	Self-Esteem	0.10	0.13	0.09
	BMI	0.04	0.03	0.15
	Race	-0.54	0.24	-0.27*
	Feedback	0.08	0.24	0.40
<i>Step 2</i>				
	Constant	-0.43	1.78	
	SES	-0.02	0.03	-0.09
	Self-Esteem	0.05	0.14	0.05
	BMI	0.02	0.05	0.08
	Race	0.93	1.53	0.47
	Feedback	-2.40	1.57	-1.21
	BMI x Race	-0.06	0.06	-0.77
	BMI x Feedback	0.10	0.06	1.32
	Race x Feedback	-0.03	0.50	-0.01
<i>Step 3</i>				
	Constant	-2.71	1.88	
	SES	-0.12	0.03	-0.07
	Self-Esteem	0.08	0.13	0.08
	BMI	0.10	0.06	0.41
	Race	4.71	2.00	2.37*
	Feedback	2.09	2.21	1.05
	BMI x Race	-0.21	0.08	-2.78**
	BMI x Feedback	-0.08	0.09	-1.07
	Race x Feedback	-7.97	2.92	-3.58**
	BMI x Race x FB	0.31	0.11	3.76**

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); Feedback is dichotomous (0=control, 1=negative); x indicates an interaction effect *** $p < .001$, * $p < .05$, † $p < .10$

Table 13.
White Middle-Class Behaviors: The Relationship Between White Middle-Class Behaviors, Coping Strategies, and Race (N = 79).

Variable	Zero-order <i>r</i>
	White Middle-Class Behavior
Disengagement	.10
Discounting	-.13
Devaluing	.00
Race	.03
Disengagement x Race	.09
Discounting x Race	.01
Devaluing x Race	.01

Note: None of the variables presented are significant predictors of white middle-class behaviors

Table 14.

Body State Self-Esteem: The Relationship Between Body State Self-esteem, SES, BMI, Pre-Manipulation Self-esteem, Negative Feedback, and Race (N = 73).

Variable	Zero-Order <i>r</i>									
	SES	Self-Esteem	BMI	Race	FB	BMI x Race	BMI x FB	Race x FB	BMI x Race x FB	State_Self-Esteem
SES		.07	-.09	-.16	.20*	-.16	.20*	.10	.10	-.10
Self-esteem			-.10	.08	.15	.07	.17	-.02	.00	.62***
BMI				.07	.12	.23	.26	.13	.22	-.39***
Race					.04	.98	.06	.59	.58	.13
Feedback						.06	.98	.61	.60	-.11
BMI x Race							.10	.60	.62	-.17
BMI x FB								.61	.63	.08†
Race x FB									.99	-.12
BMI x Race x FB										-.16
LS Mean	6.47	5.72	26.01							-.02
SD	3.96	.95	4.06							1.38

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); FB is feedback, which is dichotomous (0=control, 1=negative); x indicates an interaction effect. *** $p < .001$, * $p < .05$, † $p < .10$

Table 15.
Predicting Body State Self-Esteem

		<i>B</i>	<i>SE b</i>	β
<i>Step 1</i>				
	Constant	-1.76	1.09	
	SES	-0.04	0.03	-0.13
	Self-Esteem	0.88	0.12	0.61***
	BMI	-0.11	0.03	-0.33***
	Race	0.27	0.23	0.10
	Feedback	-0.40	0.24	-0.15†
<i>Step 2</i>				
	Constant	-3.22	1.73	
	SES	-0.04	0.03	-0.10
	Self-Esteem	0.93	0.13	0.64***
	BMI	-0.07	0.05	-0.20
	Race	-0.25	1.49	-0.09
	Feedback	2.49	1.54	0.91
	BMI x Race	0.02	0.06	0.23
	BMI x Feedback	-0.11	0.06	-1.08†
	Race x Feedback	-0.12	0.49	-0.04
<i>Step 3</i>				
	Constant	-1.59	1.89	
	SES	-0.04	0.03	-0.11
	Self-Esteem	0.91	0.13	0.63***
	BMI	-0.13	0.06	-0.38*
	Race	-2.94	2.00	-1.07
	Feedback	-0.70	2.22	-0.26
	BMI x Race	0.13	0.08	1.26
	BMI x Feedback	0.02	0.09	0.15
	Race x Feedback	5.54	2.93	1.80†
	BMI x Race x FB	-0.22	0.11	-1.94†

Note: SES is socioeconomic status based on estimated annual income; Self-Esteem is pre-manipulation general self-esteem, BMI is Body Mass Index; Race is dichotomous (0=White, 1=Black); Feedback is dichotomous (0=control, 1=negative); x indicates an interaction effect *** $p < .001$, * $p < .05$, † $p < .10$

Figures

Figure 1.

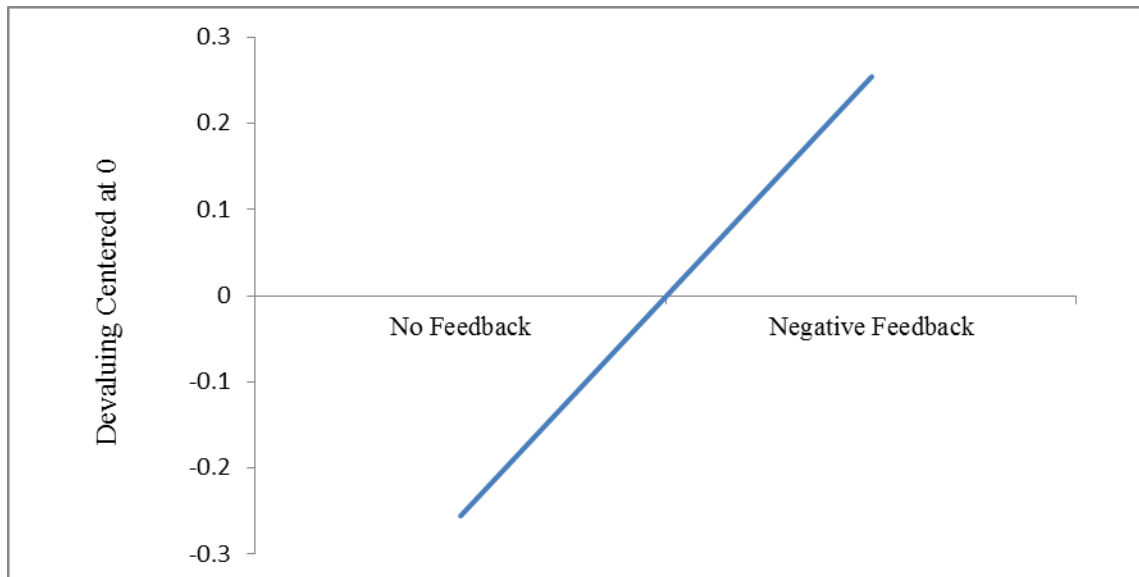
Main Effect of Feedback Condition on Devaluing (Mean Centered)

Figure 2.

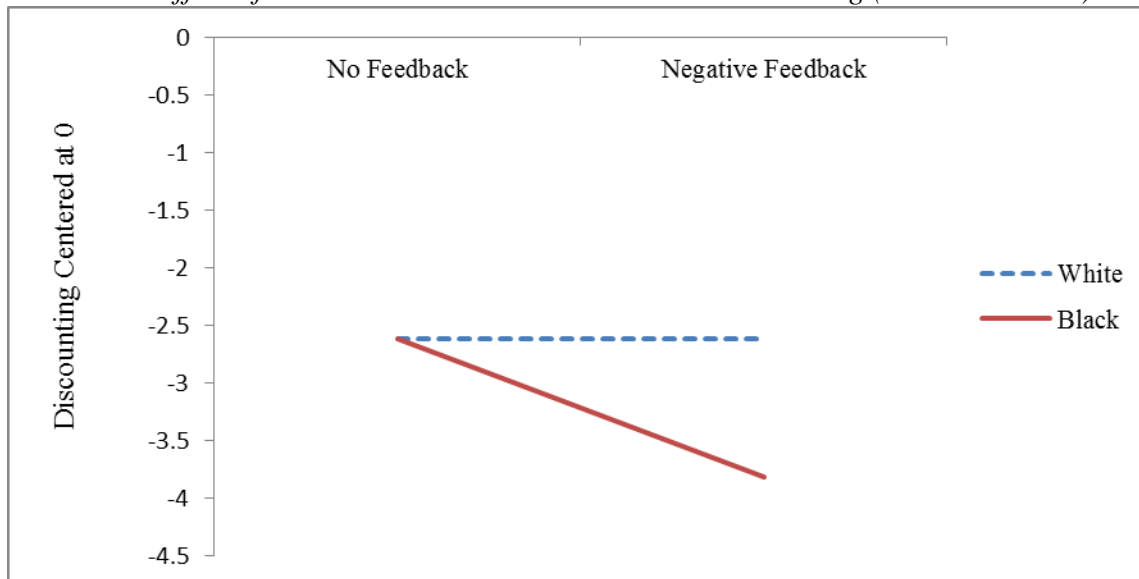
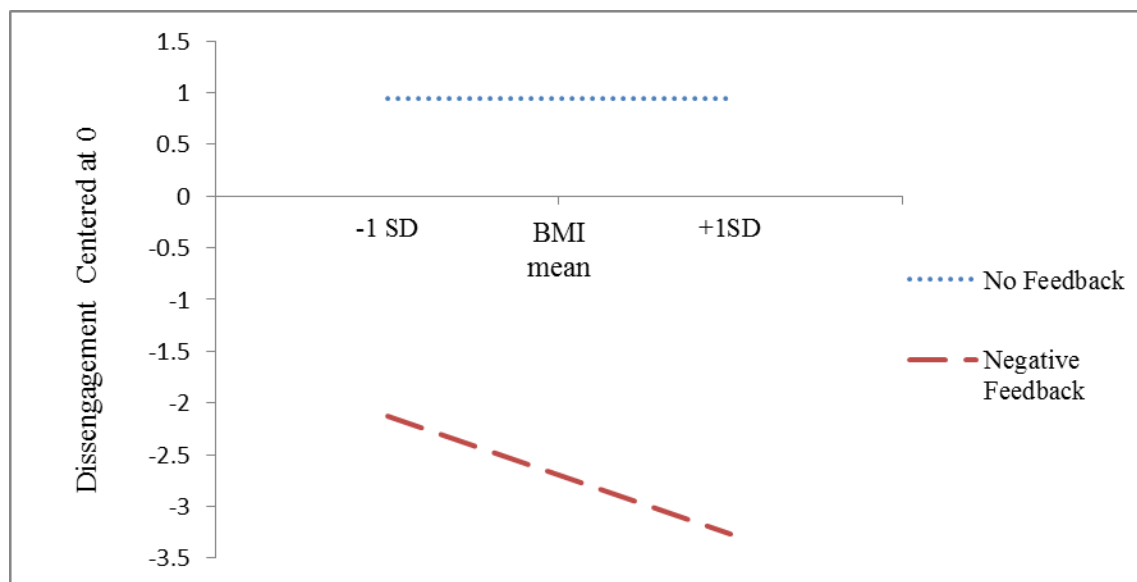
Interaction Effect of Race and Feedback Condition on Discounting (Mean Centered)

Figure 3.
Interaction Effect of BMI and Feedback Condition on Disengagement (Mean Centered)



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CONTACT INFORMATION

Lindsay R. Kraynak
 115 Ellen St.
 Syracuse, NY 13208
 724-244-1057
 lrkayna@syr.edu

EDUCATION

Thesis: Defended May 04, 2010
Coping with Negative Feedback in the Health Domain: Are Race Differences in Coping Related to Weight Disparities among Blacks and Whites?

Psychology, B.S.
 Valedictorian

Geneva College, Beaver Falls, PA
 May, 2006

TEACHING HISTORY**Teaching Associate—Social Psychology**

Fall '08-Spring '09

Responsible for keeping office hours to meet with students. Additional duties varied but included attending lectures, grading papers and assignments, managing the course Blackboard site, and keeping track of student grades.

Teaching Assistant—Introductory Psychology

Fall '09-Spring '10

Duties included attending weekly meetings with primary instructor and TA staff, attending all lectures (first year only), and leading recitations each week. Recitation responsibilities included covering material missed during lecture and additional textbook material, grading all assignments and essay quizzes, holding weekly office hours, responding to all student e-mail, and maintaining an accurate grade book for each section.

Fall '07-Spring '08

Fall '06-Spring '07

POSTER PRESENTATIONS

Newman, L. S., & Kraynak, L. R. (2010, January). *When "I'm Sorry" Isn't Good Enough: Immediate Reactions to Apologies Depend on the Ambiguity of the Transgression*. Poster session presented at the annual meeting of the Society for Personality and Social Psychology, Las Vegas, NV.

Kraynak, L. R., & Eccleston, C. P. (2009, February). *Us vs. Them: Intergroup Consequences of Threats to System Justifying Beliefs*. Poster session presented at the annual meeting of the Society for Personality and Social Psychology, Tampa, FL.

Kraynak, L. R., Tzeng, D., Eccleston, C. P., & Santuzzi, A. M. (2008, May). *A Weighty Decision: The Influences of Applicant Weight and Job Type on Hiring Decisions*. Poster session presented at the annual meeting of the Association for Psychological Science, Chicago, IL.

Kraynak, L. R., Eccleston, C. P., & Smyth, J. M. (2008, February). *Racial and Gender Achievement Gaps: Where do Black Female Students Fit?* Poster session presented at the annual meeting of the Society for Personality and Social Psychology, Albuquerque, NM.

MANUSCRIPTS

Eccleston, C. P., Kaiser, C. R., Kraynak, L. R. (2010). Shifts in justice beliefs induced by Hurricane Katrina: The impact of claims of racism. *Group Processes and Intergroup Relations*, *13*, 571-584.

(In prep)

Newman, L. S., & Kraynak, L. R. The ambiguity of a transgression and the type of apology influence immediate reactions.

ONGOING PROJECTS:

Race and Health Disparities

Apologies and Transgression Type

The impact of age stereotypes on memory performance

PROFESSIONAL AFFILIATIONS

Society for Personality and Social Psychology, Association for Psychological Science, American Psychological Association

SERVICE to PSYCHOLOGY DEPARTMENT at SYRACUSE UNIVERSITY

Psychology Action Committee—Co-President

2008-2010