

Consequences of Weight Loss Discourses on Fat Individuals

Lina Wienhues

s4369548

Department of Psychology, University of Groningen

PSB3E-BT15: Bachelor Thesis

Group number: 30

Supervisor: Yasin Koc, Dr

Second evaluator: Kyriaki Fousiani, Dr

In collaboration with: Josephine Timmermann, Emma Adden, Kristin Lammers, Luca Blank,

Rebecca Stowers.

February 06, 2023

Abstract

Fat people often experience stigmatization and discrimination solely based on their weight. Some react to these stigmas by engaging in different weight-loss approaches. In society, weight-loss is talked about in different manners. We looked at the health- (e.g. losing weight for health reasons) and the not fitting-in (losing weight for reasons of physically not fitting into places) discourses surrounding weight-loss and how these affect the fat individual. A between-subjects online experiment with a convenience sample of 302 female participants was performed. The effects of three independent variables (i.e., health, fitting-in, control) were measured on three clusters of dependent variables (body-related, psychological well-being, emotions). Next, two hypotheses were posed: (1) the health discourse is expected to cause a worsening of the variables of the body-related cluster that is larger than that of the fitting-in discourse; (2) the health discourse is expected to cause a worsening of psychological well-being, whereas the not fitting in discourse is expected to cause improvements in psychological well-being. No hypothesis was confirmed, as only non-significant results were found. Many limitations were identified and include the use of the BMI for classification purposes, having forgotten attention and manipulation checks, or including only female participants.

Keywords: fat-stigma; weight-loss discourses; psychological well-being; body-image

Consequences of Weight Loss Discourses on Fat Individuals

Today's society stigmatizes and shames people for not meeting what has been defined as bodily standards. Fat people are seen as deviations from the norm, and thus, as something that has to be fixed (Afful & Ricciardelli, 2015). This creates a problem and it is not surprising to see fat people react to the stigmatization by engaging in weight-loss behaviors. People talk about weight-loss experiences in different ways, which creates different discourses surrounding weight-loss. These are heavily influenced by current research and the media (Gronholm & Thornicroft, 2022). As of recently, the public focus has been on a health discourse, praising weight-loss of overweight people as a crucial step towards health. However, this discourse might have severely stigmatizing consequences (Pausé, 2017) and is therefore seen as rather controversial. Critics of the health discourse draw attention to the importance of mental health when considering weight loss and health. As it is not possible to reduce a person's health to only their body weight, other factors, like psychological well-being, have to be considered (Carryer, 2001). Naturally, other weight-loss discourses arise, shedding light on other aspects of fatness. One of those being, physically not fitting into one's environment. This led us to wonder whether and how different discourses about weight-loss have different effects on fat people, which inspired the following research question "What is the effect of different weight-loss discourses on fat people?". We aimed to answer this question through an experimental study. To be specific, the focus of this paper is set on the discourses' impacts on psychological well-being and stigmatization.

In this paper, the terms overweight and obese will be used as defined by the Body Mass Index (BMI). The BMI calculates a person's body fat based on height and weight and compares it to the societal "healthy" norm (BMI between 18,5 and 25) (Mackey, 2004) and is commonly used as a diagnostic tool. A BMI above 25 indicates overweight and a BMI above 30 indicates obesity, which is defined as an abnormally large amount of body fat. Recently,

the term obesity pandemic has been used a lot and describes the phenomenon that obesity levels are significantly rising worldwide (Blackwell, 2019). It highlights the problem that society sees in fatness and its search for a cure. In this study, we look at one of these cures – weight loss – and the discourses around it. This leads us to the term stigmatization, which will be used as discrimination on the basis of stereotypes (Shedlosky-Shoemaker et al., 2022). Lastly, discourse is a term often used in this paper. A discourse is the way in which a topic is publicly written or spoken about (Von Stuckrad et al., 2006).

The physical health discourse has been the most prominent one over the past years when discussing fatness and weight-loss, as it is widely known that weight loss can have positive effects on an obese person's health, such as a significant decrease in multimorbidity with the reduction of five percent of body weight. Multimorbidity is defined as the presence of at least two long term health conditions (Agborgsangaya et al., 2015). This is the fact that the health discourse is grounded on, with the underlying assumption that losing weight eventually leads to a healthy life. It is hoped to motivate fat people to lose weight by informing about health benefits. But as it turns out, this approach can have detrimental consequences.

The message of the health discourse can be perceived as quite stigmatizing in the way that fat people are living unhealthy lifestyles. Thus, indicating potentially damaging effects on psychological well-being, as well as body image satisfaction and stigmatization. The thin body has become a social norm for body weight and achieving or maintaining one has become increasingly important, while not being classified as having a normal body weight is often perceived as unhealthy and unattractive (Afful & Ricciardelli, 2015). Therefore, blaming the fat individual for bad life choices that result in fatness (Afful & Ricciardelli, 2015). Afful & Ricciardelli (2015) propose that stigmatization leads to self-disciplinary practices, like dieting or exercise, to conform to the societal norm, which are often more harmful than helpful (Tylka

et al., 2014). These weight-focused health interventions often result in weight regain and weight cycling, which have been linked to stigmatization, poor health and a decrease in well-being (Tylka et al., 2014). Thus, highlighting the various negative impacts a health-focused weight loss approach can have in respect to different variables of a person's well-being. Moreover, fat stigmas often result in serious discrimination, as, for example, Pausé (2012) recalls being denied residency in her country because of the burden she could place for the health care system due to her BMI. She claims: "The blame can always land back on the health of the fat person; the concern present; the looming cost." (Pausé, 2012, p. 46).

It can be argued that the stigmatization around fatness has its roots in the neoliberal stance in the way that everybody is responsible for their own body through their everyday choices and behaviors. This could be the belief those stigmatizing assumptions, that fat people are lazy, undisciplined, inactive, and out of control, are rooted in (Pausé, 2017). Fat stigma examples like these have been found to increase cortisol levels, blood pressure and inflammation and decrease executive function. Furthermore, it leads to decreased self-efficacy and self-esteem, a poor body image, depression, isolation and alienation (Pausé, 2017).

Another setting in which stigmatization of fat people can become seriously problematic, is the medical branch. Critics of the health discourse draw attention to the importance of mental health when considering weight loss and health. As it is not possible to reduce a person's health to only their body weight, other factors, like psychological well-being, have to be considered (Carrier, 2001). However, many overweight individuals experience being reduced to their body weight when going to the doctors (Carrier, 2001). The lack of consideration of environmental factors in medical diagnoses and treatments can have dangerous consequences for well-being.

However, another way to view this health discourse is that obesity is acknowledged as a disease and the sick person is therefore not to blame for the consequences of the illness they are suffering from (Scheurell, 2022). This suggests positive impacts and potentially motivating effects on the individual, as it could help people reach out for help. However, this aspect has not been subject to much research. Therefore, we are looking at the effects different weight-loss discourses have on a fat person's psychological well-being and body image satisfaction and stigmatization in our study.

Another weight loss discourse we encountered is "physically not fitting in". Physically not fitting into one's environment is a problem relatively distinctive to fat people. Having to worry about chairs being too small or weak, needing two seats on public transportation or having to ask for an extended seat belt on an airplane (Gailey, 2021) are only a few examples of what it means to be living in a world that does not accept one's body. Owen (2012) explains how these little mismatches between environment and body build up throughout the day to create a form of microaggressions. Microaggressions describe a way to communicate violence symbolically (Pierce, 1977). These can be humiliating to the point that some persons choose to socially withdraw (Gailey, 2021). A common example is not going to the doctor's anymore due to the fear of not being able to fit into the chairs in the waiting room. Having to live in a world shaped only for people fitting into the societal norms can be extremely challenging and discriminating and is found to be associated with shame, social isolation and an increase in depression (Gailey, 2021).

It is argued that this consumer-based discrimination is caused by the societal standards shaping our everyday environment, inconsiderate of deviations from the thin body norm (Afful & Ricciardelli, 2015). This constant reminder of living in a world not made for one, can communicate that fat people's needs and lives matter less than those that meet the norms. The hidden message behind it seems to be that not the environment has to change, but the fat

person has to in order to fit in (Owen, 2012). Owen (2012) coined this phenomenon “spatial discrimination, an implicit, deniable form of bodily oppression and identity devaluation.” (p. 303). Thus, again pointing out the discrimination that comes along with deviating from the societal beauty standards imposed on members of society. Therefore, we are interested in what kind of reactions exposure to the fitting in discourse evoke in fat people. To come back to our research question “What is the effect of different weight-loss discourses on fat people?”, it seems as if the health discourse and the not fitting in discourse address different aspects of living in a fat body, and would thus, trigger different kinds of reactions.

Examining the connection between fat stigma and weight loss discourses is crucial in today's society as it sheds light on the harmful attitudes and beliefs that fuel weight bias and stigmatization. Understanding the impact of these attitudes on individuals with weight issues can greatly improve their chances of successfully managing their weight. By doing so, research on fat stigma could eventually lead to the creation of weight management programs that are more effective and considerate, and create a more body-positive culture that embraces diversity.

In this research group, we are focusing on the effects of the health discourse and the not fitting in discourse on three different clusters of outcomes on overweight people, as those are the ones affected. Each cluster focuses on different dependent variables. The body-related cluster includes the variables body image satisfaction, internalizing stigmas and the need to control weight. Self-esteem and depressive symptoms make up the psychological well-being cluster, while the emotions cluster is focusing on anger, hope, guilt and sympathy towards the celebrity. I will be studying the former two clusters.

As can be seen from previous research, the health discourse causes higher levels of internalized stigmas, one dependent variable of our body-related cluster. It was found that environmental factors contributing to being overweight are often neglected and not considered

in many settings, which leads to serious stigmatization of fat people (Carryer, 2001). Now, we are interested in whether this effect changes for different discourses on weight loss. Therefore, the first hypothesis I have come up with states that the health discourse is expected to cause a worsening of the variables of the body-related cluster that is larger than that of the fitting-in discourse. This includes the prediction that the health discourse is expected to cause a larger increase in stigmatization than the fitting in discourse. This suggests that the physical health manipulation will trigger more internal stigmas than the not fitting in manipulation. As for the variable of body image satisfaction, we could not find much research on its association with weight-loss discourses. However, we predict there will be a visible difference in effect sizes, with lower body image satisfaction for the health discourse than the fitting-in discourse. This goes along with our predictions for the need to control weight of overweight participants, as we expect higher rates for the health discourse. This too, has not been subject to many studies yet and is thus only an assumption of ours. Since we expect the health discourse to elicit stigmatizing effects it would make sense that a first reaction is body image dissatisfaction and wanting to control one's own weight.

The second cluster we will focus on during this research is the psychological well-being cluster. Self-esteem and depressive symptoms have not been studied much in relation to weight-loss discourses. However, it is known that depression levels increase and self-esteem levels decrease in association with stigmatization (Pausé, 2017). Thus, keeping in mind our predictions regarding the body-related variables, we are predicting similar results for our study, which leads to my second hypothesis of this paper. This second hypothesis proposes the health discourse to cause a worsening in psychological well-being, whereas the not fitting in discourse is expected to cause improvements in psychological well-being. So, psychological well-being is expected to decrease in the health manipulation and increase in the not fitting in manipulation. I predict improved levels for the fitting in discourse because I

expect that relating to the struggles of not fitting into one's environment can make the participant feel and think better about themselves.

To summarize, the focus of this paper is on studying the effects of different weight-loss discourses on body-related and psychological well-being variables of fat participants. As this is a relatively new research topic, our predictions are mainly based on assumptions rather than peripheral predictions based on similar research. However, this only highlights the importance of our research and of the implications it may have for public discourses on fatness and weight-loss.

Method

Participants

We collected participants using convenience sampling through the United States based PROLIFIC platform online. A total of 302 participants completed the study. A sample of 298 responses was used, and 4 responses were removed due to incomplete answers. The sample ranged in age from 17-78 ($M = 41$, $SD = 13$), consisting of 300 females and two participants that chose not to specify their gender. Before the collection of participants in PROLIFIC, we specified a minimum BMI of 30 as a requirement to enter the study, which is categorized as "obese" by the WHO (World Health Organization, 2020). The Participants' weight ranged from 87 to 430 pounds ($M = 221$, $SD = 13$). The study received ethics approval from the Ethics Committee of Psychology.

Procedure & Design

In this study, a between-subjects experimental design with three conditions ("Health", "Fitting-in", Control) was used. The independent variables in this study are the weight discourses "health" and "fitting in", including a control group. The three conditions were randomly assigned. The researchers chose the participants based on Body-Mass-Index (BMI). The dependent variables were divided into three clusters. The first cluster consists of

body-related variables, including body image satisfaction, internalizing stigma, and the need to control weight. As a second cluster, psychological well-being, including self-esteem and depression, was measured. The third cluster consists of emotions, such as anger towards self, anger towards the celebrity, anger towards the system, hope, guilt due to feeling like a burden, guilt about being overweight, envy the celebrity, envy other people, sympathy towards the celebrity. Each student of the thesis chose two of these clusters to work on.

Participants were given informed consent with the right to withdraw, ensuring anonymity and safety. Individuals received monetary compensation for their participation in this study. Before starting the questionnaire, the participants were asked demographic questions, such as their BMI and age. In the next step, each participant was randomly assigned to one of the three conditions in which different ‘made-up’ magazine articles are displayed: control (N = 101), health discourse (N = 101), or fitting-in discourse (N = 100). The allocation was done by the online survey tool Qualtrics and the data was collected through PROLIFIC academic. The researchers created the fake celebrity ‘Olivia Turner’ and a matching fake magazine article on her weight loss. All the articles started with the same paragraph which made up the entirety of the control group. The “health” and the “fitting-in” discourses added a second paragraph including the ‘celebrity’s’ motivation for their weight loss. All participants read the articles assigned to them and then answered various questions. Finally, there was a debriefing for the participants, in which the aims of the study were explained and they were thanked for their participation.

Materials

Body Image State Scale

The translated Body Image State Scale (BISS; *Bardi et al., 2021*) is used to measure the individual’s evaluation of their physical appearance at a certain moment in time (state body image). It uses a 6-item measure, rated on a 7-point Likert scale. Each item begins with

“Right now, I feel”. An example would be: “Right now, I feel (extremely dissatisfied to extremely satisfied) with my physical appearance”. The phrasing for rating differs each time, e.g., another one would be “extremely physically attractive to extremely physically unattractive”. The score is made from the mean of each item, with higher scores indicating higher body satisfaction. And lower scores indicating lower body satisfaction. Two items are reverse scored (5,6). The BISS shows good psychometric properties with a Cronbach’s alpha of 0.77, and adequate goodness-of-fit. Sufficient convergent and construct validity was found. In our study a sufficient Cronbach’s alpha of 0.917 was found.

Weight Bias Internalization Scale

The Weight Bias Internalization Scale (WBIS; Durso & Latner, 2008) measures the degree to which participants believe negative stereotypes in form of self-statements, about people being “overweight” and “obese” (BMI of 25 and higher), apply to themselves (internalized weight biases). It is an 11-item measure, rated on a 7-point Likert scale. Items included multiple areas of content: acceptance/ rejection of weight status, desire for change, effect of perceived weight status on mood, perceived personal value, ease of life, public appearance and social interaction, and recognition of existence and unfairness of weight stigma. One example for an item would be “I hate myself for being overweight”, rated from 1, standing for strongly disagree to 7, standing for strongly agree. Items 1 and 9 were reversed scored. Psychometric properties are sufficient with an internal consistency (Cronbach’s alpha= 0.90). Adequate construct validity was found. In our study a sufficient Cronbach’s alpha of 0.913 was found.

Depression Anxiety Stress Scales

The Depression Anxiety Stress Scales (DASS-21; Lovibond & Lovibond, 1995) measures the degree to which participants have experienced each of 42 negative emotional

symptoms over the last week. In this study the short form of the questionnaire was used, including only 21 items instead of 42. It uses a 4-point severity/frequency scale, ranging from “never” to “almost always”. It includes three scales, Depression, Anxiety and Stress. We only included the Depression scale in this study. One example for an item of the Depression scale would be “I was unable to become enthusiastic about anything”. The total score of each scale is calculated by summing all scores of the relevant items. The DASS-21 shows good psychometric properties with an internal consistency (coefficient alpha) for each scale that were 0.91 for the Depression scale, 0.84 for the Anxiety scale and 0.90 for the Stress scale. In our study a sufficient Cronbach’s alpha of 0.950 was found.

Questionnaire to measure need to control weight

To measure need to control weight/dieting intentions we used a 6-item measure rated on a 7-point Likert scale, ranging from strongly disagree to strongly agree, as seen in Table 1. Items 2 and 5 were reversed scored. The reliability was sufficient with a Cronbach's alpha of 0.901. The items can be seen in Table 1 (see Appendix).

Questionnaire to measure self-esteem

To measure self-esteem we made one item (“I have a high self-esteem right now.”) rated on a 7-point Likert scale from strongly disagree to strongly agree.

Results

Preliminary Analysis

The participants were evenly divided into three conditions: control (N = 101), health (N = 101) and fitting in (N = 100). After a reliability analysis to check the internal consistency of our dependent variables, the following results were obtained: body satisfaction with a Cronbach’s alpha of 0.92, internalized stigma with a Cronbach’s alpha of 0.93, and depression with a Cronbach’s alpha of 0.95. These results led us to assume internal consistency, as all

items in each scale correlate positively with one another. When looking at the output, we found two items that contributed negatively to the reliability analysis, as their presence brought the Cronbach's alpha of the scale down. That is why we decided to cut item 5 of body satisfaction and item 1 of internalized stigma out.

We ran an ANOVA for every single dependent variable. Therefore, we first needed to test the normality assumption, that the dependent variables follow a normal distribution for each group. The Shapiro-Wilk provided us with significant p-values (all $p < 0.001$) for all dependent variables, which led us to reject the null hypothesis of a normal distribution. However, ANOVA is robust against these assumption violations, so we continued our analysis as it was. Next, the homogeneity assumption was tested and confirmed through Levene's test, which provided us with the following non-significant results: body satisfaction with $F(2, 296) = 0.685, p = .505$, internalized stigma with $F(2, 298) = 0.249, p = 0.780$, depression with $F(2, 296) = 1.40, p = 0.248$ and self-esteem with $F(2, 298) = 0.935, p = 0.394$.

Main Hypothesis Testing

One-way ANOVAs were run to test the two previously stated hypotheses (1. The health discourse is expected to cause a worsening of the variables of the body-related cluster that is larger than that of the fitting-in discourse; 2. The health discourse is expected to cause a worsening of psychological well-being, whereas the not fitting in discourse is expected to cause improvements in psychological well-being) and therefore the effect of the three experimental conditions on the dependent variables body satisfaction, internalized stigma, depression and self-esteem. For each of these, the analysis provided us with non-significant main effects: for body satisfaction $F(2, 296) = 2.37, p = 0.095, \eta_p^2 = 0.033$; for internalized stigma $F(2, 298) = 1.61, p = 0.202, \eta_p^2 = 0.011$; for depression $F(2, 296) = 0.901, p = 0.407,$

$\eta_p^2 = 0.006$; for self-esteem $F(2, 298) = 0.506, p = 0.604$, and $\eta_p^2 = 0.003$. The means and standard deviations of the dependent variables among the conditions are reported in Table 2.

Table 2

Descriptives of the Dependent Variables

	condition	bodysat_ MS	intern_ MS	dep_MS	esteem_1	weightcont_MS
N	control	101	101	100	101	100
	health	100	100	100	100	99
	fitting in	98	100	99	100	100
Mean	control	2.63	4.80	1.95	3.27	5.74
	health	2.96	4.49	1.97	3.25	5.47
	fitting in	3.07	4.45	1.82	3.52	5.46
Standard deviation	control	1.43	1.48	0.881	2.24	1.16
	health	1.55	1.51	0.912	2.00	1.30
	fitting in	1.53	1.58	0.751	2.13	1.32

Discussion

In this study, we tested the effects that different weight-loss discourses can have on fat people with the guiding research question “What is the effect of different weight-loss discourses on fat people?”. The first hypothesis, which states that the health discourse is expected to cause a worsening of the variables of the body-related cluster that is larger than that of the fitting-in discourse, was proven wrong by our data analysis. For each dependent variable we found non-significant results, which made any comparison of groups unnecessary. Accordingly, no significant changes were found in stigmatization, body satisfaction and need to control weight for either discourse manipulation. Similarly, the second hypothesis, stating that the health discourse causes a worsening of psychological well-being, whereas the not

fitting in discourse is expected to cause improvements in psychological well-being, could not be supported either due to non-significant findings for both variables. Thus, no significant changes, be it increase or decrease, in depression and self-esteem levels could be found.

The finding of only non-significant results could have different explanations and interpretations. Evidently, one is that simply neither psychological well-being, nor body-related variables are affected by the two discourses, and thus, stand in no relation to them. In practicality, that would be great news, as it means that how society has been handling obesity so far does not harm fat individuals in the tested clusters. If that was the case, continuation of both these public discourses could be encouraged. In fact, we did collect our data from the US-population, where obesity is far more common than anywhere else (Flegal et al., 2010; Groves, 2006). It could thus be assumed that the average fat person in the US feels less stigmatized than the average fat person in other countries because obesity is not as rare.

However, previous literature suggests otherwise. As has been discussed earlier, deviating from the normal body weight often goes along with fat stigma. Fat stigma is mainly based on the assumption that overweight people are living unhealthy lifestyles and includes being perceived as less attractive, less valuable and less deserving of respect and appreciation (Afful & Ricciardelli, 2015). Fat stigma, on the other hand, leads to higher levels of depression, as well as lower levels of self-esteem and a poorer body image (Pausé, 2017). This stands in contrast to our research findings that suggest fat people do not feel stigmatized by the ongoing public discourses, including health and fitting-in, as no relationship between public discourses around fatness and body-related or psychological well-being variables was found. These contradictions lead us to assume that there might be another explanation for the results of our experiment.

During the process of data collection and analysis, we recognized several limitations to our study. Starting with the selection of overweight participants based on their BMI. Simply for accessibility reasons we decided to sample our participants based on their BMI score. The high public relevance that the BMI has in today's society is being increasingly criticized, as it is used as an indicator of someone's health solely based on that person's weight and height. However, it is now known that there are many more factors that play into the definition and calculation of someone's health (Nutall, 2015). Thus, our selection of participants is based on a measure that is no longer acknowledged as a good and valid indicator for fatness. This could have distorted our results in the way that some of the participants simply did not relate to the struggles that come along with living as a fat individual, due to misclassifications of fatness. Therefore, our manipulation might have not entirely worked the way we wanted it to, as the participants potentially did not feel addressed, and therefore, could not be manipulated. This would explain why they did not feel stigmatized, body shamed, or worse in terms of psychological well-being.

Other limitations include the selection of exclusively female participants due to our manipulation designed in the form of articles using a made-up female celebrity. This limits our results in terms of generalizability and contributes to the already existing problem of lacking research on fatness in men. We have noticed most empirical articles about fatness being centered around women. This might be due to society's high beauty standards for women that include a thin body norm. However, even though the pressure on men might not be as high as on women to conform to thin beauty ideals, men cannot be disregarded. As far as we know, men struggle the same way with fatness and feel just as stigmatized. Therefore, it is important that future research includes men and their experiences with fatness in today's society.

Moreover, we failed to include manipulation- and attention checks due to a programming error. Unfortunately, this restricted our data analysis in the way that we were unable to detect and delete response styles that would falsify our results, and thus, reduces the internal validity of this study. As can be seen from the data set, there were some participants that seemed suspicious of following these certain response styles. Some participants, for example, only always selected the neutral options (“neither agree nor disagree”) or chose to only select one of the extremes and stick to that one throughout the whole questionnaire. However, as this research was done by a group of bachelor students, we will be taking this as a valuable learning experience.

Another potential limitation of this study might be the design of our manipulation. The manipulation was presented in the form of a short article about a fake celebrity’s weight loss, which makes up a relatively simple design. This might not have had the effect on the participants that we had hoped it would. A longer and more detailed article might have a stronger impact on the participants’ thinking. Another medium, like a film sequence or podcast, could also result in a stronger manipulation on the individual. Moreover, the fact that we chose a fake celebrity might have affected the study’s outcome in the way that participants did not care, and thus, did not relate to her as much as we hoped they would.

An additional limitation worth mentioning is the fact that we designed the experiment in such a way that made it difficult for us to conclude that our results were solely based on the manipulation. Since we did not include a control group that was exposed to a condition unrelated to weight-loss, it might be the case that the specific kind of weight-loss discourse did not even matter, and only the general topic of weight-loss did. Similarly, we could have included questions about the participant’s well-being and other body-related variables before the manipulation. Both could have made it easier to measure the actual effect that the

manipulation, including the different discourses and the general topic of weight-loss, had on the participants.

To improve this study, a first step would be to include a male or gender-neutral manipulation to include a wider range of participants, and thus increase the study's generalizability. Adding to this would be a different design of the manipulation in form of, for instance, a video- or audio clip. Also the participants should be asked questions assessing their well-being levels on various scales before and after the manipulation. Optionally, a condition unrelated to weight-loss should be implemented for reasons of experimental control. Moreover, manipulation- and attention checks should be added to strengthen the study's internal validity.

Most importantly, however, a different measure for fatness should be used to ensure a correct target audience. For this to be possible, more research is needed on alternatives for the BMI. As of right now, the BMI is still widely used for classification purposes, which might be due to a lack of public knowledge about fatness and its correlation to health. In fact, research on alternatives for the BMI is scarce and is in need for more empirical attention. Alternatives that have been found to be better at predicting health than the BMI, are the waist-circumference and the waist-hip ratio (World Health Organization, 2011). But the measurements that are needed for those calculations are not as easily accessible to everyone as those of the BMI, which defines an important disadvantage of these alternatives. Nonetheless, they have the potential to become important indicators for someone's health and weight status, and could be used instead of the BMI in future research.

Research on the influence of weight-loss discourses on fat people is relatively limited and mental health seems to be disregarded publicly when talking about fatness. However, both are important factors to consider in order to understand the impacts weight loss discourses have on fat people. In general, we aim to help understand how to support fat

people physically and psychologically. Therefore, we consider our research to be an important contribution to the existing literature. Nonetheless, since all results were non-significant and oppose what we have learned from previous research, we cannot draw many conclusions or implications from this study.

As mentioned earlier, the non-significant results could be understood as potentially good news for the field of fat studies. It could be concluded that health- and fitting-in discourses do not affect fat people negatively, and are thus, appropriate to use. Nevertheless, it is important to note that non-significant results do not necessarily mean that the hypothesis being tested is false, but rather that the data does not provide enough evidence to support it. For this reason our results should be interpreted carefully and only while acknowledging the disparity with previous research. If the results would have turned out to be significant and confirmed our hypotheses they would have implied that weight loss discourses, specifically the health discourse, are perceived negatively by fat people. In particular, the way weight loss is talked about would have serious problematic effects on the fat individual on various person-variables, and thus, would need to be changed. Also, the importance of mental health should be more of a concern of society when dealing with obesity. However, future research is needed to confirm or disconfirm our findings and conclusions.

To conclude, the study's two hypotheses (1. the health discourse is expected to cause a worsening of the variables of the body-related cluster that is larger than that of the fitting-in discourse; 2. the health discourse is expected to cause a worsening of psychological well-being, whereas the not fitting in discourse is expected to cause improvements in psychological well-being) could not be confirmed, due to non-significant findings. This could mean that the two weight-loss discourses, health and fitting-in, do not have a significant impact on body-related variables as well as on the psychological well-being of individuals. Optionally, as previous literature suggests, these findings may be caused by other factors

influencing this relationship. Thus, again highlighting the need for future investigations to validate the conclusions that can be drawn from this study.

References

- Afful, A. A., & Ricciardelli, R. (2015). Shaping the online fat acceptance movement: Talking about body image and beauty standards. *Journal of Gender Studies*, 24(4), 453–472.
<https://doi-org.proxy-ub.rug.nl/10.1080/09589236.2015.1028523>
- Agborsangaya, C. B., Majumdar, S. R., Sharma, A. M., Gregg, E. W., & Padwal, R. S. (2015). Multimorbidity in a prospective cohort: Prevalence and associations with weight loss and health status in severely obese patients. *Obesity*, 23(3), 707–712.
<https://doi-org.proxy-ub.rug.nl/10.1002/oby.2100>
- Bardi, L., Arnaud, C., Bagès, C., Langlois, F., & Rousseau, A. (2021). Translation and Validation of a State-Measure of Body Image Satisfaction: The Body Image State Scale. *Frontiers in Psychology*, 12.
<https://doi.org/10.3389/fpsyg.2021.724710>
- Blackwell, A. H., PhD. (2019). Obesity. In D. S. Hiam (Ed.), *The Gale Encyclopedia of Diets* (3rd ed., Vol. 2, pp. 981-993). Gale.
<https://link.gale.com/apps/doc/CX2491000241/GVRL?u=groning&sid=bookmark-GVRL&xid=a5b0476d>
- Carrier, J. (2001). Embodied largeness: A significant women's health issue. *Nursing Inquiry*, 8(2), 90–97.
<https://doi-org.proxy-ub.rug.nl/10.1046/j.1440-1800.2001.00094.x>
- Durso, L. E., & Latner, J. D. (2008). Understanding Self-directed Stigma: Development of the Weight Bias Internalization Scale. *Obesity*, 16(S2), S80–S86.
<https://doi.org/10.1038/oby.2008.448>
- Flegal, K. M., Carroll, M. D., Ogden, C. L., & Curtin, L. R. (2010). Prevalence and trends in obesity among US adults, 1999-2008. *Jama*, 303(3), 235-241.
<https://doi.org/10.1001/jama.2009.2014>

- Gailey, J. A. (2021). The Violence of Fat Hatred in the “Obesity Epidemic” Discourse. *Humanity & Society*, 46(2), 359-380.
<https://doi.org/10.1177/0160597621995501>
- Gronholm, P. C., & Thornicroft, G. (2022). Impact of celebrity disclosure on mental health-related stigma. *Epidemiology and psychiatric sciences*, 31, e62.
<https://doi.org/10.1017/S2045796022000488>
- Groves, T. (2006). Pandemic obesity in Europe. *Bmj*, 333(7578), 1081.
<https://doi.org/10.1136/bmj.39038.449769.BE>
- Lovibond, P., & Lovibond, S. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343.
[https://doi.org/10.1016/0005-7967\(94\)00075-u](https://doi.org/10.1016/0005-7967(94)00075-u)
- Mackey, C. S. (2004). Body Mass Index. In D. C. S. James (Ed.), *Nutrition and Well-Being A to Z* (Vol. 1, pp. 71-74). Macmillan Reference USA.
<https://link.gale.com/apps/doc/CX3436200047/GVRL?u=groning&sid=bookmark-GVRL&xid=39fd72de>
- Nuttall, F. Q. (2015). Body mass index: obesity, BMI, and health: a critical review. *Nutrition today*, 50(3), 117.
<https://doi.org/10.1097/NT.0000000000000092>
- Owen, L. (2012). Living fat in a thin-centric world: Effects of spatial discrimination on fat bodies and selves. *Feminism & Psychology*, 22(3), 290–306.
<https://doi-org.proxy-ub.rug.nl/10.1177/0959353512445360>
- Pausé, C. (2012). Live to tell: Coming out as fat. *Somatechnics*, 2(1), 42-56.
<https://doi.org/10.3366/soma.2012.0038>

- Pausé, C. (2017). Borderline: the ethics of fat stigma in public health. *The Journal of Law, Medicine & Ethics*, 45(4), 510-517.
<https://doi.org/10.1177/1073110517750585>
- Pierce, C. M., Carew, J. V., Pierce-Gonzalez, D., & Wills, D. (1977). An experiment in racism: TV commercials. *Education and Urban Society*, 10(1), 61-87.
<https://doi.org/10.1177/001312457701000105>
- Scheurell, L. (Host). (2022, January 10). Abnehmen: Wie schlimm ist Übergewicht wirklich? [Audio podcast episode]. In *Wissen Weekly*. Spotify Studios.
<https://open.spotify.com/episode/5cQLyZ3YQCBc6hkgrEkt5q?si=6b3a18779b8d497d>
- Shedlosky-Shoemaker, R., Strassle, C. G., Deffler, S. A., & Engler, J. N. (2022). Addressing stigmatization of psychological disorders in introductory psychology. *Scholarship of Teaching and Learning in Psychology*.
<https://doi-org.proxy-ub.rug.nl/10.1037/stl0000329>
- Tylka, T. L., Annunziato, R. A., Burgard, D., Daniëlsdóttir, S., Shuman, E., Davis, C., & Calogero, R. M. (2014). The weight-inclusive versus weight-normative approach to health: Evaluating the evidence for prioritizing well-being over weight loss. *Journal of obesity*, 2014.
<http://dx.doi.org/10.1155/2014/983495>
- Von Stuckrad, K., Auffarth, C., Bernard, J. & Mohr, H. (2006). Discourse. *The Brill Dictionary of Religion* (Vol. 1, pp. 516-519). Brill Academic Publishers.
<https://link.gale.com/apps/doc/CX2686700142/GVRL?u=groning&sid=bookmark-GVRL&xid=579b3a10>
- World Health Organization. (2011). *Waist circumference and waist-hip ratio: report of a WHO expert consultation, Geneva, 8-11 December 2008*.

World Health Organization. (2020). *Obesity and overweight* World Health Organization.

<https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

Appendix

Table 1

Items for the Body-Related and Psychological Well-Being Cluster

Body-related	Psychological well-being
Body image satisfaction:	Depressive symptoms:
1. Right now, I feel satisfied with my physical appearance	1. cannot seem to experience any positive feelings at all
2. Right now, I feel satisfied with my body size and shape	2. I feel like I have nothing to look forward to.
3. Right now, I feel satisfied with my weight.	3. I feel downhearted and blue.
4. Right now, I feel attractive	4. I am unable to become enthusiastic about anything.
5. Right now, I feel the worse about my looks than I usually do	5. I feel I am not worth much as a person.
6. Right now, I feel worse than the average person looks	6. I feel that life is meaningless.
Need to control weight:	Self-esteem:
1. I feel like I need to lose weight	1. I have a high self-esteem right now.
2. I am happy with my weight	
3. I feel like I need to control my weight	
4. I feel like I need to change my diet	

5. I feel happy with my diet

6. I feel the need to go on a diet
