

THE USE OF EMPATHY INTERVENTIONS IN REDUCING OBESITY
STIGMATIZATION

BY

LISA R. THOUAS

A Thesis submitted to the Faculty of Graduate Studies

in partial fulfillment of the requirements

for the degree of

MASTER OF ARTS

Department of Psychology

University of Manitoba

Winnipeg, Manitoba

May, 2008

**THE UNIVERSITY OF MANITOBA
FACULTY OF GRADUATE STUDIES

COPYRIGHT PERMISSION**

The Use of Empathy Interventions in Reducing Obesity Stigmatization

BY

Lisa R. Thouas

**A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of
Manitoba in partial fulfillment of the requirement of the degree**

Of

MASTER OF ARTS

Lisa R. Thouas © 2008

Permission has been granted to the University of Manitoba Libraries to lend a copy of this thesis/practicum, to Library and Archives Canada (LAC) to lend a copy of this thesis/practicum, and to LAC's agent (UMI/ProQuest) to microfilm, sell copies and to publish an abstract of this thesis/practicum.

This reproduction or copy of this thesis has been made available by authority of the copyright owner solely for the purpose of private study and research, and may only be reproduced and copied as permitted by copyright laws or with express written authorization from the copyright owner.

Table of Contents

	Page
1.0 Abstract	3
2.0 Acknowledgements	4
3.0 Introduction	
3.1 Obesity: Definition, Prevalence and Causes	5
3.2 Stigma: A Definition	7
3.3 Stereotype Content Model	7
3.4 The Consequences of Obesity Stigma	9
2.31 Medical Consequences	9
2.32 Economic Consequences	10
2.33 Social Consequences	10
2.34 Interpersonal Consequences	11
2.35 Psychological Consequences	11
3.5 Why Develop a Stigma-Reduction Intervention?	12
3.6 Empathy: Definition and Interventions	13
3.7 Purpose of the Study	15
3.8 Hypotheses	15
4.0 Method	
4.1 Participants	16
4.2 Interventions	16
4.3 Measures	18
4.4 Procedure	20
4.5 Analyses	22
5.0 Results	23
6.0 Discussion	31
7.0 References	42
8.0 Appendices	50

Abstract

In the current study, the author tested the effects of three interventions in reducing obesity stigmatization. The study involved giving 180 first year university students three pre-test measures [the Obese Person's Trait Survey (OPTS), Weiner, Perry and Magnusson's (1988) items, and the Antifat Attitudes Test (AFAT)] followed by one of three interventions (Status Quo, Traditional Empathy Intervention, Stereotype content Model Empathy Intervention). After receiving the intervention, participants were then given the same measures that had been given prior to receiving the intervention (OPTS, Weiner et al's items, AFAT).

The change in participants' reported feelings, attitudes and thoughts about obese individuals was evaluated in a repeated measures MANOVA. The results indicate that a significant reduction in negative attitudes was achieved when participants read the journal format of the TE intervention and when participants viewed the SCME video intervention, while a significant reduction in negative stereotypes was achieved when participants viewed the TE video intervention and read the SCME journal intervention.

Acknowledgments

I would like to thank the many people who helped me while I worked on this thesis either by way of research advice or by way of emotional support. I would like to thank my Advisor, Dr. Michael LeBow, for his advice and support throughout the planning, writing and presenting stages of this thesis and for his efforts to help me complete this project in a timely manner. I would like to thank my committee members for contributing their experience and expertise to this project in order to help it become a well-rounded look at a very important topic. Special thanks to Dr. David Martin for his generous support and valuable knowledge in the area of empathy and Ms. Lisa Seymour for providing me with positive feedback on my paper. I would also like to give a special thanks to Teressa Grosko who was a mentor and support through this entire process. I would like to thank my wonderful friends, Ms. Colleen Murphy, who helped me perfect both my proposal and defense presentations, Ms. Amber Mather, a statistics genius who helped me in completing the statistical analyses and Ms. Tiffany Helgason who helped me edit this paper. I would like to thank my amazing parents and the people I most admire, George and Cynthia Paquette, for providing me with love and support any and every time I needed them. Finally I would like to thank my incredible husband, Mr. George Thouas, someone I know I can always count on, who stands by me and who always believes in me.

*The Use of Empathy Interventions in Reducing Obesity Stigma**Obesity: Definition, Prevalence and Causes.*

Obesity is described by the World Health Organization (WHO) as “an accumulation of excess body fat, to an extent that may impair health” (World Health Organization [WHO], 2007). The Body Mass Index (BMI) is the most commonly used tool in assessing the health risks associated with a person’s weight (kilograms) relative to his or her height (meters²) (Spence-Jones, 2003). This BMI calculation produces a number which falls into one of four weight classifications; underweight, normal weight, overweight and obese. These classifications are based on the varying levels of health risks associated with each weight-to- height ratio (WHO, 2007). A BMI of 18.5 or less is classified as “underweight” between 18.5 and 24.9 as “normal weight” between 25.0 and 29.9 as “overweight” and finally above 30 as “obese”. Individuals in the underweight and overweight classifications are at an increased risk, and those in the obese classification are at the highest risk for developing health problems (WHO, 2007).

Obesity is a condition that affects a growing proportion of people worldwide, with children, teenagers, adults and older adults similarly affected. According to Spence-Jones (2003) fifty percent of Canadian adults are considered to be overweight or obese, this number has almost doubled since 1998. Worldwide, over a billion

people are considered to be overweight or obese (Nemerson, Danowski, & Trilling, 2004). These increases in obesity seem to be due to a combination of several contributing factors, although many people believe this condition is caused by a lack of exercise, lack of self-control and overindulgence (DeJong, 1980; King et al., 2005; Puhl, 2004).

Obesity is a complicated condition that is the result of the interaction of various elements, with biology and environment playing the largest roles. Biology is a strong contributing factor to the development and maintenance of obesity. Research has supported the finding that obesity is a predisposed condition determined by the interaction between environment and genetics (Holmes, 1998; Seiders & Petty, 2004). Genetics seem to predispose an individual to developing obesity, with the environment providing the opportunity to gain weight. Our current obesogenic environment, an environment that seems to encourage obesity through an abundance of readily available, low-cost, high calorie foods and a decreased need for physical activity, has lead to an imbalance between calories consumed and energy expended, resulting in weight gain for many individuals (Hewitt, 1997; Seiders et al., 2004; Swinburn & Egger, 2004; Wang & Brownell, 2005).

Biology also plays a part in the maintenance of obesity. Research has shown that one of the biggest problems associated with obesity and weight loss is not the

initial weight loss, but the maintenance of weight loss over time (Rogge, Greenwald & Golden, 2004). This may be due to the enlargement of fat cells (hypertrophy of fat cells) and/or the extra fat cells (hyperplasia of fat cells) that is produced when individuals gain weight. This hypertrophy and hyperplasia of fat cells makes it more difficult to lose weight or maintain a lower weight after weight loss (Bray, 2004; Holmes, 1998).

Stigma: A Definition.

Obesity stigma is a type of stigmatization or discrimination frequently experienced by individuals who are overweight or obese. Obesity stigmatization has been described as “the last acceptable prejudice” (Holmes, 1998, p.4). This type of stigma is characterized by the possession of a characteristic or condition perceived to be undesirable, visible, controllable, and sometimes harmful, resulting in society’s disapproval and even disgust of that person (Crocker & Major, 1989; DeJong, 1980; Dovidio, Major & Crocker, 2000; Puhl & Brownell, 2003). King, Hebl and Heatherton (2005) argue that stigma is made worse when a person is perceived to have characteristics perceived to be low in both competence and warmth.

Stereotype Content Model

The Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002) has used empathy to describe the basis of stereotypes and stigma. This model describes

stereotypes and stigma as being due to the target's perceived warmth and competence, each of which are seen as lying on a continuum from low to high (Fiske, Cuddy, Glick, & Xu, 2002). According to this model, individuals perceived to be low in warmth and competence, elicit very little empathy from others and, as a result are often subjected to discrimination and stigmatization. Research has found that these stereotypes fall into four clusters of competence and warmth: low competence and low warmth resulting in feelings of contempt towards the target, high competence and low warmth resulting in feelings of envy towards the target, low competence and high warmth resulting in feelings of pity for the target, and finally, high competence and high warmth resulting in a feeling of similarity, admiration and liking towards the target (Fiske, Cuddy, Glick & Xu, 2002). According to the Stereotype Content Model (2002), people who are seen as being low in both warmth and competence are more likely to experience stigmatization and discrimination (King et al., 2005; Lee & Fiske, 2006).

A person perceived to be low in warmth is described by Lee and Fiske (2006) as being unlikable, intolerant, insincere, and threatening. An individual perceived to be low in competence, on the other hand, is described by Lee and Fiske (2006) as being incompetent, dumb, not very determined and impractical. Obese individuals are often perceived to be low in both these dimensions and as the Stereotype Content Model predicts, are frequently stigmatized and described as lazy, undisciplined,

indulgent, stupid, ugly, unhappy and blame-worthy for causing their current weight condition (King, Hebl & Heatherton, 2005; Puhl, 2004).

The stigma and discrimination experienced by obese individuals often have many consequences. What follows is a detailed discussion of the consequences of obesity including the medical, economic, social, interpersonal and psychological consequences.

The Consequences of Obesity:

Medical Consequences.

Obesity is associated with an increased risk of many health problems. The risk of several physical health problems may be reduced through weight loss; these include hypertension, coronary heart disease, Type-2 diabetes, osteoarthritis, stroke, and certain types of cancer (Seiders et al., 2004).

Due to the increased risk for developing health problems, obese and overweight individuals may require more attention from doctors, nurses, psychologists and other healthcare professionals. Stigma and discrimination at the hands of these professionals, in the form of criticism, inappropriate comments and negative attitudes, may have a very negative impact on an overweight person (Puhl, 2004; Puhl, Schwartz & Brownell, 2005). Some severely obese patients are also denied some basic health care services such as the use of blood pressure cuffs, wheelchairs and MRI or

CAT scans because their size prohibits them from using the standard equipment (Carr & Friedman, 2005). These negative experiences discourage overweight individuals from seeking health care, putting them at an even higher risk for developing health problems. This is a serious consequence, considering that these individuals are more apt to have health problems in the first place (Rogge et al., 2004). The medical consequences of obesity may be made worse by economic disadvantages, making it more difficult to purchase healthier foods or medication that may be necessary to reduce some weight-related medical conditions.

Economic Consequences.

There are several economic disadvantages associated with obesity. Obese individuals, on average, tend to report a lower average income and describe having experienced discrimination in the workplace (Rogge et al., 2004). Research has found that obese and overweight individuals are less likely to be hired or promoted and are more likely to have lower wages because of their weight status (Puhl, 2004; Teachman, 2005). These economic consequences of obesity may exacerbate other problems associated with obesity by limiting the resources the individual has available, such as access to social programs or mental health services.

Social Consequences.

Research has shown that obesity is viewed negatively because it is seen as

being unhealthy, unwanted and preventable (DeJong, 1980; Wang, Brownell & Wadden, 2004). Obese people are often blamed for causing their current weight condition and are viewed as being stupid, lazy, undisciplined, and gluttonous (DeJong, 1980; King et al., 2005; Puhl, 2004). Even those who are overweight rate an obese and overweight person as less likeable than an average weighted person (Wang et al., 2004). Along with these social complications, overweight individuals are also frequently and significantly affected by interpersonal and psychological consequences of obesity stigmatization (Puhl, 2004; Rogge et al., 2004; Teachman, 2005).

Interpersonal Consequences.

Along with social stigmatization and discrimination, obese and overweight individuals often feel the interpersonal consequences of their stigmatized status. People who are obese are less likely to date or to be married and are more likely to be socially isolated because of their weight (Rogge et al., 2004). Obese people feel the humiliating effects of this social and interpersonal stigma by being ridiculed, despised and avoided by others, frequently causing psychological distress (Carr & Friedman, 2005; Kalisch, 1972).

Psychological Consequences.

Along with the social, economic and medical difficulties, many obese and overweight individuals experience significant psychological consequences of the

stigma they experience. Some of these psychological consequences include lower self-acceptance and self-esteem, negative body image, feelings of powerlessness and humiliation, social isolation, anxiety, depression, and suicidal ideation (Carr & Friedman, 2005; Latner, Stunkard & Wilson, 2005; Puhl, Schwartz, & Brownell, 2005; Rogge et al., 2004). These psychological symptoms are exacerbated by the stigma and discrimination an overweight or obese person experiences (Carr & Friedman, 2005; Puhl, Schwartz & Brownell, 2005).

Why Develop a Stigma-Reduction Intervention?

Because there are so many consequences of being overweight or obese, many interventions have focused on reducing the excess weight that is causing the problem (e.g., Hansen, Dendale, Berger, Van-Loon, & Meeuser, 2007; Jakicic, Otto, 2005). The difficulty with these interventions is that long-term weight loss is difficult to achieve, obesity rates are increasing, and the stigmatization of obesity is devastating (DeJong, 1980; Puhl, 2004; Puhl, Schwartz, & Brownell, 2005; Spence-Jones, 2003; Teachman, 2005). People frequently blame the overweight individual for their condition and view him or her as being incompetent and unlikable, despite the fact that their weight status is caused by a complex interplay of factors.

The fact that the prevalence of obesity is increasing and that there are so many consequences associated with this condition suggest that interventions need to be

researched in order to examine how to reduce some of the associated social, interpersonal and psychological consequences.

Empathy: Definition and Interventions.

Empathy, “an emotional response congruent with the perceived plight of the person in need”, has been investigated for its potential to reduce stigmatization (Batson, Early & Salvarani, 1997). Empathy involves both a cognitive and an emotional component; the cognitive component involves being able to take the target’s perspective, while the emotional, or affective, component of empathy involves being able to experience the target’s emotions (Dymond, 1950; Ohbuchi, 1988; Stotland & Smith, 1969).

Research has shown that empathy is increased when the target self-discloses and when the empathizer believes he or she is similar to, or has experienced similar situations as, the target (Ohbuchi, 1988; Yabar & Hess, 2007). These conditions create the experience of perceived similarity and warmth of the target, allowing the empathizer to imagine the target’s experiences more vividly and to more easily take the target’s perspective (Ohbuchi, 1988; Yabar & Hess, 2007).

Existing research on empathy interventions has produced conflicting results regarding the effectiveness of empathy interventions in reducing obesity stigmatization. One study, conducted by Teachman, Gapinski, Brownness, Rawlins and

Jeyaram (2003), attempted to increase empathy by having participants read the experiences of stigmatization and discrimination experienced by an obese woman.

This intervention was effective in reducing implicit bias in overweight participants but was ineffective in altering the thoughts and feelings of average weight participants.

This intervention may have only been effective for the overweight participants because of their perceived similarity to the target, enabling them to more easily take the target's perspective.

Another study, conducted by Gapinski, Schwartz and Brownell (2006), examined the effects of having research participants view a 10-minute video of an obese woman's first hand experiences of discrimination. This study found no significant effect of the empathy intervention in increasing empathy and reducing obesity stigma.

Although a similar study, that investigated the effects of video presentation on stigma reduction, was conducted by Walters (1994). Walters found an increase in empathy and a decrease in stigma towards homosexuals in college students after they viewed video scenarios of how they were discriminated against.

A third study, conducted by Grosko (2007), found conflicting that seemed to challenge other empathy intervention findings. This study examined, among other stigma-reduction interventions, how an empathy intervention, where participants read

a first hand story of an obese woman's experiences, accomplished this goal. Grosko's (2007) empathy intervention proved to be one of the three most effective interventions examined in this study.

These studies highlighted the need to investigate the reasons why some empathy interventions are very effective in reducing stigma, while others are not. Grosko's (2007) empathy intervention may have made the target person more realistic and more competent; based on the Stereotype Content Model this would increase the participants' perception of the target's competence and warmth, thereby increasing the evocation of empathy (King et al., 2005).

Purposes of this Study were to:

1. Replicate prior empathy intervention research (e.g. Grosko, 2007).
2. Determine whether the SCME intervention was more effective in reducing stigma than the other two interventions.
3. Determine whether an intervention presented by video was more effective in reducing obesity stigmatization than an intervention presented as a journal entry.

Hypotheses.

Hypothesis I: Participants in the Traditional Empathy Intervention group would report higher levels of empathy and lower levels of stigmatization than the

Status Quo group.

Hypothesis II: Following the logic of the Stereotype Content Model, the Stereotype Content Model Empathy Intervention (SCME) would be more effective at decreasing levels of stigmatization than the Status Quo and Traditional Empathy intervention.

Hypothesis III: The video presentation method would be more effective than the journal presentation method in increasing empathy and reducing stigmatization.

Method

Participants.

Participants were 180 first year University of Manitoba students; these students were given course credit for participation in this study. Participants read and signed the consent form, modified from Grosko's (2007) consent form, prior to participating in the study (Appendix I).

Interventions.

Status Quo. The Status Quo intervention, which was not intended to influence feelings, attitudes or thoughts about obese individuals, required participants to read a 539 word document or view the same words presented in a 2 minute news-type story about current research findings in the obesity area (Appendix II). This intervention was the same intervention used in Puhl's (2004) study to compare the effectiveness of

the other stigma-reducing interventions.

The video presentation method of the Status Quo intervention was acted out by an average weighted woman sitting at a desk as though she were a news anchor. An average weighted woman was chosen to act out this video because most news anchors are of average weight and the video was intended to appear as realistic and believable as possible.

Traditional Empathy Intervention. This intervention involved reading a 599 word document or viewing the same words presented in a 2 minute video of an obese woman describing her first hand account of obesity stigmatization (Appendix III).

This intervention was a replica of Grosko's (2007) Empathy Intervention. This intervention was intended to increase empathy and to replicate Grosko's (2007) research findings.

Stereotype Content Model Empathy (SCME) Intervention. The SCME Intervention was based on the Stereotype Content Model where perceived competence and warmth are believed to be important factors that increase the evocation of empathy and reduce the experience of stigma (Fiske, Cuddy, Glick & X, 2002).

Participants in the SCME Intervention group read a 487 word document or viewed the same words presented in a 2 minute video of an obese woman's story (Appendix IV).

This intervention was designed by the researcher with the intent of increasing the

perception of the target's competence and warmth, in effect testing the Stereotype Content Model (Fiske et al., 2002). The perception of the obese woman's competence was increased by showing her to be task competent, intelligent, determined and practical (Lee and Fiske, 2006). The perception of the obese woman's warmth was increased by showing her as a tolerant, sincere and non-threatening person (Lee and Fiske, 2006).

The video presentation method for both the TE and SCME interventions involved the same obese actress acting out, with emotion, the words on the respective journal intervention. A professional review of the SCME video intervention was completed by clinical psychology graduate students and ensured that the target did in fact appear warm and competent.

Measures.

Interpersonal Reactivity Index (IRI). The IRI, developed by Davis (1980), is a measure of trait empathy. It is a questionnaire with 28 statements rated on a 5-point Likert type scale ranging from 1 (does not describe me well) to 5 (describes me very well) (Appendix IX). This measure contains four 7-item scales; the Perspective-Taking scale, Empathic Concern scale, Fantasy scale and the Personal Distress scale, respectively, produce a total empathy score (Davis, 1980). This index has acceptable internal reliability with an alpha coefficient ranging from .70 to .77 for the four

subscales (Davis, 1980).

Obese Person's Trait Survey (OPTS). The OPTS, developed by Puhl (2004), is a measure of the support of positive and negative stereotypes about obese individuals. This measure involves estimating the percentage of people who possess twenty stereotypical traits, then rating the confidence in this estimate (Appendix VI). This confidence rating is made on a 9-point scale, ranging from 1 (Not at all confident) to 9 (Extremely confident). The positive and negative trait subscales have a good internal reliability, with a Cronbach's alpha of .83 and .73, respectively (Puhl, Schwartz & Brownell, 2005).

Weiner, Perry & Magnusson's (1988) Items. Weiner et al.'s (1988) items questionnaire is a measure of feelings about obese individuals. The amount of liking, pity, blame and anger a participant feels towards the obese target is measured in this 7-item questionnaire (Appendix VII). These 7 statements are rated on a 9-point Likert type scale ranging from 1 (Strongly Disagree) to 9 or (Strongly Agree). This measure has a Cronbach's alpha of 0.58 at pre-test and 0.64 at post-test (Grosko, 2007).

Antifat Attitudes Test (AFAT). The AFAT (Lewis, et al., 1997) is a measure of attitudes such as respect for obese people, belief about an obese person's attractiveness, and the belief about the controllability of weight. These attitudes are

based on the ratings of 47 statements, such as “Society is too tolerant of fat people” on a 5-point Likert type scale (Appendix VII). There are three subscales included in this measure: social character, physical unattractiveness and weight controllability (Lewis et al., 1997). Grosko (2007) revised of the original AFAT statements so they would reflect the target person presented in her intervention, this is the same measure that was used in the present study. This measure has good internal reliability, with a Cronbach’s alpha of 0.87 for the character subscale, 0.85 for the physical subscale, and 0.88 for the controllability of weight subscale (Grosko, 2007). These same items will be used for the present study.

Procedure

The purpose of this study was to investigate the effectiveness of empathy interventions in reducing obesity stigmatization in first year university students. This was done by examining changes in participants’ thoughts, feelings and attitudes about obese individuals before and after being exposed to one of three intervention groups: Status Quo, Traditional Empathy Intervention, and Stereotype Content Model Empathy Intervention (SCME).

Prior to participating in the study, participants read and signed the consent form, adapted from Grosko’s (2007) consent form. Participants were then required to complete the Interpersonal Reactivity Index (IRI; Davis, 1980) and to self-report

personal information such as their weight, height, age and gender in the background information questionnaire (Appendix V). Once participants had filled out the background information questionnaire and the IRI they were then given the three pre-test measures: the Obese Person's Trait Survey (OPTS; Puhl, 2004), Weiner et al.'s items (Weiner et al., 1988), and the Antifat Attitudes Test (AFAT; Lewis, Cash, Jacobi, & Bubb-Lewis, 1997).

Participants were then randomly assigned to one of two presentation method groups (journal or video) and one of three intervention groups [Status Quo, Traditional Empathy Intervention, and Stereotype Content Model Empathy Intervention (SCME)]. The video presentation method of the Traditional Empathy or Stereotype Content Model Empathy Interventions, involved participants viewing a pre-recorded video of an obese woman's account of stigmatization and discrimination, while the video presentation method of the Status Quo intervention involved participants viewing a pre-recorded video of an average weighted woman reading a report in a newsroom type environment. The journal presentation method involved the participant reading a one-page account of the same story that was presented in one of the three video interventions.

Following the presentation of an intervention, the post-test measures were then administered; the post-test measures were the same as the pre-test measures. Once all

measures and interventions had been administered, the participants were then presented with a debriefing form, adapted from Grosko's (2007) debriefing form (Appendix X). This debriefing form described the purpose of the study and whom to contact if the participants had any questions (Appendix XI; flow chart describing this procedure).

Analyses.

An analysis of variance (ANOVA) was conducted on the differences between participants' pre-test scores in order to ensure that there were not any significant differences between the subjects in each intervention group (validity check). A 2 (presentation method; video, journal) x 3 (Intervention type; Status Quo, Traditional Empathy Intervention, SCME Intervention) repeated measures multivariate analysis of variance (MANOVA) was conducted in order to examine differences in the effectiveness of each intervention and presentation method in reducing stigmatization. A correlational analysis was also conducted in order to examine participant's pre-test, post-test, and change scores compared to their empathy scores on the IRI in order to examine the level of empathy each participant displays and how that might be related to their evaluations of the obese target.

Results

This study was conducted in order to investigate the effectiveness of empathy interventions in reducing obesity stigmatization. An examination of the mean change scores for participants revealed that those who received the SCME and TE interventions experienced the greatest reduction in negative attitudes, feelings and stereotypes, as well as the greatest increase in positive stereotypes when compared to those in the Status Quo group (see tables 1 and 2). An Analysis of Variance (ANOVA) was conducted on the differences between the participants' pre-test scores in order to ensure that there were no significant differences prior to receiving the stigma-reduction intervention (see tables 3 to 6). The results from this analysis indicated that there were no significant differences between participants in each intervention group on measures of the AFAT, $F(2,178)= 2.677, p=0.072$, on the Weiner measures, $F(2,178)=.312, p<.615$, on the OPTS positive factors, $F(2,178)= 1.183, p<.309$, or on the OPTS negative factors, $F(2,178)= 1.744, p<.178$.

Table 1. Mean Score Differences (Post-Pre) for the Video Presentation Method.

Measure	Intervention Type	Mean Difference (Post-Pre)	SD
AFAT	SCME	-0.30	0.38
	TE	-0.22	0.24
	SQ	0.20	0.29
Weiner	SCME	0.25	0.52
	TE	0.24	0.56
	SQ	0.00	0.61
OPTS (+)	SCME	4.58	8.29
	TE	5.19	7.12
	SQ	2.69	6.37
OPTS (-)	SCME	-6.77	11.51
	TE	-8.72	9.42
	SQ	4.84	11.31

Table 2. Mean Score Differences (Post-Pre) for the Journal; Presentation Method

Measure	Intervention Type	Mean Difference (Post-Pre)	Standard Deviation
AFAT	SCME	-0.11	0.40
	TE	-0.17	0.27
	SQ	0.11	0.29
Weiner	SCME	0.20	0.72
	TE	0.33	0.44
	SQ	0.08	0.48
OPTS (+)	SCME	3.85	6.81
	TE	3.20	5.35
	SQ	1.87	8.08
OPTS (-)	SCME	-8.61	10.77
	TE	-4.22	8.93
	SQ	-1.96	12.02

Table 3. Analyses conducted with AFAT scores

Dependent Variable	Analysis	F	df	p
Pre-test scores	Oneway ANOVA			
	ME of intervention	2.677	2, 178	0.072
Difference scores	Oneway ANOVA			
	ME of intervention	24.963	2, 178	<0.001
Difference scores	Intervention x Presentation ANOVA			
	ME of intervention	25.56	2, 178	<0.001
	ME of presentation	1.06	2, 178	0.304
	Interv. x pres. interaction	2.97	2, 178	0.054
	Simple effect: Interv. within pres.			
	Within Journal: ME of Interv.	6.393	2, 89	0.01
	Within Video: ME of Interv.	22.93	2, 88	<0.001

Note: ME = main effect; Interv = Intervention; Pres = Presentation

Table 4. Analyses conducted with Weiner scores

Dependent Variable	Analysis	F	df	p
Pre-test scores	Oneway ANOVA			
	ME of intervention	0.312	2, 178	0.615
Difference scores	Oneway ANOVA			
	ME of intervention	3.058	2, 178	0.049
Difference scores	Intervention x Presentation ANOVA			
	ME of intervention	3.04	2, 178	0.051
	ME of presentation	0.22	2,178	0.638
	Interv. x Pres. interaction	0.27	2,178	0.761

Note: ME = main effect; Interv = Intervention; Pres = Presentation

Table 5. Analyses conducted with OPTS positive item scores

Dependent Variable	Analysis	F	df	p
Pre-test scores	Oneway ANOVA			
	ME of intervention	1.183	2, 178	0.309
Difference scores	Oneway ANOVA			
	ME of intervention	1.471	2, 178	0.233
Difference scores	Intervention x Presentation ANOVA			
	ME of intervention	1.47	2, 178	0.233
	ME of presentation	1.25	2, 178	0.266
	Interv. x Pres. interaction	0.15	2, 178	0.861

Note: ME = main effect; Interv = Intervention; Pres = Presentation

Table 6. Analyses conducted with OPTS negative item scores

Dependent Variable	Analysis	F	df	p
Pre-test scores	Oneway ANOVA			
	ME of intervention	1.744	2, 178	0.178
Difference scores	Oneway ANOVA			
	ME of intervention	12.459	2, 178	<0.001
Difference scores	Intervention x Presentation ANOVA			
	ME of intervention	12.71	2, 178	<0.001
	ME of presentation	0.74	2, 178	0.389
	Interv. x Pres. interaction	4.16	2, 178	0.017
	Simple effect: Interv. within pres.			
	Within Journal: ME of Interv.	3.002	2, 88	0.055
	Within Video: ME of Interv.	13.853	2, 89	<0.001

Note: ME = main effect; Interv = Intervention; Pres = Presentation

A one-way analysis of variance (ANOVA) was conducted on the mean difference scores obtained for each treatment condition in order to identify which intervention was most effective at reducing negative attitudes, feelings, stereotypes and increasing positive stereotypes (see tables 3 to 6). A significant difference among the means of the three groups was found on the AFAT, $F(2, 178) = 24.963$, $p < .001$ and on the negative stereotype factor scores of the OPTS, $F(2, 178) = 12.459$, $p < .001$ and on the Weiner et al.'s items, $F(2, 178) = 3.058$, $p < .05$. These results indicated that the interventions were effective in reducing negative attitudes, feelings and stereotypes, but they were not effective in increasing positive stereotypes.

A Tukey test was performed on the AFAT scores in order to further analyze the differences between these three intervention groups. Based on changes between pre- and post-test scores on the AFAT, the participants in the SCME intervention group and TE intervention group showed a significantly greater reduction in negative attitudes when compared to the Status Quo group (all $P_s < .001$). Based on the change scores on the Weiner et al.'s (1988) items, the participants in the TE group showed a greater reduction in negative feelings when compared to the Status Quo group (all $P_s < .05$). Based on the OPTS negative factor change scores, the participants in the SCME and TE groups showed the greatest reduction in negative

stereotypes when compared to those in the Status Quo group (all P s<.001).

A 2 (presentation method: video or journal) X 3 (Intervention: Status Quo, Traditional Empathy Intervention, Stereotype Content Model Empathy Intervention) repeated measures analysis of variance (MANOVA) was performed on each of the three pre and post-test measures (AFAT, Weiner et al.'s items, OPTS) so the differences in the stigma-reduction effectiveness of each intervention and presentation method could be examined (see table 3 to 6). The results indicated a main effect of intervention on the AFAT scores, $F(2, 178) = 25.56, p < .001$, and on the OPTS negative factor scores, $F(2, 178) = 12.71, p < .001$. However, on the AFAT these effects were qualified by a marginally significant intervention x presentation interaction, $F(2, 178) = 2.97, p < .054$ and on the OPTS negative factor scores, these effects were qualified by a significant interaction between intervention and presentation, $F(2, 178) = 4.16, p < .017$. These findings suggested that the effect of the different intervention types (Status Quo, Traditional Empathy, or Stereotype Content Model) on reducing stigmatizing attitudes and negative stereotypes was impacted by the presentation method (video or journal) used to convey these interventions.

Based on an analysis of means of the SCME intervention, the video presentation method was the most effective presentation method for reducing

negative attitudes, while the SCME journal presentation method was most effective at reducing negative stereotypes. Based on an analysis of means for the TE intervention, the video intervention was most effective at reducing negative stereotypes, while the journal presentation method was most effective at reducing negative attitudes (see tables 1 and 2).

Simple effects analyses were conducted to determine the differing effects of intervention within each of the types of presentation on the AFAT scores (see table 3). For those whose intervention was presented in journal form, there was a significant main effect of intervention, $F(2, 89) = 6.393, p < .01$. Simple effect analyses were also conducted in order to examine the differing effects of video interventions on the AFAT scores (see table 3). For those whose intervention was presented in video form, there was a significant main effect of intervention, $F(2, 88) = 22.93, p < .001$. Post-hoc Tukey comparisons showed that those in the SCME and TE intervention groups had a greater reduction in negative attitudes than those in the SQ group (all P s $< .024$).

Simple effects analyses were conducted to determine the various effects of intervention within each of the types of presentation on the OPTS negative factor scores (see table 6). The presentation method received by participants significantly influenced the amount of negative stereotypes reported by participants on the OPTS

negative factor scores. While those who received the video presentation demonstrated a significant main effect of intervention, $F(2, 89) = 13.853, p < .001$, those in the journal presentation method only evidenced a marginally significant effect of intervention, $F(2, 88) = 3.002, p < .055$. Post-hoc Tukey comparisons indicate that in the journal presentation method, a greater reduction of negative stereotypes was seen in participants in the SCME intervention compared to those in the SQ intervention group ($p < .048$). Post-hoc Tukey comparisons also indicated that in the video presented interventions, a greater reduction of negative stereotypes was seen in participants who received the SCME and TE interventions compared to those in the SQ group (all $P_s < .001$). Based on these results, it appears the intervention by presentation interaction was the result of the TE intervention having an effect in the video presentation modality, but not in the journal presentation modality on the OPTS negative factor scores.

Using the IRI scores as well as change and post-test scores for each measure, a correlational analysis was conducted in order to investigate the relationship between levels of empathy and levels of negative attitudes, feelings and stereotypes. No significant results were found correlating participants' change scores and levels of empathy reported ($p > .05$); however, a Pearson Correlational analysis found that participants who reported higher levels of empathy (IRI) reported significantly

lower levels of negative attitudes and feelings in post-test measures on the AFAT ($p < .01$), and on the Weiner et al.'s (1988) items ($p < .01$). These results indicate that individuals who expressed higher levels of empathy also reported fewer negative attitudes and feelings after exposure to the intervention. The non-significant correlation of empathy with change scores suggests that this is because those individuals with higher empathy held less negative attitudes and beliefs to begin with. Correlations of pre-test scores on the AFAT and Weiner et al.'s (1988) items with IRI empathy were significant ($p < .01$) and support this hypothesis.

Discussion

This study analyzed the effectiveness of three interventions in reducing negative attitudes, feelings and stereotypes toward obese individuals. The SCME intervention was based on the theory of the Stereotype Content Model and the design was based on the Grosko (2007) TE intervention which involved a target person describing her difficulties with obesity. This intervention was based on the theory of the Stereotype Content Model, where it is theorized that a target person would be liked more and stigmatized less, if they were perceived to be warm and competent. In order to apply this theory to the intervention, the target person in the intervention described her experiences with others, showing her to be warm, and described difficulties she overcame, showing her to be competent. The Grosko

(2007) TE intervention involved an obese target person describing her difficulties with being obese. This intervention was intended to increase empathy and reduce stigmatization. The Status Quo intervention was used as a control group and involved presenting weight as controllable and involved discussing the importance of weight loss. The amount of change in the participants' reported negative attitudes, feelings and stereotypes was measured by examining the participants' scores on three measures, the AFAT, Weiner et al.'s items and the OPTS, before and after being exposed to the intervention.

Statistical analyses revealed significant effects of the interventions in reducing negative attitudes and negative stereotypes, while an interaction highlighted the impact of the presentation modality on the effectiveness of the different intervention types, particularly the TE intervention, on the reduction of negative stereotypes. Specifically, the results indicated that those in the SCME Intervention and TE Intervention groups experienced the greatest reduction in negative attitudes and stereotypes compared to those in the Status Quo intervention group. Although no significant change in positive stereotypes was seen as a result of the interventions presented. Analyses also revealed a significant negative correlation between empathy scores and negative evaluations of obese individuals, such that those who had higher levels of empathy reported fewer

negative evaluations of obese individuals.

Effects of interventions on change scores.

Status Quo intervention. As hypothesized, participants who received the status quo intervention reported no significant change in attitudes, feelings, or stereotypes due to the intervention, regardless of presentation modality (video or journal). These findings support Hypothesis I and II, that the status quo intervention would be less effective than both the TE and SCME interventions. An unexpected result of the status quo intervention was an increase in negative attitudes and stereotypes after being exposed to this intervention. This surprising result may be accounted for by Weiner's (1995) Theory of Judgment of Responsibility which states that problems believed to be controllable often result in the individual being blamed and stigmatized. This intervention may have emphasized that the obese individual should be held responsible for his or her condition, and therefore should be evaluated more harshly and negatively.

Traditional Empathy Intervention. Participants in the Traditional Empathy Intervention group reported a significant reduction in negative attitudes, stereotypes, and a marginally significant reduction of negative feelings. These findings support Hypothesis I, where it was hypothesized that the Traditional Empathy Intervention group would report higher levels of empathy and lower

levels of stigmatization than the Status Quo group.

According to an examination of pre- versus post-test means, the TE intervention was found to be the most effective intervention in reducing negative attitudes when presented in journal format, and negative stereotypes when presented in the video format.

This intervention may have been more effective at reducing negative stereotypes when presented in video format due to the believability of the target person as representing other obese individuals. The OPTS is a measure that requested beliefs about obese individuals in general; therefore if the experiences described by the target person in this intervention were generalizable to other obese individuals, there should be a reduction in the amount of negative stereotypes reported, which is what was found in this study.

This intervention, presented in journal format, may also have been more effective in reducing negative attitudes by exposing the participants to a sincere and honest obese woman with whom the participants may have been able to relate. This may have challenged commonly held negative attitudes about obesity being self-inflicted and deserved (Puhl, & Brownell, 2001; Teachman, Gapinski, Brownell, Rawlins & Jeyeram, 2003). This may have reduced the attribution of blame for being obese that the participant ascribed to the target.

Stereotype Content Model Empathy Intervention. The Stereotype Content Model Empathy Intervention was successful in decreasing participants' reported negative attitudes and stereotypes toward the target obese individual. These findings support Hypothesis II that the SCME Intervention would be more effective at decreasing negative evaluations than the Status Quo and Traditional Empathy intervention.

According to an examination of pre- versus post-test means, the SCME intervention was found to be most effective in reducing negative attitudes when presented in video format, and most effective in reducing negative stereotypes when presented in the journal format, when compared to the Status Quo or TE interventions (see tables 1 and 2).

This intervention may also have evoked empathy because of the perceived similarity of the target with the participant; both were university students, and the target had only recently begun to gain weight, a common experience for many students. This intervention may have reduced negative attitudes and feelings towards the target because the participants may have perceived similarities between themselves and the target, facilitating perspective taking of the target and her experiences (Baron, 1979; Krebs, 1975; Ohbuchi, 1988).

Negative stereotypes, on the other hand, were only reduced when presented in

journal format. The OPTS is used to measure stereotypes about obese individuals in general; therefore, there is a possibility that the journal presentation method produced the story of an obese woman who seemed believable and whose story seemed generalizable to that of other obese individuals. The results from the journal intervention on the OPTS may have differed from the video intervention where participants may have vividly remember the target as distinct from other obese individuals, perhaps allowing them to think of her as though she were an exception to the rule, with other obese people still fulfilling the stereotypes.

These findings support the results found in a study conducted by Grosko (2007) as well as one by Teachman, Gapinski, Brownell, Rawlins & Jeyaram (2003) who found that one of the most effective ways of evoking empathy and reducing size stigmatization was with the use of empathy interventions. The SCME intervention was based on the Grosko (2007) Traditional Empathy Intervention, therefore it is hardly surprising that both were found to be effective in reducing negative stereotypes and attitudes felt toward an obese target, albeit with differing results depending on the presentation modality.

The effectiveness of empathy interventions found in this study is contradictory to the findings of other studies. One study, conducted by Gapinski, Schwartz and Brownell (2006) found that empathy interventions were ineffective at reducing

stigmatization. Another such study, conducted by Harris and Walters (1999) found that their empathy intervention was also ineffective at evoking empathy in participants, and therefore was not useful in reducing stigmatization. The difference between these ineffective empathy interventions and the ones used in the present study are that the TE and SCME interventions present an emotional and honest first-person account of the difficulties experienced, perhaps encouraging more empathy to be evoked than in the Gapinski et al., and Harris et al.'s studies.

Effects of presentation modality on change scores.

Although both the TE and SCME interventions were effective at reducing negative attitudes, feelings and stereotypes, a difference was found in their effectiveness based on which modality it was presented in, either video or journal. While the SCME intervention proved to be more effective at reducing negative attitudes when presented in video format as well as more effective at reducing negative stereotypes when presented in journal format, the TE intervention was in fact more effective at reducing negative stereotypes when presented by video as well as more effective at reducing negative attitudes when presented by journal. These findings somewhat support Hypothesis III, that the video presentation method will be more effective than the journal presentation method in increasing empathy and reducing stigmatization. This was only somewhat supported

because the video presentation method was more effective in reducing negative attitudes in the SCME intervention, but not the TE intervention, and was more effective in reducing negative stereotypes in the TE intervention and not the SCME intervention. These results support the findings of Gapinski, Schwartz and Brownell (2006) as well as Riggle, Ellis and Crawford (1996), that interventions presented by video are effective in reducing prejudice and stereotypes.

Correlations between scores of empathy and negative evaluations.

Those who reported the highest amount of empathy appeared to have held fewer negative stereotypes before, as well as fewer negative attitudes and feelings before and after being exposed to the intervention. These results indicate that the individuals who reported the highest levels of empathy held less negative attitudes, feelings and stereotypes before being exposed to the intervention, and therefore reported still fewer after being exposed to the intervention.

Those participants who reported higher levels of empathy may have been more susceptible to identifying with the target person, taking his or her perspective and imagining what it would feel like to be in that person's situation. This may have led to a greater empathic reaction and fewer stigmatizing attitudes, feelings, and beliefs. The fact that the greatest correlations were found between empathy and negative attitudes and feelings indicate that participants who

reported higher levels of empathy may have been more easily affected by the interventions at a cognitive and affective level, allowing them to identify with and to feel more empathy toward the target person.

Limitations of this study

Although this study found that empathy interventions do in fact help reduce the amount of reported size stigmatization, more research is still needed in order to examine the long-term effects of stigma-reduction interventions such as these. It is also imperative that this sort of stigma-reduction intervention be examined on populations other than first-year university students, in order to verify the generalizability of the results to other populations.

The pre- and post-test measures used in this study were self-report measures, and therefore have limitations mediated by a person's desire to appear as if they subscribe to socially appropriate norms, beliefs and the desire to appear as a non-judgmental person. These, among other influences may result in less-than-honest results from the measures used in this study. In order to reduce the influence of these limitations on the results, it would be useful to use, among self-report measures, tests that assess implicit responses such as tests that measure reaction time to responses. These measures would be useful in evaluating if the participant is attempting to mediate his or her response in a

socially desirable manner or if the participant is responding sincerely.

Two other limitations of this study involve the interventions and the measures administered to participants. The Status Quo intervention was presented as a news story in both the journal and video presentation methods; it therefore varied from the first-hand account story that was used in both the TE and SCME interventions. The Status Quo intervention was presented, in the video format, by an average-weighted woman, while both the Traditional Empathy and Stereotype Content Model Empathy Interventions were acted out by an obese woman, and the same woman was used for both videos. The Status Quo intervention was presented in this way because most reporters on news programming are women or men of average weight, and the intent was to present the interventions in the most realistic manner possible. Further inquiry would be required in order to determine if different results would be found if the same obese woman presented all three interventions.

Implications for stigma reduction.

The results from this study indicate that it is possible to evoke empathy and reduce stigmatization with a relatively short exposure time to an obese individual's story. These findings are encouraging in that, if the long-term effects of these interventions can be examined and proven to be useful, they would be a

relatively efficient way of reducing negative attitudes, feelings and stereotypes towards many populations, including obese populations. An intervention of this sort may also be useful in settings such as schools where it could be used in order to promote more empathic understanding among children and teenagers. The reduction of negative evaluations, which may be promoted by interventions such as these, may also be helpful in reducing the amount of unjust discrimination and stigmatization an individual experiences for a condition that is, in itself, a struggle.

References

- Batson, D., Early, S., Salvarani, G. (1997). Perspective taking: Imagining how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin*, 23(7), 751-758.
- Blaine, B., & Williams, Z. (2004). Belief in the controllability of weight and attributions to prejudice among heavyweight women. *Sex Roles*, 51, 79-84.
- Bray, G. (2004). Medical consequences of obesity. *Journal of Clinical Endocrinology and Metabolism*, 89, 2583-2589.
- Carr, D., & Friedman, M. (2005). Is obesity stigmatizing? Body weight, perceived discrimination, and psychological well-being in the United States. *Journal of Health and Social Behavior*, 46, 244-259.
- Crocker, J., & Garcia, J. (2005). *Self-esteem and the stigma of obesity*. Guilford Publications: New York, NY.
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review*, 96, 608-630.
- Crocker, J., Cornwell, B., & Major, B. (1989). Social stigma of overweight: Affective consequences of attributional ambiguity. *Journal of Personality and Social Psychology*, 64, 60-70.
- Davis, M. (1980). A multidimensional approach to individual differences in empathy.

Catalog of Selected Documents in Psychology: JSAS, 10, 85.

- Davis, H. (1983). Measuring individual differences in empathy: evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44(1)*, 113-126.
- DeJong, W. (1980). The stigma of obesity: The consequences of naïve assumptions concerning the causes of physical deviance. *Journal of Health and Social Behavior, 21(1)*, 75-87.
- Dymond, R. (1950). Personality and empathy. *Journal of Consulting Psychology, 14(5)*, 343-350.
- Dovidio, J., Major, B., & Crocker, J. (2000). *Stigma: introduction and overview. The Social Psychology of Stigma*. Guilford Publications: New York, NY.
- Fiske, S., Cuddy, A., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82(6)*, 878-902.
- Gapinski, K., Schwartz, A., & Brownell, K. (2006). Can television change anti-fat attitudes and behavior? *Journal of Applied Biobehavioral Research, 11(1)*, 1-28.
- Grosko, T. (2002). Perceived controllability and stigma regarding overweight people: Ameliorating emotions towards an overweight target with a psycho-

educational intervention. Unpublished Master's thesis, University of Manitoba, Winnipeg, Manitoba, Canada.

Grosko, T. (2007). Obesity Stigma Reduction. Unpublished Doctoral thesis, University of Manitoba, Winnipeg, Manitoba, Canada.

Hansen, D., Dendale, P., Berger, J., Van-Loon, L., & Meeuser, R. (2007). The effects of exercise training on fat-mass loss in obese patients during energy intake restriction. *Sports Medicine*, *37*(1), 31-46.

Hatcher, S., Favorite, T., Hardy, E., Goode, R., De Shetler, L. & Thomas, R. (2005). An analogue study of therapist empathic process: Working with difference. *Psychotherapy: Theory, Research, Practice, Training*, *42*(2), 198-210.

Hayden-Wade, H., Stein, R., Ghaderi, A., Saelens, B., Zabinski, M., & Wilfley, D. (2005). Prevalence, characteristics, and correlates of teasing experiences among overweight children vs. non-overweight peers. *Obesity Research*, *3*(8), 1381-1392.

Hewitt, J. (1997). The genetics of obesity: what have genetic studies told us about the environment. *Behavior Genetics*, *27*(4), 353-358.

Holmes, B. (1998). Childhood and adolescent obesity in America: What's a parent to do? *University of Wyoming Cooperative Extension Service*. Retrieved September 23, 2007 from <http://ces.uwyo.edu/PUBS/b1066.pdf>.

- Jakicic, J., Otto, A. (2005). Physical activity considerations for the treatment and prevention of obesity. *American Journal of Clinical Nutrition*, *82*(1), 226S-229S.
- Kalisch, B. (1972). The stigma of obesity. *American Journal of Nursing*, *72*(6), 1124-1127.
- Karnehed, N., Rasmussen, F., Hemmingsson, T., & Tynelius, P. (2006). Obesity and attained education: Cohort study of more than 700,000 Swedish men. *Obesity*, *14*, 1421-1428.
- King, E., Hebl, M., & Heatherton, T. (2005). *Theories of stigma: Limitations and needed directions. Weight bias: nature, consequences, and remedies*. Guilford Press: New York, NY.
- Klaczynski, P., Goold, K., & Mudry, J. (2004). Culture, obesity stereotypes, self-esteem, and the "thin ideal": A social identity perspective. *Journal of Youth and Adolescence*, *33*(4), 307-317.
- Latner, J., Stunkard, A., & Wilson, T. (2005). Stigmatized students: age, sex, and ethnicity effects in the stigmatization of obesity. *Obesity Research*, *13*, 1226-1231.
- Lee, T., & Fiske, S. (2006). Not an outgroup, not yet an ingroup: Immigrants in the stereotype content model. *International Journal of Intercultural Relation*, *30*,

751-768.

Lewis, R., Cash, T., Jacobi, L. & Bubb-Lewis, C. (1997). Prejudice toward fat people:

The development and validation of the Antifat Attitudes Test. *Obesity*

Research, 5, 297-307.

Low, K., Charanasomboon, S., Brown, C., Hiltunen, G., Long, K., Reinhalter, K., &

Jones, H. (2003). Internalization of the thin ideal, weight and body image

concerns. *Social Behavior and Personality, 31(1)*, 81-90.

Nemerson, L., Danowski, L., & Trilling, J. (2004). Selections from current literature:

The spectrum of treatment options for obesity. *Family Practice, 21(3)*, 324-

328.

Ohbuchi, K. (1988). Arousal of empathy and aggression. *Psychologia: An*

International Journal of Psychology in the Orient, 31(4), 177-186.

Penny, H., & Haddock, G. (2007). Anti-fat prejudice among children: the “mere

proximity” effect in 5-10 year olds. *Journal of Experimental Social*

Psychology, 43, 678-683.

Price, J., & Pecjak, V. (2003). Obesity and stigma: Important issues in women’s health.

Psychology Science, 45(2), 6-42.

Puhl, R. (2004). Impact of perceived consensus on stereotypes about obese people:

New avenues for bias reduction. Unpublished Dissertation. Yale University.

Puhl, R., & Latner, J. (2007). Stigma, obesity, and the health of the nation's children.

Psychological Bulletin, 133(4), 557-580.

Puhl, R., & Brownell, K. (2001). Bias, discrimination, and obesity. *Obesity Research*,

9, 788-805.

Puhl, R., & Brownell, K. (2003). Ways of coping with obesity stigma: review and

conceptual analysis. *Eating Behaviors*, 4, 53-78.

Puhl, R., & Schwartz, M., & Brownell, K. (2005). Impact of perceived consensus on

stereotypes about obese people: a new approach for reducing bias. *Health*

Psychology, 24(5), 517-525.

Rogge, M, Greenwald, M., & Golden, A. (2004). Obesity, stigma, and civilized

oppression. *Advances in Nursing Science*, 27(4), 301-315.

Seiders, K., & Petty, R. (2004). Obesity and the role of food marketing: A policy

analysis of issues and remedies. *Journal of Public Policy and Marketing*, 23(2),

153-169.

Spence-Jones, G. (2003). Overview of obesity. *Critical care Nursing Quarterly*, 26,83-

88.

Stotland, E., & Smith, K. (1993). Empathy, imagining and motivation. *Imagination*,

Cognition and Personality, 13(3), 193-213.

Swinburn, B., & Egger, G. (2004). The runaway weight gain train: Too many

accelerators, not enough brakes. *British Medical Journal*, 329, 736-739.

Teachman, B. (2005). Information processing and anxiety sensitivity: Cognitive vulnerability to panic reflected in interpretation and memory biases. *Cognitive Therapy and Research*, 29(4), 479-499.

Teachman, B., Gapinski, K., Brownell, K., Rawlins, M., & Jeyaram, S. (2003). Demonstrations of implicit anti-fat bias: The impact of providing causal information and evoking empathy. *Health Psychology*, 22, 68-78.

Wadden, T., Brownell, K., & Foster, G. (2002). Obesity: Responding to the global epidemic. *Journal of Consulting and Clinical Psychology*, 70(3), 510-525.

Walters, A. (1994). Using visual media to reduce homophobia: A classroom demonstration. *American Association of Sex Educators Counselors and Therapists*, 20(2), 92-100.

Wang, S., Brownell, K., & Wadden, T. (2004). The influence of the stigma of obesity on overweight individuals. *International Journal of Obesity*, 28, 1333-1337.

Wang, S., & Brownell, K. (2005). Public policy and obesity: The need to marry science with advocacy. *Psychiatric Clinics of North America*, 28 (1), 235-252.

Weiner, B., Perry, R., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, 55(5), 738-48.

World Health Organization. (n.d.). Obesity and overweight fact sheet. Retrieved

September 21, 2007, from

www.who.int/mediacentre/factsheets/fs311/en/index.html

Yabar, Y., & Hess, U. (2007). Display of empathy and perception of out-group members. *New Zealand Journal of Psychology*, *36*(1), 42-49

Appendices

- I. Consent form (Grosko, 2007)
- II. Status Quo Intervention (Puhl, 2004)
- III. Traditional Empathy Intervention (Grosko, 2007)
- IV. Stereotype Content Model Empathy Intervention (SCME)]
- V. Background Information Questionnaire
- VI. Obese Person's Trait Survey (OPTS; Puhl, 2004)
- VII. Weiner et al.'s items (1988)
- VIII. Antifat Attitudes Test(AFAT; Lewis et al.,1997))
- IX. Interpersonal Reactivity Index (IRI; Davis, 1980)
- X. Debriefing form (Grosko, 2007)
- XI. Flow chart describing procedure

Appendix I: Consent Form

Research Project Title: The Use of Empathy Interventions in Reducing Obesity Stigma

Researcher: Lisa Thouas, M.A. Candidate

Advisor: Mike LeBow, Ph.D., C Psych.

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

This study is being conducted by Lisa Thouas for her Master's thesis. The thesis is being supervised by Dr. Michael LeBow, a professor at the University of Manitoba in the Department of Psychology. This study will investigate adults' perceptions of obesity; your interest in this study is very much appreciated.

This study comprises three parts: filling out a set of questionnaires, reading a document or viewing a video, then filling out another set of questionnaires. This study will involve filling out questionnaires that will ask you to report your thoughts, beliefs, and feelings about obesity, as well as some personal information about your current weight, height and whether you are pregnant or not. You will be asked to consider your responses carefully and to answer the questions directly onto the space provided. You will also be asked to read a one-page document or view a 5 minute video about obesity. The study will take about 60 minutes to complete and, when finished, you will receive two credits for your participation and a debriefing form further explaining the study.

It is important to know that your participation in this study is entirely voluntary and you are free to discontinue your participation at any time, without penalty. You may decline answering any question you do not want to answer. Please remember that, at all times, your responses are kept confidential. Your questionnaire will receive a number only, for identification and data entry purposes. Your name will not be associated in any way with these data and only the main researcher will have access to these data. Though there are no obvious risks to participating, it is possible that thinking about this topic may prompt unexpected positive or negative thoughts and feelings about yourself, about obesity or obese individuals. If you want to talk to

someone about these feelings, there are resources listed on the bottom of this consent form that you can contact at any time.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Lisa Thouas at umthouas@cc.umanitoba.ca or

Dr. Mike LeBow at mlebow@cc.umanitoba.ca

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

NOTE: This consent form will be separated from the questionnaire once you are done. No identifying information will be stored with the data.

Participant's signature

Date

Researcher's signature

Date

Print name

Please provide your email address if you wish to receive a summary of the study results. A summary of the study will be sent to those who request it by August 2008, and the data will be destroyed by February 2010.

Your email address:

If participation in this study has prompted unexpected feelings of self-consciousness about your weight or negative reactions, or feelings of distress and you wish to speak with a mental health professional, the University of Manitoba Counselling Centre

accepts drop-ins (call for information at 474-8592) or call the Klinik Community Health Centre Crisis Line (786-8686 to talk to someone on the phone in an emergency situation).

Appendix II: Status Quo Intervention
(Puhl, 2004)

The causes of obesity have been debated by researchers in the field. The following paragraph is an excerpt from a recent article in the *Free Press*. Please read the summary, and answer the questions on the following page when you are finished.

July, 2006

The Obesity Epidemic: Experts Search for Causes

Source: *Free Press*

It is certainly easy to become overweight in North America. Human obesity, a condition affecting over 1/3 of North Americans has begun to receive increasing attention over the past 25 years. In the last decade, obesity research has entered a new phase, where researchers are trying to get at the causes of appetite and body weight that are within personal control. Experts studying the causes of obesity have identified several lifestyle factors that are responsible for why people are overweight. These findings are the latest in a series of studies that are beginning to shed light on the causes of obesity.

In particular, findings recently published in the *Journal of Medical Epidemiological Research* and *Journal of Obesity Physiology* suggest that human obesity may be caused by an excessive build up of fat cells due to overeating and a lack of exercise. Today's fast food environment makes it easy for people to access high fat, high calorie foods that are inexpensive. Another key to obesity may be a sedentary lifestyle, where people are not exercising enough and are spending too much time watching television. Researchers indicate that trying to control weight will only be effective if individuals can stick to healthy meal plans and exercise every day. Experts from these studies conclude that body weight is influenced by these lifestyle factors which are within an individual's personal control.

Thus, in order to be healthy, obese people must take responsibility. They must become more physically active and eat smaller portions of healthier foods. It is up to each person to make sure that he/she is healthy. Part of being healthy means not being obese. It is very important for obese individuals to take charge of their lives and their health. They must begin today.

Please answer the following questions by circling your response using the scale provided:

1. How surprised were you by the research findings described in the passage?

Not At All												Extremely
Surprised	1	2	3	4	5	6	7	8	9			Surprised

2. How much control do you think individuals have over the prevention of becoming obese?

No												Total
Control	1	2	3	4	5	6	7	8	9			Control

3. Using the following scale, indicate the degree to which you agree or disagree with the following statements:

1	2	3	4
Strongly	Somewhat	Somewhat	Strongly
Disagree	Disagree	Agree	Agree

a) Obesity is caused by factors outside personal control (e.g., hormones, thyroid problems) 1 2 3 4

b) Obesity is caused by factors within personal control (e.g., overeating, lack of motivation to exercise) 1 2 3 4

c) The causes of obesity are complex and variable 1 2 3 4

Appendix III: Traditional Empathy Intervention

(Grosko, 2007)

Please read the following story that was written by a woman named Marie. It is an account of her experiences as an obese person. When you have finished, please answer the questions on the following page.

My name is Marie, and I have been obese since childhood. I have talked to many friends and read a lot about people's experiences with being unhappy about their weights. I know many people struggle with weight and body image. I would like to tell you how I have struggled.

My parents, grandparents, and siblings are all obese too. I really hate being this fat. I hate myself. That is the worst part of being obese. I try really hard to lose weight, but it is so difficult. I have tried hundreds of diets, and some have worked, but I just seem to regain the weight. I am disappointed in myself. It's not that I'm not motivated; it's just that it's so hard. Even when I've lost 50 pounds and my doctor said that was good, I didn't look that much better.

Another terrible part about being obese is people don't respect me. People either stare at me like I'm a monster or they ignore me altogether. This really hurts me. Every time I go out of the house, someone says or does something mean to me. I feel really sad that I am not accepted as part of society. I do have some good friends, but no one has ever been interested in me romantically. I understand why. I just wish that someone could look beneath the surface. My friends say that I am a good person and that I am smart and funny. Why is my weight such a problem to others?

When you are obese, it is hard to get good service from salespeople, restaurant servers, and even doctors. Think about this: half of all women are greater than a size 14, yet there are only three stores in this city that sell plus-sized clothes. And, it's so expensive. I don't like being fat, and I have not given up on trying to lose weight. I don't want to complain. Rather, I want to share my experiences as a fat person. I think that most people could understand if they tried. In fact, many people struggle with their weight. The main point is that I just want to be treated like everyone else. After all, I am a person, not a monster.

Please answer the following questions by circling your response using the scale provided:

1. How surprised were you by the story?

Not At All										Extremely
Surprised	1	2	3	4	5	6	7	8	9	Surprised

2. How much control do you think Marie have over the prevention of becoming obese?

No										Total
Control	1	2	3	4	5	6	7	8	9	Control

3. Using the following scale, indicate the degree to which you agree or disagree with the following statements:

1	2	3	4
Strongly	Somewhat	Somewhat	Strongly
Disagree	Disagree	Agree	Agree

a) Obesity is caused by factors outside personal control (e.g., hormones, thyroid problems) 1 2 3 4

b) Obesity is caused by factors within personal control (e.g., overeating, lack of motivation to exercise) 1 2 3 4

c) The causes of obesity are complex and variable 1 2 3 4

Appendix IV: Stereotype Content Model Empathy Intervention (SCME)

Please read the following story that was written by a woman named Marie. It is an account of her experiences as an obese person. When you have finished, please answer the questions on the following page.

My name is Marie, and I have been slowly putting on weight ever since my first year in university. I really hate being this fat, but I have started to do something about it! I've had enough of the name-calling, the stares and the uncomfortable feeling of being self-conscious. Part of the reason I want to change is that people don't respect me and are even disgusted with me because of the way I look. Just imagine what it feels like the when you put on weight and someone makes an insensitive or mean comment about it! I see kids on the street pointing and laughing and adults looking at me as though they are horrified. I know I shouldn't let it bother me, but it really hurts to be treated that way.

I am successful in so many aspects in my life; I am in the second year of a PhD program, and I hope to eventually use my degree in a way that helps others. I work really hard for everything I have; I even pay for my own schooling with a part-time job on the side. I have a great relationship with my parents and my brother, my friends and boyfriend say that I am a good, smart, and funny person.

I know this change will be hard, but I think it's time I take control of this aspect of my life and do something that makes me feel good about myself. I've decided that I am going to focus on being happy and healthy. About 2 months ago, I started an exercise program and I'm very excited about taking these steps to feeling good about myself!

Please answer the following questions by circling your response using the scale provided:

1. How surprised were you by the story?

Not At All												Extremely
Surprised	1	2	3	4	5	6	7	8	9			Surprised

2. How much control do you think Marie have over the prevention of becoming obese?

No												Total
Control	1	2	3	4	5	6	7	8	9			Control

3. Using the following scale, indicate the degree to which you agree or disagree with the following statements:

1	2	3	4
Strongly	Somewhat	Somewhat	Strongly
Disagree	Disagree	Agree	Agree

a) Obesity is caused by factors outside personal control (e.g., hormones, thyroid problems) 1 2 3 4

b) Obesity is caused by factors within personal control (e.g., overeating, lack of motivation to exercise) 1 2 3 4

c) The causes of obesity are complex and variable 1 2 3 4

Appendix V: Background Information Questionnaire

Please respond to each question by circling the best answer:

1. What is your gender?
 - a) Male
 - b) Female

2. Are you currently pregnant or breast feeding?
 - a) Yes
 - b) No

3. Please report your current weight: _____

5. Please report your current height: _____

5. Sociable: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

6. Undisciplined: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

7. Friendly: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

8. Gluttonous: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

9. Outgoing: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

10. Intelligent: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All											Extremely
Confident	1	2	3	4	5	6	7	8	9		Confident

11. Unhealthy: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All											Extremely
Confident	1	2	3	4	5	6	7	8	9		Confident

12. Honest: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All											Extremely
Confident	1	2	3	4	5	6	7	8	9		Confident

13. Sluggish: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All											Extremely
Confident	1	2	3	4	5	6	7	8	9		Confident

14. Productive: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All											Extremely
Confident	1	2	3	4	5	6	7	8	9		Confident

15. Lack of willpower: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All										Extremely
Confident	1	2	3	4	5	6	7	8	9	Confident

16. Unclean: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All										Extremely
Confident	1	2	3	4	5	6	7	8	9	Confident

17. Warm: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All										Extremely
Confident	1	2	3	4	5	6	7	8	9	Confident

18. Insecure: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All										Extremely
Confident	1	2	3	4	5	6	7	8	9	Confident

19. Organized: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All										Extremely
Confident	1	2	3	4	5	6	7	8	9	Confident

20. Unattractive: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

21. Competent: _____% of obese people possessing this trait

My confidence in the above estimate:

Not At All												Extremely
Confident	1	2	3	4	5	6	7	8	9			Confident

g) The health-care system should help fat people.

Strongly	1	2	3	4	5	6	7	Strongly
Disagree								Agree

Appendix VIII: Attitudes pre-test & post-test
 Antifat Attitudes Test (AFAT)

Lewis et al. (1997)

Please circle the number that represents how much you agree or disagree with the following statements, using the following scale:

Strongly Disagree 1 2 3 4 5 Strongly Agree

1. There's no excuse for being fat.

Disagree 1 2 3 4 5 Agree

2. If I were single, I would date a fat person.

Disagree 1 2 3 4 5 Agree

3. Jokes about fat people are funny.

Disagree 1 2 3 4 5 Agree

4. Marie probably buys too much junk food.

Disagree 1 2 3 4 5 Agree

5. Marie is physically unattractive.

Disagree 1 2 3 4 5 Agree

6. Marie shouldn't wear revealing clothing in public.

Disagree 1 2 3 4 5 Agree

7. If someone in my family were fat, I'd be ashamed of him or her.

Disagree 1 2 3 4 5 Agree

8. I can't stand to look at fat people like Marie.

Disagree 1 2 3 4 5 Agree

9. If Marie doesn't get hired, it's her own fault.

Disagree 1 2 3 4 5 Agree

10. Marie is disgusting.

Disagree 1 2 3 4 5 Agree

11. If I have the choice, I'd rather not sit next to Marie.

Disagree 1 2 3 4 5 Agree

12. Marie doesn't care about anything except eating.

Disagree 1 2 3 4 5 Agree

13. I'd lose respect for a friend who started getting fat.

Disagree 1 2 3 4 5 Agree

14. Marie is probably boring.

Disagree 1 2 3 4 5 Agree

15. I can't believe someone of average weight would marry a fat person.

Disagree 1 2 3 4 5 Agree

16. Society is too tolerant of fat people.

Disagree 1 2 3 4 5 Agree

17. When Marie exercises, she probably looks ridiculous.

Disagree 1 2 3 4 5 Agree

18. I hate it when fat people take up more room than they should in a theatre or on a bus or plane.

Disagree 1 2 3 4 5 Agree

19. Marie is lazy.

Disagree 1 2 3 4 5 Agree

20. Marie doesn't care about anyone but herself.

Disagree 1 2 3 4 5 Agree

21. Marie is just as competent in their work as anyone.

Disagree 1 2 3 4 5 Agree

22. If Marie really wanted to lose weight, she could.

Disagree 1 2 3 4 5 Agree

23. Being fat is sinful.

Disagree 1 2 3 4 5 Agree

24. It would be disgusting to see fat Marie eating.

Disagree 1 2 3 4 5 Agree

25. Marie has no willpower.

Disagree 1 2 3 4 5 Agree

26. I would prefer not to associate with Marie.

Disagree 1 2 3 4 5 Agree

27. Marie doesn't care about her appearance.

Disagree 1 2 3 4 5 Agree

28. Marie is moody and hard to get along with.

Disagree 1 2 3 4 5 Agree

29. If bad things happen to Marie, she deserves it because she is fat.

Disagree 1 2 3 4 5 Agree

30. Marie doesn't keep her surroundings neat and clean.

Disagree 1 2 3 4 5 Agree

31. Society should respect the rights of fat people.

Disagree 1 2 3 4 5 Agree

32. It's hard not to stare at Marie because she is so unattractive.

Disagree 1 2 3 4 5 Agree

33. If I owned a business, I would not hire Marie because of the way she looks.

Disagree 1 2 3 4 5 Agree

34. I'd feel self-conscious being seen in public with Marie.

Disagree 1 2 3 4 5 Agree

35. The idea that genetics cause Marie to be fat is just an excuse.

Disagree 1 2 3 4 5 Agree

36. I would not want to continue in a romantic relationship if my partner became fat.

Disagree 1 2 3 4 5 Agree

37. The existence of organizations to lobby for the rights of fat people in our society is a good idea.

Disagree 1 2 3 4 5 Agree

38. I don't understand how someone could be sexually attracted to Marie.

Disagree 1 2 3 4 5 Agree

39. If Marie knew how bad she looked, she would lose weight.

Disagree 1 2 3 4 5 Agree

40. Marie has as much physical coordination as anyone.

Disagree 1 2 3 4 5 Agree

41. Marie is unclean.

Disagree 1 2 3 4 5 Agree

42. Marie should be encouraged to accept herself the way she is.

Disagree 1 2 3 4 5 Agree

43. Marie will latch onto almost any excuse for being fat.

Disagree 1 2 3 4 5 Agree

44. It's hard to take Marie seriously because she is fat.

Disagree 1 2 3 4 5 Agree

45. Marie does not necessarily eat more than other people.

Disagree 1 2 3 4 5 Agree

46. Marie obviously has a character flaw; otherwise she wouldn't have become fat.

Disagree 1 2 3 4 5 Agree

47. It makes me angry to hear anybody say insulting things about Marie because she is fat.

Disagree 1 2 3 4 5 Agree

Appendix IX: Interpersonal Reactivity Index (IRI; Davis, 1980)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter on the answer sheet next to the item number. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT				DESCRIBES ME
DESCRIBE ME				VERY WELL
WELL				

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
3. I sometimes find it difficult to see things from the "other guy's" point of view.
4. Sometimes I don't feel very sorry for other people when they are having problems.
5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.

11. I sometimes try to understand my friends better by imagining how things look from their perspective.
12. Becoming extremely involved in a good book or movie is somewhat rare for me.
13. When I see someone get hurt, I tend to remain calm.
14. Other people's misfortunes do not usually disturb me a great deal.
15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
16. After seeing a play or movie, I have felt as though I were one of the characters.
17. Being in a tense emotional situation scares me.
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.
19. I am usually pretty effective in dealing with emergencies.
20. I am often quite touched by things that I see happen.
21. I believe that there are two sides to every question and try to look at them both.
22. I would describe myself as a pretty soft-hearted person.
23. When I watch a good movie, I can very easily put myself in the place of a leading character.
24. I tend to lose control during emergencies.
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

Appendix X: Debriefing Form

Thank you for your participation in this study, which is being conducted by the Department of Psychology at the University of Manitoba. The investigators of this study are Lisa Thouas, a M.A. candidate, and Dr. Michael LeBow, a researcher and professor of psychology.

The purpose of this study is to contrast and compare different empathy interventions that were designed to reduce stigma towards overweight and obese individuals. Overweight and obese people are highly stigmatized (e.g., they are less likely to be chosen as employees, friends, romantic partners, and tenants than are normal-weight individuals). The stigma overweight people experience has serious physical, social and psychological consequences.

This study was designed to test which empathy intervention (the Traditional Empathy Intervention or the Stereotype Content Model Empathy Intervention) is more effective than the control group (Status Quo Intervention) and which is most effective overall in increasing empathy and reducing obesity stigmatization. The study was also designed to evaluate which of the two presentation methods (intervention presented by video or by a written story) is most effective in evoking empathy and decreasing stigmatization towards obese individuals.

The Status Quo Intervention is a control condition that is not intended to affect the participant's feelings, thoughts or beliefs about obese individuals. It is hypothesized that, because this is a control condition, that this intervention will be less effective than the Traditional Empathy Intervention and the Stereotype Content Model Empathy Intervention in increasing empathy and reducing stigmatization.

The Traditional Empathy Intervention is an intervention that was developed by Grosko (2007) in order to increase a participant's feelings of empathy towards an obese individual. It is hypothesized that this intervention will be more effective in increasing empathy and decrease stigmatization than the Status Quo Intervention, but less effective than the Stereotype Content Model Empathy Intervention.

The Stereotype Content Model Empathy Intervention is a newly developed intervention based on the Stereotype Content Model (Fiske, Cuddy, Glick & Xu, 2002). This model states that by increasing the perception of an individual's warmth and competence, more empathy may be felt towards the target, in turn causing a reduction in stigmatization towards that individual. It is hypothesized that this

intervention will be more effective in increasing empathy and reducing stigmatization than the Traditional Empathy Intervention and the Status Quo Intervention.

The video intervention presentation method was evaluate in order to assess if more empathy is evoked when a participant views a person describing their experiences with emotion versus reading a document with this same information. It is hypothesized that the video presentation method will be more effective at increasing empathy and reducing stigma than the read presentation method.

If you are interested in learning more details about this study or about the results, please do not hesitate to contact me by email (umthouas@cc.umanitoba.ca). I thank you again for your participation.

Sincerely,

Lisa Thouas

Appendix XI: Flow Chart Describing Procedure

