Motivated to Lose: Weight-Loss Intentions, Peer Networks, and Actual Weight Loss in a National Longitudinal Sample

Matthew A. Andersson*
Nicholas Christakis
Yale University

*Correspondence to:
Matthew A. Andersson
Center for Research on Inequalities and the Life Course (CIQLE)
Department of Sociology, Yale University
New Haven, CT 06520
Email: matthew.andersson@yale.edu Tel: (203) 432 3216
Abstract

Although research provides evidence for peer effects on personal body mass, it remains unclear what kinds of goal-relevant social network changes occur among those who intend to lose weight and how these network changes matter for subsequent loss in body mass. To gain better insight into social network dynamics among those who intend to lose weight, we will utilize national panel data (2013-2015 Gallup Panel Study). According to preliminary analyses, intending to lose weight predicts increased social contact with individuals of relatively heavier body mass over the next two years. However, actual losses in body mass are linked to the opposite interpersonal strategy: that is, more social time spent with thinner individuals. The stark contrast between typical and efficacious weight-loss strategies among those intending to lose weight may help explain abundant cases of unsuccessful weight loss in the population.
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Weight loss is conditioned by numerous biological and social influences. Social influences include one’s peers. For instance, peer body mass may influence personal body mass over time, in a type of social contagion process (Christakis and Fowler 2007). The nature and extent of peer effects remain poorly understood, however (Cunningham et al. 2012). Meanwhile, it remains difficult to reconcile any peer contagion effects with observed rates of weight loss in the population. Intended weight loss often is unsuccessful and is a complex process that occurs in social contexts over time. Is intended weight loss a simple story of individuals recruiting and “sticking with” peers who are thinner and thus perhaps more knowledgeable about weight loss? Or is personal network change more complex than a simple selection model might suggest?

According to a goal facilitation perspective, individuals who are committed to a salient goal, such as weight loss, recruit and spend time with significant others who embody the completed goal and who may thus provide relevant or useful information for goal progress (Fitzsimons and Fishbach 2010). In this case, peers or significant others with lower body mass relative to one’s own literally embody a self with lower mass, and these individuals may be more likely to provide useful information, behavioral resources, or encouragement towards the end of personal weight loss than individuals who are similar to or heavier than one’s current body mass. While a goal facilitation perspective has shed light on how work- and activity-related goals lead to corresponding change in interpersonal contact with goal-relevant significant others (Fitzsimons and Finkel 2011), it has yet to be applied to the study of population weight loss among adults.

In contrast, a self-enhancement perspective focuses on stigmatizing social attitudes toward excess body mass and the vulnerability one experiences when progressing toward a difficult goal such as weight loss (Frisco, Houle and Martin 2010; Schafer and Ferraro 2011). Overweight and obese individuals are subject to negative social stereotypes about their competence, effectiveness and likeability. Engaging in weight loss involves admitting that one is overweight, which may induce self-stigma in addition to social stigma (Lillis, Louma and Hayes 2010). Meanwhile, individuals have a motivation toward self-enhancement, whereby they seek to preserve positive attitudes about the self, especially when these attitudes are under threat (Swann, Chang-Schneider, and McClarty 2007). In the case of weight loss, spending more social time with individuals who are heavier than oneself would help to ensure that one is regarded positively and feels confident while pursuing the socially and physically challenging goal of weight loss.

METHOD

DATA

To examine changes in goal-relevant social contact as they relate to weight-loss intentions and changes in body mass, we draw on 2013-2015 Gallup Panel Data (Waves 1-3; Nicholas Christakis, PI). This is an unreleased national dataset collected by a combination of email and phone interviews. At each wave, Gallup respondents nominated up to eight individuals with whom they discuss important matters or spend free time. For each nominated alter, demographic and personal information are collected, including information about alter’s body mass. Here, we
focus on individuals who participated in all three waves of the Gallup survey and who intend to lose weight (“Would you like to lose weight, stay at your present weight, or put on weight?”; 60-70% of sample, depending on wave). We exclude older individuals in order to focus on changes in weight unrelated to geriatric concerns. This will yield a panel sample size of approximately N=3596.

OVERVIEW OF ANALYTIC STRATEGY

Model Set 1: Intention to Lose Weight and Goal-Relevant Social Contact. In a first set of models, we examine associations between the intention to lose weight at baseline (Wave 1) and goal-relevant social contact (Waves 2 and 3).

Goal-relevant social contact refers to social time spent with individuals heavier or thinner than oneself. Relative weight of one’s peers is based on the respondent’s appraisals of others’ weight with one’s own weight as reference. Perceived peer weight is more relevant to goal facilitation and social comparison than actual peer weight. Measures of social time, which are collected at each Gallup wave for each individual in the personal social network, include time spent interacting in person, on the phone, on email, on text messaging, and on social media.

Control variables will include demographic characteristics, basic network aspects (density, percent kin, demographic aspects of alters), changes in basic network aspects, self-rated physical and mental health, and baseline body mass and baseline goal-relevant social contact.

Model Set 2: Changes in Body Mass Linked to Goal-Relevant Social Contact. In a second set of models, we will focus on longitudinal changes in body mass as they relate to goal-relevant social contact. We will select on those who are intending to lose weight. Body mass is calculated from self-reports of weight and height. Control variables will be consistent with Model Set 1.

PRELIMINARY RESULTS AND NEXT RESEARCH STEPS

Across three waves, 63% of Gallup respondents report an intention to lose weight. According to preliminary analyses, intending to lose weight predicts increased social contact with individuals of relatively heavier body mass over the next two years, as well as decreased contact with relatively thinner individuals (Model Set 1). However, actual losses in body mass are linked to the opposite interpersonal strategy: that is, more social time spent with thinner individuals and less time spent with heavier individuals (Model Set 2). The stark contrast between typical and efficacious weight-loss strategies among those intending to lose weight may help explain abundant cases of unsuccessful weight loss in the population. In refining Model Sets 1 and 2, we will examine robustness to diverse measures of goal-relevant social contact and diverse specifications of body mass, and we will also test for differences in weight-loss dynamics by gender and by age.

To better establish the nature of weight-loss mechanisms, we will also consider varying arrangements of temporal order. In some instances, we will examine the outcome at Wave 3 and consider covariates at Waves 1 and 2. In other instances, we will examine the outcome across Waves 2 and 3 and implement covariates from Waves 1 and/or 2 as appropriate. We may
implement a first-differenced modeling strategy to examine whether our findings are robust to unobserved stable differences between individuals such as personality traits or dispositions relevant to weight loss. Additional models also will examine whether associations between goal-relevant social contact and changes in body mass are explained by changes in weight-relevant health behaviors (e.g., exercise, diet).

In examining personal social network changes, it is often unrealistic to focus on changes in actual individuals, especially if some individuals are family members or close friends. However, it does make sense to look for gradual or small changes in the amount of social time spent with contacts, under the idea that one may shift one’s allocation of time having decided to attempt to lose weight. While we will focus mainly on the allocation of social time across one’s network contacts, we also will consider individuals moving in and out of one’s personal social network.

REFERENCES


