The Effect of Self-Efficacy on Weight Loss Behavior

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SELF-EFFICACY EFFECT ON WEIGHT-LOSS BEHAVIOR

Abstract

The purpose of this proposal is to examine the effects of self-efficacy on weight-loss behavior. It will follow a quasi-experimental design with participants sharing the characteristics of being overweight with a desire to lose weight. Self-efficacy is anticipated to be a predictor of weight-loss behavior with a positive correlation. Experimental groups one and two will receive two levels of intervention from the same therapist. Longitudinal techniques will be implemented in both groups along with the control in order to compare surveys, questionnaires, interviews, and self-reports on individual experiences. It is predicted that the significance level will be below or at .05%. Future research might attempt to replicate these projected results with a mentoring program intervention in place of a traditional therapy.

Keywords: self-efficacy, weight-loss behavior
Self-Efficacy Effect on Weight-Loss Behavior

Self-efficacy is the belief in one’s ability to succeed in specific situations or accomplish a task (AllPsych Dictionary, 2018). Previous research has indicated the significance of self-efficacy and the effect it can have on approaching challenges and accomplishing life goals. What people believe they can do has shown to have a monumental effect on their abilities. According to Albert Bandura, people who have an awareness of self-efficacy are typically able to bounce back from failure and approach conflict with alternative solutions, rather than worry of what might go wrong (Bandura, 2008). Recent research has investigated links between self-efficacy and weight-loss behavior (Annesi, 2017).

Annesi (2017) explored the relationships between self-accountability, self-efficacy, and mood variations in assisting improved physical activity and nutrition behaviors (Annesi, 2017). He tested the extension of behavioral therapy in improving weight-loss treatment effects in women with obesity ($N = 53$). Mediation models were used to assess self-efficacy and its relationship to self-regulation, mood change, fruit and vegetable consumption, and physical movement (through month 6 and 6-24 months). The objective of this study was to better the understanding of directionality between psychosocial predictors of behavioral changes associated with weight-loss (p. 506). His hypotheses included predictions that self-regulation fluctuations would stem from both self-efficacy and weight-loss changes, along with self-efficacy and weight-loss variations having similar effects on self-regulation (Annesi, 2017). “Changes in self-regulation would be the stronger predictor of self-efficacy changes than vice versa; Change in mood would significantly moderate relationships between these predictors and weight-loss behaviors” (Annesi, 2017, p. 506). Emotional eating variations were also expected to alter mood and nutrition fluctuations (Annesi, 2017). Outcomes concluded that self-regulation did result to
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be the stronger predictor of self-efficacy fluxes than vice versa, and emotional eating did significantly affect mood change and fruit/vegetable intake relationships (Annesi, 2017).

Nezami et al. (2016) investigated the effects of self-efficacy on weight-loss behavior. The objective of his study was to determine the prediction abilities of eating self-efficacy and physical activity self-efficacy on dietary consumption, physical activity, and weight fluctuation during a behavioral weight-loss intervention. He also studied whether fruit and vegetable consumption and physical activity could mediate relationships between self-efficacy and weight change. Nezami predicted that increased self-efficacy during intervention would result in increased weight-loss (p. 714). He acquired participants (N = 363) through television and newspaper recruitment advertisements. He ran a randomized controlled trial over the course of 18 months which randomly assigned adults to weight-loss intervention programs. Baseline data included that higher eating self-efficacy was associated with lower calorie consumption. Participants had lost 10.9% of their body weight by 6 months. By 12 months, weight lost was about the same at 11%. The study showed that levels of self-efficacy can affect dietary consumption, physical activity, and weight-loss, both before and after an intervention program.

Wilson et al. (2016) used pragmatic measures to develop an assessment for self-efficacy and its relationship to physical activity, eating, and weight-loss. She described her work as brief measurements intended to promote further research. She included that previous findings (e.g., Annesi, 2007) lack sufficient supporting evidence of construct validity pertaining to self-efficacy. Wilson also noted that the available measures were dissatisfactory, which contributed to results that were difficult to interpret (Wilson, 2016). The purpose was “to provide a survey to measure self-efficacy for weight-loss-related behaviors that is brief, comprehensive, and pragmatic” (Wilson, 2016, p. 1255). About 1800 overweight women from 28 worksites in
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Southern Virginia enrolled in a two-condition cluster randomized weight-loss trial. The women had an average age of 46 and BMI of 33.32. With the exception of body weight, the nutritional data was self-reported by the participants through websites and paper-and-pencil format. Wilson focused on fruit, vegetable, and dietary fat consumption. Regarding physical activity self-efficacy, participants were encouraged to ease into regular amounts of moderate-to-vigorous activity (Wilson, 2016). She also wanted to test factorial and predictive validity according to other factors (e.g., gender, education level). Stability over time was an offered measurement as well. Certain sessions focused on increasing knowledge on nutrition while others asked participants to lower physical energy. The results concluded that this survey has strong psychometric quality for targeting self-efficacy for weight-loss behaviors (Wilson, 2016). This study supports the use of the survey in future weight-loss trials.

Previous research on self-efficacy and its effect on weight-loss behavior has produced findings that are difficult to interpret (Wilson, 2016). A universally drawn conclusion from each of the above articles is that self-efficacy levels do affect weight-loss behavior. While self-efficacy, self-regulation, and mood changes can be viewed as reciprocal and interactive relationships, Annesi (2017) found that self-regulation was a stronger predictor of self-efficacy fluctuation than self-efficacy was of self-regulation (Annesi, 2017). Self-efficacy levels were found to have an effect on dietary intake, physical motion, and weight lost, both before and after an intervention program (Nezami et al., 2016). Wilson et al. (2016) developed a more accurate measurement for targeting self-efficacy and its effect on weight-loss behavior. Their study supports the continued use of the survey in weight-loss trials. From Bandura’s (1997) publication, “Passages Beyond the Gate,” “If self-efficacy is lacking, people tend to behave ineffectually, even though they know what to do” (p. 425).
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The dependent variable for this proposed study will be the weight-loss behavior. The actual amount of weight lost will also be measured for comparison. However, individuals have tended to lose weight at different rates, so what will be tracked more specifically will be each participant’s actual engagement in weight-loss behavior. Measurement will include check-in dates and times, log entries for attendance at intervention sessions, completion and submission of questionnaires, and filming appointments for interviews. The independent variable, self-efficacy level, will be manipulated through this experiment while compared to individuals not receiving any intervention at all. Instructions will be given by the researcher to all participants at the same time to avoid any differentiation.

Method

Participants

Participants will be recruited through social media, newspapers, and advertisement campaigns. The sample size for this study will include about 100 individuals. The gender ratio will include roughly an even number of males and females, and the participants will be divided into three groups. The race and education level, being possible variables for future research on self-efficacy, will need to be randomized. However, participants will be eligible for participation at the standardized age of 30, and they will be selected at random. Participants will be informed that there will be no compensation before agreeing to participate in this study. This will be to prevent a financial incentive to engage in weight-loss behaviors, as accurate self-efficacy levels will be crucial for analyzing the results.

Materials

Materials necessary for this study will include journal logs, or access to any form of technology for online uploading and tracking participation and detailed accounts of therapy
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experiences. Camera equipment for interview footage will also be essential to cross reference the participants over time. Self-analysis will be critical to determine how each participant feels about their own potentials and abilities. Questionnaires will need to include topics such as goal orientation and task analysis completion.

**Procedure**

This proposed research study will follow a quasi-experimental design, as the participants will share the characteristic of being overweight with a desire to lose weight. The first group will receive a 12-month intervention from a psychologist. The second group will receive a 6-month intervention from the same psychologist in order to standardize the treatment for both groups. The third group will not receive any form of intervention. The goal will be to determine whether any differentiation occurs between the experimental groups. A supplemental longitudinal technique will be added to both the intervention and control groups. Due to therapy effectiveness relying on the strength of the relationship between the therapist and client, any form of therapy will be an acceptable intervention, as long as it is standardized among the experimental groups. All participants will be required to disclose their experiences and mental health states through journal entries and psychological assessments. This will aid in the analysis of efficacy measurements over time and the examining of results for composing future research. All participants will still be required to document their trials and tribulations at homogeneous times, and all will be held to the same check in times and interview stage commitment.

**Projected Results**

The goal will be to obtain the mean and standard deviation of each of the group’s weight-loss and weight-loss behavior. A column chart will be created to best present the group means. A t-test will also need to be included in the statistical analysis of the findings. The hypothesis is
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that self-efficacy is indeed an influencer of weight-loss behaviors. Isolating one age group with an even number of males and females will allow for more accurate views of extraneous variables. It is predicted that the significance level will be below or at .05%. Self-efficacy is believed to be a predictor of weight-loss behavior, but females often have difficulty losing weight over males. Age is also believed to affect the results, which is why it must be standardized for this study and possibly manipulated in a future one.

Discussion

Results will be analyzed further to propose future research ideas based on the findings. Although the same psychologist will be administering the interventions to all participants within the experimental groups, it will be hard to account for differences in the personality traits and predispositions of both the therapist and the participant and how each interaction might affect the results. Several anticipated factors to examine based on predicted outcomes of the filmed interviews and questionnaires would be perceived and learned helplessness, verbal persuasion, emotional and physiological states and stressors, and major life altering experiences or traumas. Additional variables to consider could be medications, both for and irrelevant to weight-loss behavior, conditions of worth, psychoanalysis, modeling, self-esteem and confidence levels, and motivation sources. Examining participants’ social media/technology usage is pertinent as well due to vast misleading and unrealistic portrayals of beauty (i.e., developments of body disturbance disorders, disordered eating, negative body image). Based on the Nezami et al. (2016) baseline data findings, fewer calories consumed by an individual was related to higher levels of self-efficacy. This may pose a greater need for cultural competence research relations to modern day technology, ideals, and self-expectations. While no particular form of therapy reigns superior over others in terms of effectiveness, as success is proven to be based on positive client-
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therapist relationships, perhaps certain forms have specific influences over self-efficacy
development and/or weight-loss behavior. Future research might attempt to replicate these
projected results with a mentoring program intervention in place of a therapist. Perhaps a
relationship with a foundation of unconditional positive regard is enough to yield similar results.

Appendix A
Interview Script Sheet for Filmed Sessions

Interviewer ID: ___
Interviewee ID: ___
Video Session #: ______
Date: ______________

Open-Ended Questions:

1. What are some goals, both short and long-term, that you have set for yourself in the past month?
______________________________________________________________________________
______________________________________________________________________________
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2. Of the goals previously mentioned, which have you met and not met?

______________________________________________________________

3. What do you believe to be the reason for having met or not met those goals?

______________________________________________________________

______________________________________________________________

4. What short and long-term goals do you plan on setting for yourself in the future?

______________________________________________________________

______________________________________________________________

5. How do you plan ensure that you accomplish said goals?

______________________________________________________________

______________________________________________________________

6. What deterrents, if any, do you anticipate experiencing in the pursuit of these goals?

______________________________________________________________

______________________________________________________________

7. How can you prepare for said deterrents if and when they occur?

______________________________________________________________

______________________________________________________________
Appendix B
Self-Analysis Questionnaire

Participant ID: ___
Date: ______________

Questions:

1. On a scale from 1-10, with 1 being the weakest and 10 being the strongest, rank your ability to set goals for yourself:

   1  2  3  4  5  6  7  8  9  10

2. On a scale from 1-10, with 1 being the weakest and 10 being the strongest, rank your ability to accomplish said goals for yourself:

   1  2  3  4  5  6  7  8  9  10
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3. On a scale from 1-10, with 1 being the weakest and 10 being the strongest, rank your ability to maintain a positive mindset:

1 2 3 4 5 6 7 8 9 10

4. On a scale from 1-10, with 1 being the weakest and 10 being the strongest, rank the strength of your self-esteem:

1 2 3 4 5 6 7 8 9 10

5. On a scale from 1-10, with 1 being the weakest and 10 being the strongest, rank how successful you feel at this moment:

1 2 3 4 5 6 7 8 9 10

6. On a scale from 1-10, with 1 being the weakest and 10 being the strongest, rank your potential for success in the future:

1 2 3 4 5 6 7 8 9 10

References


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