UNIVERSITY OF CALIFORNIA
RIVERSIDE

Psychosocial Predictors of Giving Health-Related Social Control to a Partner

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Psychology

by

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December 2012

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Acknowledgements

I am blessed to have had so many people support me on my journey.

Faculty and Staff

First and foremost, I would like to thank my advisor, Dr. Chandra Reynolds, for inspiring me, teaching me complex statistical analyses, and giving me so many great opportunities. I have always admired her enthusiasm and dedication to research, and I will forever be grateful for everything she has done for me. I am also very thankful to Dr. Howard Friedman, my secondary advisor. Howard taught me the importance of solid writing and grounding research in theory. He also supported and guided me in all of my endeavors. I would also like to thank Dr. Sonja Lyubomirsky for serving on my committees and always providing such thoughtful feedback. Sonja also helped me develop my writing skills, and she has been invaluable in my professional development.

I am also thankful to the entire University of California, Riverside (UCR). The faculty here taught me so much. Faye Harmer was a tremendous resource and source of support, and she helped me navigate every graduate school hurdle. Dianne Fewkes was also a great resource and supporter. In addition, Conrad Colindres and Renee Young were always very kind and willing to help. I am also immensely grateful to the UCR vanpool program and the drivers who helped me commute over 100,000 miles during graduate school!

This dissertation was supported by the UCR Dissertation Year Program Award and the UCR Dissertation Research Grant. I am very thankful to Dr. Ken Stewart and the UCR Campus Health Center for allowing me to collaborate with them on their Get Fit

Challenge for my dissertation. I also really appreciate the research assistants, especially Sophia, who assisted on this study.

Lab Mates

I am incredibly grateful to have had so many wonderful and supportive lab mates over the years. Peggy Kern taught me all about The Terman Life Cycle Study, introduced me to SAS, and showed me what great work ethic in graduate school looks like. Even after graduating from UCR, she has generously continued to share her experiences, provide insightful feedback, and be a steady source of encouragement and support. Archana Balasubramanian, one of the senior students in my lab, paved the way for me and generously shared the lessons she learned along the way. Archana has remained a valuable resource and become a great friend. Catalina Zavala has given me endless encouragement and support during our time together. Through our cross-country travels and many hours spent working side-by-side, she has become a dear friend. Brittany Bannon has brought a great spirit to the lab and has always had the ability to make me laugh. Ashley Ricker always believed in and supported me. Jennifer Koontz, another senior student in the lab, also provided feedback and advice. Finally, Katherine Duggan has also been a great source of encouragement and support.

Family

I cannot thank my mom, Ilyana Jacobson, enough for how much she has done for me. She has always believed in me and taught me to believe in myself. She has worked tirelessly my entire life to support me and help me in any way she could. I admire my mom's work ethic, her devotion to being the best mother possible, and her dedication to

her health. I feel so blessed to have been given such an amazing mother and friend, and I can only hope to continue to become more and more like her.

I would also like to thank my grandfather, Dr. Rodolfo Jacobson. He was an accomplished professor and researcher, and he has always been such an inspiration to me. In addition, I would like to thank my uncle, Roy Jacobson, for teaching me, inspiring me, and most importantly, for loving me with all his heart. My grandmother, aunts, uncle and cousins have also been very loving and supportive.

In addition, I would also like to thank my dad, Dr. Loren Wurzman, for always believing in me and encouraging me, especially during this dissertation project. I will always remember the science projects we worked on together when I was younger and how proud he always has been of me. I would also like to thank my grandparents, aunts, uncles and cousins for their encouragement and support.

Last but not least, I would like to thank my best friend, college sweetheart, and loving husband, Andrew Vie. Andrew is one of the sweetest, funniest, and kindest people I know. He graciously supported me through the peaks and valleys of graduate school, and I am so grateful to have him in my life. Andrew's brother, Joshua Vie, has also been a great source of encouragement and enthusiasm. In addition, Andrew's parents, Fred and Becca Vie, his sister, Amanda Vie, and his grandparents, Les and Pearl Fletcher, have also all provided a great deal of encouragement and support over the years. I would also like to thank my church family for supporting me and being with me every step of the way. Finally, and most importantly, I would like to thank God for making all of this possible and showing me the way.

Dedication

This dissertation is dedicated to my grandfather, Dr. Rodolfo Jacobson. It is an honor to be receiving my doctoral degree and carrying on his legacy.

ABSTRACT OF THE DISSERTATION

Psychosocial Predictors of Giving Health-Related Social Control to a Partner

by

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University of California, Riverside, December 2012
Dr. Chandra A. Reynolds, Chairperson

According to social control theory, social relationships may be beneficial to health when partners monitor and attempt to improve one another's health behaviors (Rook & Pietromonaco, 1987; Tucker & Anders, 2001). This dissertation expanded upon current theoretical models of social control by proposing the Individual Differences in Social Control (IDISC) Model, which considers the characteristics of who is most likely to offer and receive health-related social control and the downstream impacts on a partner's health behaviors and health outcomes. Furthermore, this study examined social control primarily in the context of friends, who may be important to health early in the lifespan. Pairs of students signed up to take part in a University-supported weight loss challenge, and psychosocial surveys, along with physical assessments at the Campus Health Center, were completed at four waves spanning over six months.

In the context of a dyadic longitudinal study, relationship satisfaction and personality were both found to significantly predict the giving and receiving of health-related social control, according to self-reports, and to a lesser extent, partner-reports. Specifically, higher relationship satisfaction, conscientiousness, agreeableness, and

extraversion tended to predict helpful social control attempts (e.g., more positive and direct social control attempts). Whereas social control demonstrated inconsistent associations with health behaviors (e.g., eating healthy, physical activity), both positive social control and health behavior reports were associated with having a lower subsequent BMI. Perceived obstacles to weight loss showed associations with personality traits, giving social control to a partner, health behavior engagement at baseline and last report, and perhaps most importantly, to higher BMI and body fat percentage both at baseline and last report.

All together, the present findings suggest that theoretical models of social control processes should be expanded to reflect individuals' differential likelihood of giving and receiving health-related social control from a partner, such as a friend, spouse, or relative, across the lifespan in order to more fully portray the processes involved.

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Introduction

Some individuals engage in health-enhancing behaviors, such as following a healthy diet and engaging in regular physical activity, whereas others engage in more health-compromising behaviors, such as consuming foods high in fat and low in vital nutrients. What are the causes of these different behaviors, and what can be done to best promote engagement in healthy behaviors? Modern developments in understanding the complex psychological and social links to health have begun to bridge knowledge about intrapersonal features, such as personality, and interpersonal factors, such as the social control attempts individuals may use in their close social relationships. The current dissertation expands upon current models of health-related social control and health behavior change by examining the characteristics of who is most likely to offer health-related social control and its downstream impacts on a partner's health behaviors and health outcomes.

Social Control Theory

Social relationships are important to health outcomes (Taylor, 2007), and a great deal of research has examined the role of social networks and social support. Cohen and colleagues (2000) suggested conceptualizing social support as the "provision or exchange of emotional, information, or instrumental resources in response to the perception that others are in need of such aid. These needs are often associated with acute or chronic stressful experiences" (p. 4), and this perspective has been endorsed by others in the field (Lewis & Butterfield, 2005). There are, however, many other ways in which people can influence each other's health behaviors (Rook, Thuras, & Lewis, 1990). Social control

has been defined as attempts to regulate or influence someone's behavior in response to actual or perceived violations of norms (Rook & Pietromonaco, 1987). It has, thus, been suggested that marriage may be beneficial to health when spouses monitor and attempt to improve one another's health behaviors (Tucker & Anders, 2001). One distinguishing factor between social support and social control is the conceptualization that social support must be affirming in order to be helpful, whereas social control may be affirming or not affirming and still be helpful (Rook et al., 1990). More specifically, the dual effects model of social control (Hughes & Gove, 1981; Rook, 1990) suggests that certain social control behaviors may lead to a reduction in an unhealthy behavior, while also leading to an increase in psychological distress.

Social control attempts are typically classified along one of two possible dimensions. Social control attempts can be classified as either positive (e.g., helpful, supportive tactics, such as providing information, assistance, or support) or negative (e.g., less supportive and refer to things such as ridiculing or pressuring someone to change a behavior) (Lewis & Rook, 1999). Additionally, social control attempts can be classified as either direct (e.g., tactics people actively utilize in an attempt to encourage or motivate someone to change a health behavior) or indirect (e.g., when a person internalizes a sense of obligation to avoid health-compromising behaviors or pursue health-enhancing behaviors for a friend or loved one) (Lewis & Rook, 1999).

Key Findings

Married men tend to report receiving more social control than unmarried men (August & Sorkin, 2010; Umberson, 1992) and more than women in general (August &

Sorkin, 2010). In addition, older adults report receiving less frequent health-related social control attempts, compared to young and middle-aged adults (Tucker, Klein, & Elliott, 2004). Married individuals most frequently report their spouse as their primary source of social control, whereas unmarried women tend to list their children and unmarried men tend to list their friends and neighbors (August & Sorkin, 2010). In general, social control has been linked to fewer health-compromising behaviors and more health-enhancing behaviors (Lewis & Rook, 1999; Lewis & Butterfield, 2007; Stephens et al., 2009), especially in males (C. N. Markey, Gomel, & Markey, 2008).

Positive social control attempts predict partner reports of health-enhancing behavioral reactions (Lewis & Butterfield, 2007). In addition, more frequent reinforcement, modeling and structural changes have been linked to more positive emotional reactions, but not to behavior change, psychological adjustment, or metabolic control in a sample of patients with diabetes (Thorpe, Lewis, & Sterba, 2008). Social control using persuasion has been linked to better dietary behavior among married individuals with diabetes (August & Sorkin, 2010). In contrast, patients who are pressured by their spouse report more negative emotions in response to their spouses' control attempts, both concurrently (Stephens et al., 2009; Thorpe et al., 2008) and six months later (Thorpe et al., 2008). More frequent negative social control has also been linked to less behavior change, and direct persuasion has been linked to individuals feigning behavior change (Thorpe et al., 2008).

According to the mediational model of social control (Tucker & Anders, 2001), affective responses to social control, such as appreciation (August & Sorkin, 2010),

distress (Lewis & Rook, 1999), and hostility (August & Sorkin, 2010), may play a crucial role in the association between social control attempts and behavioral responses. Positive social control has been associated with participant reports of 'feeling good' and ultimately reporting that they felt motivated to improve their behaviors, such as in a random digit dialing telephone interview study (Tucker, Orlando, Elliott, & Klein, 2006). In contrast, negative social control has been associated with participant reports of 'feeling bad', and it has been associated with inaction (e.g., not improving the health behavior) or with hiding the unhealthy behavior from their partner.

Additionally, BMI may moderate the social control – affective response process, such that persons with higher BMIs respond more positively to positive types of social control and persons with lower BMIs respond more favorably to negative types of social control (Novak & Webster, 2011). Possible explanations have been proposed for these associations with BMI, including the notion that slimmer persons may find the negative social control less threatening, or the negative social control (i.e., monitoring) may be given in a relatively more positive way, such as a casual reminder about the value of eating healthy rather than a lecture about how important it is to avoid unhealthy foods (Novak & Webster, 2011). It remains unclear how affective responses to social control and BMI (as well as health behaviors) relate across time. Hence, the directionality of associations between reported social control attempts, affect, and health behaviors, while assumed, must yet be evaluated in a temporal context. Moreover, the characteristics of those who make social control attempts versus those who are receptive to such attempts must also be considered.

Personality and Health

Higher conscientiousness has been associated with a lower risk of dying in any given year (Friedman et al., 1993; Kern & Friedman, 2008), and there is evidence that this relationship is partially explained by engagement in health behaviors (Friedman et al., 1995). For example, Kern, Reynolds, and Friedman (2010) found that childhood levels of energy and sociability were associated with higher levels of activity for males and females in young adulthood. In addition, lower neuroticism and higher extraversion in adulthood were independently related to higher levels of activity, especially for males, whereas conscientiousness was not related to levels of physical activity.

An examination of associations between the five major personality domains and various health behaviors (Booth-Kewley & Vickers, 1994) revealed that individuals higher on neuroticism reported fewer wellness behaviors, less accident control behavior, and more traffic risk-taking behavior than individuals lower on neuroticism. Those higher on extraversion engaged in more wellness behaviors and accident control, and there was also a tendency towards more substance risk taking, relative to individuals lower on extraversion. In addition, individuals higher on conscientiousness reported more wellness behaviors, more accident control, and less traffic risk taking compared to those lower on conscientiousness. Agreeable individuals reported more wellness behaviors, more accident control, and less traffic risk taking than less agreeable individuals. Finally, openness to experience was associated solely with greater substance risk taking.

More recently, personality was examined in relation to health behaviors in a college sample (Raynor & Levine, 2009). Students high on conscientiousness were more likely to wear seat belts, consume alcohol less frequently, exercise, get enough sleep, and consume fruits and vegetables, and they were less likely to smoke cigarettes, consume alcohol, and binge drink (Raynor & Levine, 2009). Students high on extraversion were more likely than students low on extraversion to smoke cigarettes, consume alcohol, binge drink, and have multiple sexual partners. They were also less likely to engage in alcohol-related harm reduction, use condoms, and get enough sleep. Another study of college students found that low conscientiousness and low agreeableness were most strongly associated with smoking, drinking, and speeding (Hong & Paunonen, 2009). In addition, there was an interaction such that students low on agreeableness and conscientiousness consumed significantly more tobacco than all other participants. More extroverted individuals reported higher levels of alcohol consumption, relative to less extroverted individuals, whereas neuroticism and openness showed very modest relations to health behaviors.

Social Relationships and Health

In addition to the importance of personality to health and health behaviors, social relationships are also important to consider. According to assortative mating theory, persons may actively select their mate based on observable characteristics including health-relevant traits, such as weight. Research has found a small, but consistent, correlation in weight between partners (approximately .10 to .25), even before engaged

couples began living together, and even when age similarity was taken into account (Allison et al., 1996).

In addition to partners assorting, in part, on weight, there is also evidence of assortment for dietary behaviors, including frequency or level of consumption of particular foods, such as servings of fruit (Kolonel & Lee, 1981; Price & Vandenberg, 1980). Furthermore, some studies find that some dietary patterns among romantic partners may converge, that is, become more similar over time (Leonard & Das Eiden, 1999; Price & Vandenberg, 1980). One study, for example, found evidence of convergence for alcohol consumption, in particular, as well as servings of breakfast cereal and cups of coffee per day in a sample of 134 couples (average age 44 years; Price & Vandenberg, 1980). Additionally, in a longitudinal qualitative study of couples that were about to marry, researchers found that one year after the initial interview, all 20 couples described some dietary convergence, including symmetric convergence (e.g., both partners reporting comparable levels of change) and asymmetric convergence (e.g., one partner's food choices changing more than the other partner's) (Bove, Sobal, & Rauschenbach, 2003). Findings that partners may assort on weight or weight-related behaviors, and also that partners may converge on dietary behaviors, highlight the importance of considering partnerships in which members are attempting to lose weight together.

Marital status also has clear links to weight. In the National Survey of Personal Health Practices and Consequences, married men were found to be significantly more overweight and more likely to be obese compared to men who never married or were

previously married (Sobal, Rauschenbach, & Frongillo, Jr., 1992). This effect remained significant, even after controlling for demographic, social, and physical variables. In contrast, marital status and weight were not significantly associated in women, once other factors were controlled. A more recent study, examining marital status, marital transitions, and weight in the Americans' Changing Lives (ACL) survey, found some evidence of weight gain following marriage for whites, but not African Americans, and this was only a short-term effect (Umberson, Liu, & Powers, 2009). Associations between relationship status and weight further highlight the importance of considering both partners of a dyad.

Friendship is another key social relationship important to health behaviors and health. Similarities in health-related behaviors, such as physical activity, have been observed in networks of friends (Macdonald-Wallis, Jago, Page, Brockman, & Thompson, 2011). Friends' perceived attitudes and behaviors toward weight and dieting have also been linked to individuals' own dieting behaviors (Paxton, Schutz, Wertheim, & Muir, 1999), including unhealthy weight-control behaviors, such as laxatives and diet pills (Eisenberg, Neumark-Sztainer, Story, & Perry, 2005). Additionally, in a study of older women, receiving health advice and encouragement from friends and family was commonly reported (Moremen, 2008).

Relationship Satisfaction and Health

From both psychosocial and psychophysiological points of view, the quality of the marital relationship should matter. Marital satisfaction has been linked to a variety of physical health outcomes, including objective physical health ratings, self-reported

physical health, and physiological assessments collected during or following marital interactions (e.g., Zautra et al., 1998; Barnett, Davidson & Marshall, 1991; Kiecolt-Glaser et al., 1997). Both cross-sectional and short-term longitudinal studies of marital satisfaction and self-reported health have found that individuals in high quality marriages tend to report better health (Bookwala, 2005; Lyubormirsky et al., 2005). Gender differences are sometimes found (Heffner et al., 2006; Kiecolt-Glaser & Newton, 2001), with wives' physiological functioning negatively affected by their husbands' hostility, but husbands less likely to be affected by their wives.

Using data from the Terman Life Cycle Study, an 80-year longitudinal archival study, these associations have been examined across decades. Specifically, early relationship satisfaction (average age 30) was tested as a predictor of healthy aging 46 years later (average age 76). For the females in this study, higher partner relationship satisfaction in early adulthood predicted better physical health 46 years later (Vie, Kern, Reynolds, & Friedman, 2009; Vie, Reynolds, Kern, & Friedman, 2012). If higher relationship satisfaction is associated with being more invested in one's marriage and thus more committed to helping a spouse improve his or her health behaviors, this could begin to explain, in part, the association between early partner relationship satisfaction and later health.

Partner Personality and Health

Partner personality may also influence someone's likelihood of helping a partner improve his or her health behaviors. A study of older couples, for example, found that having a partner high in conscientiousness was related to better concurrent self-rated

health, relative to having a partner low in conscientiousness (Roberts, Smith, Jackson, & Edmonds, 2009). It is possible that part of this benefit may stem from the conscientious partner encouraging healthier behaviors in his or her spouse. Moreover, the influence of the partner may depend on the personality of the person whose health is being assessed. The potential health and behavioral consequences of the interaction of partners' personalities have not been considered.

As a follow up to the work by Roberts and colleagues (2009), growth curve analyses were used to examine self and partner personality as predictors of level and change in health (a single-item self-rated measure) across five decades in the Terman Life Cycle Study (Vie, Reynolds, Kern, & Friedman, 2010). For males, having a wife higher in neuroticism at age 30 was directly predictive of worse self-rated health two decades later. It might be that a wife who is higher in neuroticism provides less encouragement for her husband to improve his health behaviors, partially explaining this association.

Relationship Satisfaction, Personality, and Social Control

The contextual model of social control (Ingersoll-Dayton, Morgan, & Antonucci, 1997) suggests that contextual influences, such as the relationship between the social control giver and the social control receiver, may be important. Few studies have examined relationship satisfaction in relation to general or health-specific influence tactics, and these studies have yielded mixed results (Aida & Falbo, 1991; Buss, Gomes, Higgins, & Lauterbach, 1987; Butterfield & Lewis, 2002). In the social control literature, relationship satisfaction has primarily been examined in relation to the association

between social control, health behavior decisions, and affective responses (Tucker & Anders, 2001; Tucker, Orlando, et al., 2006). In both studies, the associations between social control, affective responses, and health behavior decisions remained, even after controlling for relationship satisfaction.

For individuals with low relationship satisfaction (assessed with a single-item measure), direct social control attempts have been associated with more hiding behaviors, such as eating something unhealthy when one's partner is not around, and more frequent negative affect, whereas indirect social control attempts have been associated with less frequent hiding behaviors and less frequent negative affect (Tucker, 2002). Individuals in less satisfying relationships may resent the prompting and pressuring they receive from their partner through direct social control. In contrast, for those high in relationship satisfaction, indirect social control has been associated with more hiding behaviors and more positive affect, suggesting that feelings of obligation to one's partner may make a person feel closer to him or her. Additionally, for those high on relationship satisfaction, direct social control has been associated with less negative affect.

In connecting social control processes to personality, individuals higher on conscientiousness have been found to report receiving more indirect social control from others, relative to individuals lower on conscientiousness, though there was no difference in the frequency of direct social control attempts reported (Tucker, Elliott, & Klein, 2006). Individuals higher on neuroticism reported more frequent attempts by others to change their health behaviors (i.e., direct social control attempts), relative to individuals lower in neuroticism. Additionally, conscientious individuals reported more positive

affective responses to health-related social control, whereas individuals higher on neuroticism reported more negative affective responses to health-related social control attempts. This study provides initial insight into the role of the receiver's personality in the social control process, though it remains unknown whether personality also influences one's likelihood to give health-related social control to a partner.

Weight Management and Social Control

Even though diet, exercise, and weight loss are among the most common health behaviors spouses encourage in one another, most social control studies consider health behaviors at a more general level (Lewis & Butterfield, 2007; Tucker & Anders, 2001). One recent study examined the spousal social control of 61 married individuals (average age = 41) who were interested in losing weight (Novak & Webster, 2011). Individuals were excluded from this study if their spouse was also interested in losing weight. Participants completed a baseline questionnaire before beginning their attempt, a daily diary across the first two weeks of their attempt, and a weight assessment approximately one month after beginning their weight loss attempt. Instrumental and reinforcing social control (i.e., positive social control) were associated with better health behaviors, well-being, and relationship satisfaction, although these associations did not hold over time. Monitoring social control (i.e., negative social control) had inconsistent associations with health behaviors and well-being. This article called for future research to do three things: 1) include both partners, 2) include couples in which both partners were trying to lose weight, and 3) examine social control in an extended longitudinal design. This

dissertation does all of those things, and it considers a greater variety of relationship types in a larger and younger, college-age sample.

Current Theoretical Model

Whereas much has been learned over the past two decades regarding which social control attempts are more or less likely to lead to health behavior change, relatively little is known about the characteristics that make partners more or less likely to try to influence one another. The foundation for the Individual Differences in Social Control (IDISC) model is largely based on the dual effects model of social control, the mediational model of social control, and the contextual model of social control. This project adds to these models by embedding individual differences within the social context of close relationships to better understand who exerts and receives social control attempts and the health-related consequences of such attempts (see Figure 1). Given prior evidence that partner attributes and satisfaction ratings predict one's later health, it is important to examine how personality and relationship satisfaction relate to the likelihood that a partner will give health-related social control.

Given the associations between social control, health behaviors, and health, it is imperative that the factors that make partners more or less likely to use health-related social control be explored so that this information can be built into future theoretical models. This dissertation addresses this issue using personality and relationship satisfaction to predict health-related social control attempts, engagement in healthy or risky behaviors, and health over the span of six months.

Research Questions

Question 1: Can social control attempts be predicted? Specifically, this question examines associations between Parts I and II of the IDISC Model (Figure 1).

Q1A. Does relationship satisfaction predict the giving of social control to a partner?

***Hypotheses*.** Partners who are more satisfied with their relationship will utilize more social control attempts on their partner than partners who are less satisfied with their relationship. More specifically, partners who are more satisfied with their relationship will use more positive social control attempts and less negative social control attempts than their counterparts who are less satisfied in their relationships.

Q1B. Does relationship satisfaction predict the receiving of social control from a partner?

Hypotheses. Partners who are more satisfied with their relationship will be more receptive to social control attempts from their partner than partners who are dissatisfied with their relationship. More specifically, partners who are more satisfied with their relationship will report receiving more positive social control attempts and fewer negative social control attempts than their counterparts who are less satisfied in their relationships.

Q1C. Does personality predict the giving of social control to a partner?

***Hypotheses*.** Individuals high on agreeableness are expected to use more indirect social control attempts, whereas persons low on agreeableness are expected to use more direct social control attempts. Individuals high on conscientiousness are expected to use

more positive and indirect social control attempts on their partner than persons low on conscientiousness. Individuals high on neuroticism are expected to use more direct social control attempts, relative to individuals low on neuroticism. Analyses examining extraversion and openness to experience will be exploratory in nature.

Q1D. Does personality predict receiving social control from a partner?

Hypotheses. A pattern of associations, similar to those hypothesized for Q1C, is predicted for Q1D. Individuals high on agreeableness are expected to be more receptive to indirect social control attempts from their partner, relative to less agreeable individuals. Further, agreeable individuals will be less receptive to direct social control attempts from their partner. Individuals high on conscientiousness are expected to be more receptive to positive and indirect social control attempts from their partner, relative to individuals low on conscientiousness. Individuals high on neuroticism are expected to be more receptive to direct social control attempts from their partner, relative to individuals low on neuroticism. Analyses examining extraversion and openness to experience will be exploratory in nature.

Question 2: Can subsequent health behaviors and health be predicted? Specifically, this question examines associations between Parts II, III, and IV of the IDISC Model (Figure 1).

Q2A. Are social control attempts associated with subsequent health behaviors?

Hypotheses. Participants who receive more social control attempts, specifically more positive social control attempts, will report engaging in more subsequent health behaviors.

Q2B. Are health behaviors associated with subsequent health?

***Hypotheses*.** Healthier behaviors will be associated with better subsequent health.

Q2C. What are the cross-time associations between social control and BMI?

***Hypotheses*.** Participants who receive more social control attempts, specifically more positive social control attempts, at Wave *t* will show decreases in BMI at Wave *t* + 1.

Question 3: Can qualitative reports of obstacles to weight management be informative? (Exploratory analysis).

Q3A. What are the most commonly described obstacles to losing weight?

Q3B. How do qualitative reports of obstacles to losing weight relate to personality, social control, health behaviors, and health?

Significance

The current dissertation seeks to (1) identify particular personality traits that predict how likely a person is to give or receive health-related social control, (2) illustrate how relationship satisfaction relates to one's giving of social control to a partner, (3) replicate and extend prior research examining predictors of receiving social control (4) demonstrate whether social control attempts are associated with subsequent health behaviors, and (5) highlight whether these health behaviors then predict subsequent health. This will be the first study to examine the interaction of both partners' relationship satisfaction and personality as predictors of giving and receiving health-related social control to a partner, and it will be the first study to examine social control processes in partnerships in which members are attempting to lose weight together.

Method

Participants

This study was conducted in collaboration with the University of California, Riverside Campus Health Center as part of their 2011 Get Fit Challenge. The Get Fit Challenge program, which consists of physiological assessments and weekly group training sessions, was started in 2009 as a university-supported program to promote the health of the student community. Details of the Get Fit Challenge are found in Appendix 1, and a timeline of the Get Fit Challenge and the present research study is found in Appendix 2.

Students interested in participating in the 2011 Get Fit Challenge submitted completed applications to the Campus Health Center, and the first 52 partnerships (104 participants) were invited to join the challenge. Those students who enrolled in the Get Fit Challenge and consented to be in this research study will be referred to as Group 1, "the Get Fit Challenge group". Those students who applied to take part in the Get Fit Challenge, but were not invited to join (N=136), were also recruited to take part in this research study. The participants in this group, who consented to being in this research study, will be referred to as Group 2, "the Comparison group". Of the 104 students who enrolled in the Get Fit Challenge, 93 (89%) consented to being in this research study. Of the 136 students who could have been in the comparison group, 49 (36%) consented to being in this research study.

The sample was predominantly female (85%) and the average age was 20.5 (range: 18 – 45). At baseline, 31% of participants (44 of 142) were overweight and 31%

(44 of 142) were obese, according to BMI classification guidelines (World Health Organization, 2012). The ethnic breakdown of this sample was as follows: 51% Hispanic or Latino, 31% Asian, 11% Black or African American, 11% Caucasian, 4% American Indian or Alaska Native, 3% Native Hawaiian or other Pacific Highlander, and 5% other. Students were free to endorse any ethnicity with which they identified. In total, 11 of 107 participants (10%) identified with 2 or more ethnicities.

In the Get Fit Challenge group, eight partnerships (15 participants) were matched by the challenge coordinator because their partner could no longer participate in the study or because they signed up without a partner. This was accounted for in analyses. Participants were also asked what type of relationship they had with their partner. Eighty percent of participants (63 of 79) reported they were friends. Another 13% of relationships (10 of 79) were in romantic relationships. Of the remaining partnerships, 4% (3 of 79) were relatives and 4% (3 of 79) were acquaintances.

Measures

Appendix 3 contains a summary of the measures used and the corresponding references. In addition, Appendix 4 contains a sample copy of one of the surveys.

Relationship satisfaction. The Couples Satisfaction Index (CSI; Funk & Rogge, 2007) was used to assess relationship satisfaction. This measure was well suited for assessing satisfaction in romantic relationships as well as non-romantic relationships, such as friends and relatives. The 4-item version of this measure was chosen to minimize participant fatigue and because of the very minimal loss in reliability compared to the full 32-item version (α = .94 and α = .98, respectively; Funk & Rogge, 2007). The baseline

reliability of relationship satisfaction in this study was $\alpha = .90$. The correspondence of relationship satisfaction reports between partners ($r = .51$, $p = .007$) was consistent with the literature.

Personality. The Big Five Inventory (BFI; John, Donahue, & Kentle, 1991; John, Naumann, & Soto, 2008), a self-report inventory consisting of 44 short phrases, was used to measure the Big Five dimensions of personality. Agreeableness (9 items) had a baseline reliability of $\alpha = .77$. Conscientiousness (9 items) had a baseline reliability of $\alpha = .82$. Extraversion (8 items) had a baseline reliability of $\alpha = .86$. Neuroticism (8 items) had a baseline reliability of $\alpha = .79$. Finally, openness (10 items) had a baseline reliability of $\alpha = .69$. Within each partnership, there were no statistically significant associations within traits (all $p \geq .21$).

Social Control

Positive and negative social control. Participants were asked to indicate the extent to which 10 influence strategies were encountered in an attempt to improve health behaviors (Lewis & Rook, 1999; Okun, Huff, August, & Rook, 2007). Five strategies represented positive social control attempts, which are considered more helpful and supportive. A sample positive social control item is, "How true or untrue is it that your Get Fit Challenge partner offered to help you change your health behavior(s) in the past month?" Participants were asked the extent to which they gave positive social control attempts to change their partner's health behavior(s) (baseline $\alpha = .88$) and the extent to which they received positive social control attempts, aimed at changing their health behavior(s), from their partner (baseline $\alpha = .89$).

Negative social control attempts emphasize making people feel bad about themselves, with the goal of motivating them to change their health behaviors. Five negative social control items were included in this measure. A sample negative social control item is "How true or untrue is it that your Get Fit Challenge partner ridiculed you, and made you feel bad to get you to change your health behavior(s) in the past month?" Participants reported how often they gave negative social control attempts to change their partner's health behavior(s) (α = .74) and how often they received negative social control attempts, aimed at changing their health behavior(s), from their partner (α = .71). Natural log transformations were applied to reduce non-normality.

Indirect social control. This measure, adapted from Tucker, Elliott, and Klein (2006), assessed the extent to which partners reported feeling an obligation toward one another to engage in health-enhancing behaviors or to reduce health-compromising behaviors, in order to not disrupt their relationship with their partner. A sample item for this measure is "How much would your Get Fit partner be disappointed if you did not make an effort to be healthy?" Each participant was asked about indirect social control from two perspectives: the extent to which they feel obligated to their partner to be healthy (i.e., receive indirect social control; α = .84), and the extent to which they believe their partner feels obligated to them to be healthy (i.e., give indirect social control; α = .89).

Direct social control. This measure, which built upon an adapted version of the measure from Lewis and Rook (1999), assessed the extent to which partners attempted to encourage one another to engage in health-enhancing behaviors over the past month

(Tucker, Elliott et al., 2006). A sample item for this measure is "In the past month, how often has your Get Fit Challenge partner encouraged you to start exercising or exercise more frequently?" Each participant was asked about direct social control from two perspectives. First, they were asked how often they used direct social control attempts to encourage health enhancing behaviors in their partner (baseline α =.90). Then, they were asked how often their partner used direct social control attempts to encourage them to adopt health-enhancing behaviors (baseline α = .87).

Affective responses to social control. An eight-item measure (Tucker, Orlando, et al., 2006; adapted from Brunstein, Dangelmayer, & Schultheiss, 1996) was used to assess each participant's affective response to their partner's social control attempts in the past month. The measure included four positive affective responses (baseline α = .93) and four negative affective responses (baseline α = .73). Sample items from this measure include "In the past month, how much have your Get Fit partner's attempts made you feel inspired?" and "In the past month, how much have your Get Fit partner's attempts made you feel irritated?" For this measure, participants were only asked to rate their affective responses to their partner's social control attempts; they were not asked to infer their partner's affective responses to their attempts.

Health Behaviors

Eating habits in the past 30 days. A 14-item measure (baseline α = .80) was used to identify the frequency of specific eating behaviors over the past 30 days (Dailey, Richards, & Romo, 2010). Sample items include "I ate fresh vegetables" and "I was uncomfortably full after meals."

Physical exercise in the past 30 days. A modified version of Godin and Shephard's 1985 Leisure Time Exercise Questionnaire was used to assess self-reported physical activity in the past week (Dailey et al., 2010). Participants were asked how many times in the past week they engaged in strenuous exercise (heart beats rapidly) such as running, moderate exercise (not exhausting) such as fast walking, and mild exercise (minimal effort) such as yoga or easy walking, both with and without their partner. Due to extreme responses in the number of times each type of activity was reported in the past week, both with and without a partner, responses greater than 8 times per week in a single category were recoded to have a value of 8. The metabolic equivalent of task (MET) was then used to create scores for each participant's activities with their partner and their activities without their partner (Godin & Shephard, 1985). Strenuous activities were multiplied by 9 MET, moderate activities were multiplied by 5 MET, and mild exercise activities were multiplied by 3 MET. These values were then summed to create activity scores with and without one's partner. Log transformations were applied to reduce non-normality.

Training class attendance. Participants in the Get Fit Challenge group were expected to attend weekly hour-long training classes as part of the program. The training class topics were as follows: Training class #1 – Yoga DVD, Training class #2 – Resistance band work out lead by a Student Recreation Center (SRC) instructor, Training classes #3-7 – Outdoor boot camp classes lead by SRC personal trainers. Participants' actual attendance at these classes was examined as an objective measure of exercise for Group 1.

Anthropometric Measures

Body mass index (BMI). BMI was assessed through two means. First, participants were weighed at the Campus Health Center, using a two-point foot-to-foot Tanita TBF-300A body composition analyzer (Tanita Corporation of America, 2011). Participant age, sex, body type (standard), and height were entered into the analyzer prior to measurement. This device provided the BMI for each individual. Second, participants were asked to self-report their height and weight in each research survey. Objective (health center) BMI measures were used whenever available. The method of measurement (objective or self-report) was included as a covariate in BMI analyses.

Body fat percentage. The Tanita TBF-300A body composition analyzer used Bioelectrical Impedance Analysis (BIA) to assess body fat percentage during the physical assessments at the Campus Health Center (Tanita Corporation of America, 2011). Participant age, sex, body type (standard), and height were entered into the analyzer prior to measurement. The BIA printout provided each participant's estimated body fat percentage.

Open-ended Measures

Biggest obstacle. On the Get Fit Challenge application form, participants were asked to indicate (free response) their biggest obstacle to losing weight.

Data Analysis

Descriptive statistics for the first reports of relationship satisfaction, personality, social control, health behaviors, anthropometric measures, and participation indices, as well as descriptive statistics for receiving social control and BMI, by Wave, are available

in Tables 1-3. Associations between the relationship satisfaction and personalities of partner 1 and partner 2, between self- and partner-reports of giving social control, and between self- and partner-reports of receiving social control can be found in Tables 4-6. Associations between self-reports of giving and receiving social control can be found in Table 7. Correlational analyses between relationship satisfaction, personality, and giving social control, as well as between health behaviors, anthropometric measures of health, and receiving social control, can be found in Tables 8-9. All descriptive and correlational analyses were performed using SAS software (Version 9.3; SAS Institute Inc., 2011). Social control reports were transposed and rearranged to create self- and partner-reports of giving social control and self- and partner-reports of receiving social control (Table 10).

Research question 1.

(Q1A and 1B). Participants' baseline measure (i.e., their first report) of relationship satisfaction (IDISC Model, Part I) was used to predict social control attempts participants gave their partner (IDISC Model, Part IIa) from the same assessment wave. Covariates included Sex, Group (in the Get Fit Challenge or not), Matched (whether the partners signed up together or were assigned as partners), and Wave (the wave that relationship satisfaction was assessed). Regression analyses, accounting for pair dependency and using MLR estimation, were performed using Mplus (Version 6; Muthén & Muthén, 2006). Analyses were first performed allowing the self- and partner-paths to vary. Analyses were then rerun, constraining the self- and partner-paths to be equal. Chi-square difference tests were performed, based on loglikelihood values and scaling

correction factors obtained with the MLR estimator (Satorra, 2000), to determine whether constraining the self- and partner-paths to be equal resulted in a significant worsening of model fit. In addition, relationship satisfaction was examined as a predictor of self- and partner-reports of receiving social control from a partner (IDISC Model, Part IIa).

(Q1C and Q1D). The analyses above were also run using participants' first reports of agreeableness, conscientiousness, neuroticism, extraversion, and openness (IDISC Model, Part I) to separately predict the first self- and partner-reports of the social control attempts that each participant gave their partner (IDISC Model, Part IIa). In addition, personality was examined as a predictor of self- and partner-reports of receiving social control from a partner (IDISC Model, Part IIa).

Research question 2.

(Q2A). The first self-reports of received social control (IDISC Model, Part IIa) were examined in relation to participants' last reports of their health behaviors (i.e., eating healthy, activity levels with their partner, activity levels without their partner, and training classes) (IDISC Model, Part III). Covariates included the baseline level of the health behavior (for all but training classes), Sex, Group, and Wave (the wave the last health behavior was assessed). There were too few matched participants in these analyses, and the Q2B analyses, to include Matched as a covariate.

(Q2B). The first reports of health behaviors (IDISC Model, Part III) were examined in relation to participants' last measured BMI (IDISC Model, Part IV). Covariates included baseline BMI, Sex, Group, Wave (of first health measure), Wave (of last health measure), and BMI Measure type. Next, health behaviors were used to predict

participants' last measured body fat percentage (IDISC Model, Part IV). Covariates included baseline body fat percentage, Sex, Group, and Wave (of the last body fat percentage measure).

(Q2C). Autoregressive cross-lagged models were applied in Mplus to examine the extent to which social control attempts (IDISC Model, Part IIa) predict subsequent body mass index levels (IDISC Model, Part IV), and the extent to which levels of body mass index predict subsequent social control attempts (e.g., Hawkley, Preacher, & Cacioppo, 2010), after controlling for Sex and Group. Models were specified such that the paths between Wave 1 and 2 and the paths between Wave 2 and 3 were equated within social control and within BMI measures, because there was an equal distance in time between these waves and they each occurred during the Get Fit Challenge. Although the IDISC model views affective responses as a moderator (IDISC Model, Part IIb), given the constraints of the sample size, this study examined affective response as a predictor and outcome. Specifically, autoregressive cross-lagged models were also applied to examine the extent to which affective responses to social control attempts predict subsequent body mass index levels (IDISC Model, Part IV), and the extent to which body mass index levels predict subsequent emotional responses to social control attempts, after controlling for Sex and Group.

Research question 3.

(Q3A). The open-ended responses to participant's biggest obstacle to losing weight were content-coded into one or more categories. The obstacle scores were then

coded for each participant, in order to reflect the total number of different obstacles described.

(Q3B). Next, obstacle codes were correlated with personality, social control, health behaviors, and anthropometric measures, not accounting for pair dependency.

Results

Research Question 1: Can Social Control Attempts be Predicted?

Baseline reports (i.e. earliest reports) of relationship satisfaction and personality were examined as predictors of giving social control to a partner at baseline. Self-reports of how much social control an individual said he or she gave and partner-reports of how much social control the partner reported receiving from that person were simultaneously examined using Mplus. Relationship satisfaction and personality were also examined as predictors of receiving social control from a partner at baseline. Self-reports of how much social control someone said they received and partner-reports of how much social control their partner said they give him or her were also simultaneously examined using Mplus. All analyses accounted for pair dependency. Key covariates were controlled in all analyses, including Sex, Group, Matched and Wave.

Relationship satisfaction and giving social control (Q1A). Relationship satisfaction was examined in relation to giving social control, beginning with positive and negative social control (Table 11). Participants with higher relationship satisfaction reported giving more positive social control attempts to their partner ($b = .22$, $p = .03$), relative to their counterparts who were less satisfied in their relationships. Additionally, the partners of these individuals also reported receiving more positive social control

attempts from them (b = .32, p =.002). These paths could be equated without significantly worsening model fit ($\Delta\chi^2(1) = 1.34$, p = .25), indicating these paths are not significantly different (see Table 25). Relationship satisfaction did not significantly predict fewer negative social control attempts, as measured by self-reports (b = .08, p = .41) or partner-reports (b = .00, p = .99). Constraining the paths between relationship satisfaction and self- and partner-reports of negative social control to be equal did not significantly worsen of model fit ($\Delta\chi^2(1)$= .35, p = .55) (Table 24).

Next, relationship satisfaction was examined in relation to indirect social control attempts (Table 12, Analysis 1). Analyses revealed that higher relationship satisfaction was associated with more indirect social control attempts, according to both self-reports (b = .24 p = .03) and partner-reports (b = .35, p = .004). Additionally, self and partner paths could be equated without significantly worsening model fit ($\Delta\chi^2(1)$= .07, p = .79) (Table 25), suggesting they do not differ significantly.

Finally, greater relationship satisfaction was significantly associated with more frequent direct social control attempts (Table 12, Analysis 2) according to both self-reports of social control (b = .22, p = .02) and partner-reports of social control (b = .41, p < .001). Constraining the paths between relationship satisfaction and self- and partner-reports of direct social control to be equal resulted in a trend significant worsening of model fit ($\Delta\chi^2(1) = 3.70$, p = .05) (Table 25). This suggests that relationship satisfaction may relate more strongly to how a partner perceives someone's behavior than that person's own report of said behavior.

Relationship satisfaction and receiving social control (Q1B). Relationship satisfaction was next examined in relation to receiving social control from a partner, beginning with positive social control (Table 13, Analysis 1). Individuals high in relationship satisfaction reported receiving more positive social control from their partner (b = .48, p < .001), despite the fact that their partners did not report giving them significantly more positive social control (b = .21, p = .10). Relationship satisfaction was not significantly related to self-reports (Table 13, Analysis 2; b = .07, p = .54) or partner-reports (b = .14, p = .21) of negative social control received. There was a trend association between relationship satisfaction and self-reports of receiving indirect social control (Table 14, Analysis 1; b = .21, p = .07), and relationship satisfaction was significantly associated with partner-reports of receiving indirect social control (b = .43, p < .001). Finally, relationship satisfaction was significantly related to self-reports of receiving direct social control (b = .39, p < .001) and partner-reports of direct social control (Table 14, Analysis 2; b = .26, p = .04). Due to the high correspondence between self and partner relationship satisfaction, and the similar pattern of associations found for predicting the giving of social control, models comparing self and partner paths were not pursued.

Summary. Hypothesis Q1A received partial support. Participants with higher relationship satisfaction were significantly more likely to give positive social control to a partner, according to both self- and partner reports, however, relationship satisfaction did not relate to the negative social control participants gave their partner. Higher relationship satisfaction was also associated with giving significantly more indirect social

control to a partner, according to both self- and partner reports, and it was related to giving more direct social control a partner, according to self-reports and to an even greater extent, partner-reports. Hypothesis Q1B also received partial support. Individuals with high relationship satisfaction received more positive social control from their partner according to self-reports, yet relationship satisfaction was not related to receiving negative social control from a partner. Finally, higher relationship satisfaction was associated with receiving more indirect social control, according to partner-reports, with a trend association for self-reports and with receiving more direct social control, according to self- and partner-reports.

Agreeableness and giving social control (Q1C). Agreeableness was examined in relation to reports of giving social control, beginning with positive social control (Table 15, Analysis 1). There was a trend such that more agreeable participants reported giving more positive social control attempts, relative to their less agreeable counterparts (b = .18, p = .06). Associations between agreeableness and partner-reports of receiving positive social control attempts were in the same direction, although not significant (b = .16, p = .13). The self- and partner-paths could be equated without significantly worsening model fit ($\Delta\chi^2(1) = .11$, p = .74).

Next, negative social control attempts were examined in relation to agreeableness (Table 15, Analysis 2). There was a trend such that higher agreeableness was associated with reporting giving fewer negative social control attempts (b = -.18, p = .07), although the partners of these individuals did not report receiving fewer negative social control

attempts from them (b = -.10, p = .38). The self- and partner-paths could be equated without significantly worsening model fit ($\Delta\chi^2(1) = .56$, p = .45) (Table 25).

Agreeableness was also examined in relation to indirect social control attempts (Table 16, Analysis 1). Agreeableness was not associated with more self-reports of indirect social control attempts (b = .08, p = .38) or partner-reports of indirect social control attempts (b = -.08, p = .55). These paths could be equated without significantly worsening model fit ($\Delta\chi^2(1) = 1.04$, p = .31) (Table 25).

Finally, agreeableness was examined in relation to direct social control attempts (Table 16, Analysis 2). More agreeable participants reported giving significantly more direct social control attempts to their partner (b = .19, p = .03), relative to less agreeable participants. Their partners, however, did not report receiving more direct social control attempts from them (b = -.10, p = .41). Equating the self- and partner-paths resulted in a significant worsening of model fit ($\Delta\chi^2(1) = 4.04$, p = .04), suggesting these paths significantly differ from one another (Table 25).

Summary. Weak effects were observed between high agreeableness and self-reports of giving more positive social control and less negative social control to one's partner, relative to low agreeableness. Contrary to Hypothesis Q1C, agreeableness was not associated with giving more indirect social control, and rather, agreeableness was associated with self-reports of giving more direct social control to a partner.

Conscientiousness and giving social control (Q1C). Conscientiousness was next examined in relation to giving social control. Participants higher in conscientiousness reported giving more positive social control attempts (Table 17,

Analysis 1; $b = .26$, $p = .01$). Their partners also reported receiving more positive social control attempts from them ($b = .23$, $p = .03$). The paths between conscientiousness and the self- and partner-reports of social control could be equated without significantly worsening model fit ($\Delta\chi^2(1) = .13$, $p = .72$), suggesting they do not significantly differ (see Table 25).

Conscientiousness was next examined in relation to negative social control attempts (Table 17, Analysis 2) and indirect social control attempts (Table 18, Analysis 1). Conscientiousness did not significantly predict self-reports ($b = -.04$, $p = .68$) or partner-reports ($b = -.16$, $p = .18$) of negative social control attempts. Conscientiousness also did not significantly predict self-reports ($b = .09$, $p = .41$) or partner-reports of giving indirect social control attempts ($b = -.00$, $p = .98$). Equating the self- and partner-paths did not significantly alter model fit for the negative social control attempts analyses ($\Delta\chi^2(1) = 1.05$, $p = .30$) or the indirect social control attempts analyses ($\Delta\chi^2(1) = .64$, $p = .42$) (see Table 25).

Finally, conscientiousness was examined in relation to direct social control attempts (Table 18, Analysis 2). Conscientiousness significantly predicted direct social control attempts, such that participants who were higher in conscientiousness reported giving relatively more direct social control attempts ($b = .27$, $p = .01$). The partners of these high conscientious individuals, however, did not report receiving more direct social control attempts from them ($b = .01$, $p = .91$). Importantly, equating the self- and partner-paths resulted in a significant worsening of model fit ($\Delta\chi^2(1) = 4.35$, $p = .04$), indicating these paths significantly differ from one another (Table 25).

Summary. The conscientiousness hypotheses of Hypothesis Q1C received partial support. As hypothesized, conscientiousness was significantly associated with giving more positive social control attempts, according to both self and partner reports. Conscientiousness was not associated with the giving of negative social control to a partner. Contrary to hypotheses, however, conscientiousness also did not significantly predict self or partner reports of giving indirect social control to a partner. Finally, conscientiousness significantly predicted giving more direct social control attempts, according to self-, but not partner-, reports.

Neuroticism and giving social control (Q1C). Neuroticism was next examined in relation to reports of giving social control, beginning with positive social control attempts (Table 21, Analysis 1). Neuroticism was not associated with self-reports of giving positive social control attempts (b = .00, p = .99). It was, however, significantly related to partner-reports of positive social control attempts, such that partners of individuals high on neuroticism reported receiving significantly fewer positive social control attempts from their more neurotic partner (b = -.22, p = .05). Neuroticism did not significantly relate to negative social control (Table 21, Analysis 2) or indirect social control (Table 22, Analysis 1). Additionally, neuroticism was not associated with giving direct social control (Table 22, Analysis 2). Self- and partner-paths between neuroticism and each type of social control attempt could be equated without significantly worsening model fit (all $p \geq .18$) (Table 25).

Summary. Neuroticism was not significantly related to self-reports of giving social control; however, partners of more neurotic individuals did report receiving

significantly fewer positive social control attempts, relative to partners of less neurotic individuals. Contrary to Hypothesis Q1C, neuroticism did not predict the giving of direct social control to a partner.

Extraversion and giving social control (Q1C). Extraversion was next examined in relation to giving social control, beginning with positive social control (Table 19, Analysis 1). Higher levels of extraversion were significantly associated with reporting giving more positive social control attempts to a partner (b = .21, p = .01), relative to lower levels of extraversion. Partners of more extraverted individuals, however, did not report receiving more positive social control attempts from them (b = .06, p = .64).

Next, extraversion was examined in relation to reports of negative social control attempts (Table 19, Analysis 2) and indirect social control attempts (Table 20, Analysis 1). Extraversion was associated with self-reports of negative social control attempts, such that more extraverted individuals reported giving their partners more negative social control attempts (b = .19, p = .02) than less extraverted individuals. Their partners, however, did not report receiving more negative social control attempts from them (b = .05, p = .67). Extraversion did not relate to self-reports of indirect social control (b = .05, p = .66) or partner-reports (b = .05, p = .72).

Finally, extraversion was examined in relation to reports of direct social control attempts (Table 20, Analysis 2). Higher extraversion was significantly associated with reporting giving a partner more direct social control attempts (b = .27, p = .00), relative to lower extraversion. Higher extraversion did not, however, significantly predict partners' reports of receiving direct social control attempts (b = .15, p = .18). The self- and partner-

paths between extraversion and each type of social control could all be equated without significantly worsening model fit (all $p \geq .20$) (Table 25).

Summary. Higher extraversion was significantly associated with giving more positive and negative social control, according to self- but not partner-reports. Extraversion was not associated with giving indirect social control, but it did predict self-reports of giving direct social control to a partner.

Openness and giving social control (Q1C). Finally**,** openness did not significantly relate to reports of giving any of the measured types of social control (Tables 23 and 24). The self- and partner-paths for positive social control attempts could be equated without significantly worsening model fit ($p = .18$). Equating the self- and partner-paths predicting negative social control attempts, however, did significantly worsen model fit ($\Delta\chi^2(1) = 7.68$, $p = .01$) (Table 25), indicating these paths significantly differed from one another. Specifically, self-reports were in the direction of more negative social control and partner-reports were in the direction of less negative social control (Table 23, Analysis 2). However, given that openness did not significantly relate to the individual self- or partner-reports of negative social control, the subsequent significant difference the between self- and partner paths was viewed as non-informative. Finally, the self- and partner-paths for indirect and direct social control attempts could be equated without significantly worsening model fit (all $p \geq .15$).

Summary. Openness did not predict the giving of any type of social control to a partner.

Agreeableness and receiving social control (Q1D). Next, personality was examined in relation to receiving social control, beginning with agreeableness. Agreeableness was not significantly associated with reports of receiving positive social control (Table 26, Analysis 1). Agreeableness was not associated with self-reports of receiving negative social control (b = .01, p = .93), however a trend association was observed such that the partners of more agreeable participants reported giving them fewer negative social control attempts than partners of less agreeable participants (Table 26, Analysis 2; b = -.23, p = .07). Agreeableness was not significantly associated with reports of receiving indirect or direct social control (Table 27).

Conscientiousness and receiving social control (Q1D). Conscientiousness was not significantly associated with receiving positive social control (Table 28, Analysis 1). Conscientiousness was also not associated with self-reports of receiving negative social control (Table 28, Analysis 2; b = -.06, p = .52), although it was associated with partner-reports of fewer negative social control attempts (b = -.26, p = .03). In addition, conscientiousness was not associated with receiving indirect or direct social control (Table 29).

Extraversion and receiving social control (Q1D). Extraversion was not significantly associated with receiving positive social control (Table 30, Analysis 1). Whereas extraversion was not associated with self-reports of receiving negative social control attempts (Table 30, Analysis 1; b = .13, p = .12), a trend association was observed between extraversion and partner-reports of negative social control, such that the partners of more extraverted participants reported giving fewer negative social control attempts

than partners of less extraverted participants (Table 30, Analysis 2; b = -.21, p = .06). Extraversion was not significantly associated with reports of receiving indirect or direct social control (Table 31).

Neuroticism and receiving social control (Q1D). Neuroticism was not associated with self-reports of receiving positive social control (b = -.04, p = .69), however a trend association was observed with partner-reports, such that the partners of more neurotic participants reported giving relatively fewer positive social control attempts than partners of less neurotic participants (Table 32, Analysis 1; b = -.18, p < .10). Neuroticism was not significantly associated with receiving negative social control (Table 32, Analysis 2) or with receiving indirect or direct social control (Table 33).

Openness and receiving social control (Q1D). Participants high on openness reported receiving more positive social control, relative to participants low on openness (Table 34, Analysis 1; b = .22, p = .01), however, openness was not related to partner-reports of positive social control (b = -.12, p = .42). A complex pattern was found between openness and reports of receiving negative social control (Table 34, Analysis 2). There was a trend such that more open participants reported receiving more negative social control from their partners, relative to less open participants (b = .17, p = .06). In contrast, the partners of more open participants reported giving them significantly less negative social control, relative to partners of less open participants (b = -.33, p = .02).

Openness was not associated with self-reports of receiving indirect social control from a partner (b = .09, p = .35), although it was associated with partner-reports of receiving more indirect social control (Table 35, Analysis 1; b = -.26, p = .02). Finally,

openness was examined in relation to receiving direct social control from a partner (Table 35, Analysis 2). Participants high on openness were more likely to report receiving direct social control attempts from their partners (b = .18, p = .04), relative to participants low on openness, although their partners did not report giving them more direct social control (b = -.02, p = .92).

Summary. Hypothesis Q1D was not supported. Specifically, agreeableness was not associated with receiving indirect or direct social control, although there was a trend association such that agreeable individuals seemed to receive less negative social control, according to partner-reports. Additionally, conscientiousness was not associated with receiving positive or indirect social control, although it was associated with less negative social control, according to partner-reports. Neuroticism was also not associated with receiving direct social control, although it was associated with receiving less positive social control, according to partner-reports. Exploratory analyses with extraversion revealed a trend association of receiving less negative social control, according to partner-reports. Exploratory analyses with openness revealed associations with receiving more positive social control, according to self-reports. There was also a trend association between openness and receiving more negative social control, according to self-reports, although partner-reports revealed openness was significantly associated with receiving less negative social control. Openness was associated with receiving less indirect social control, according to partner-reports, and it was associated with receiving more direct social control, according to self-reports. Relative to analyses in which personality predicted the giving of social control, few significant associations were observed between

personality and receiving social control. For this reason, models comparing self and partner paths were not pursued.

Research Question 2: Can Subsequent Health Behaviors and Health Be Predicted?

Baseline social control attempts (i.e., earliest reports) were tested as predictors of subsequent health behaviors and health, controlling for baseline levels and key covariates, including Sex, Group, Wave, Matched, and Measure, for BMI analyses. Health behaviors were examined in relation to BMI and body fat percentage through the end of the Get Fit Challenge (Wave 3) and also through follow up (Wave 4) because health measured at the end of a fitness challenge may differ from health assessed months after the challenge has ended. In an attempt to maximize the proportion of the sample included in these analyses, BMI through Wave 3 examined the last available report, either Wave 2 (24%) or Wave 3 (76%), whereas analyses predicting BMI through Wave 4 used the last available report, either Wave 2 (15%), Wave 3 (32%), or Wave 4 (53%). Similarly, analyses predicting body fat percentage through Wave 3 examined the last available report, Wave 2 (45%), Wave 3 (55%), whereas analyses predicting body fat percentage through Wave 4 examined the last available report, Wave 2 (41%), Wave 3 (37%), or Wave 4 (22%). Analyses examining cross-lagged associations between social control and BMI used data across all four waves. Cross-lagged associations between social control and body fat percentage were not examined due to higher rates of missing data.

Social control and healthy eating (Q2A). Self- and partner-reports of received positive social control attempts did not significantly relate to reports of healthy eating

through Wave 3 (Table 36, Analysis 1) or Wave 4 (Table 37, Analysis 1). Self-reports of received negative social control did not significantly relate to healthy eating through Wave 3 (b = -.00, p = .99), although a trend association was found between partner-reports of received negative social control and healthy eating through Wave 3, such that those individuals whose partners reported giving them more negative social control reported worse eating behaviors through Wave 3 (Table 36; b = -.24, p = .09). When healthy eating through Wave 4 was assessed, neither self-reports (b = -.04, p = .75) nor partner-reports (b = -.07, p = .57) of negative social control were significantly predictive (Table 37, Analysis 2).

Next, indirect social control attempts were examined as predictors. Participants who reported receiving more indirect social control attempts from their partner reported eating less healthily through Wave 3 (Table 36, Analysis 3; b = -.54, p = .004), although partner-reports were not associated with healthy eating through Wave 3 (b = .24, p = .17). A trend association was observed when eating habits through Wave 4 were considered, such that self-reports of indirect social control were associated with less healthy eating (b = -.36, p = .06), whereas partner-reports were not associated with healthy eating (Table 37, Analysis 3; b = .18, p = .34).

Finally, direct social control was examined in relation to healthy eating. Considering healthy eating through Wave 3, self-reports of received direct social control attempts were not significantly predictive (b = .02, p = .83) whereas partner-reports of more direct social control were significantly associated with less healthy eating (Table 36, Analysis 4; b = -.31, p = .02). Considering healthy eating through Wave 4, neither

self-reports of direct social control received (b = -.14, p = .23) nor partner-reports were significantly associated (Table 37, Analysis 4; b = -.16, p = .12).

Social control and activities with partner (Q2A). Whereas self-reports of positive social control received were not significantly predictive of engaging in more activities together through Wave 3 (Table 38, Analysis 1; b = -.15, p = .49) or Wave 4 (Table 39, Analysis 1; b = -.01, p = .94), partner-reports of positive social control were significantly predictive of engaging in more physical activities together through Wave 3 (b = .49, p = .01) and through Wave 4 (b = .39, p = .003). There were no significant or trend associations between engaging in activities with one's partner and self- or partner-reports of receiving negative social control (Table 38, Analysis 2 and Table 39, Analysis 2), indirect social control (Table 38, Analysis 3 and Table 39, Analysis 3), or direct social control (Table 38, Analysis 4 and Table 39, Analysis 4).

Social control and activities without partner (Q2A). First, positive social control was examined. Neither self-reports of positive social control (b = .10, p = .47) nor partner-reports of positive social control (b = -.14, p = .25) were predictive of physical activity without one's partner through Wave 3 (Table 40, Analysis 1). When examining activities without one's partner through Wave 4, self-reports of positive social control remained nonsignificant (Table 41, Analysis 1; b = .16, p = .25), whereas partner-reports of more positive social control from a partner were associated with reporting engaging in fewer physical activities without one's partner (b = -.30, p = .04). There were no significant or trend associations between self- or partner-reports of negative social

control and engaging in activities without one's partner (Table 40, Analysis 2 and Table 41, Analysis 2).

Next, indirect social control was examined in relation to activities engaged in without one's partner. There was a trend association between self-reports of indirect social control received and activities engaged in without one's partner through Wave 3 (Table 40, Analysis 3; b = -.27, p = .05), such that receiving more indirect social control from a partner was associated with engaging in fewer physical activities without one's partner. Partner-reports of indirect social control were not significantly associated with physical activities without one's partner through Wave 3 (b = -.03, p = .81). Neither self-reports of indirect social control (b = -.17, p = .26) nor partner-reports of indirect social control (b = -.05, p = .73) predicted activities engaged in without one's partner through Wave 4 (Table 41, Analysis 3).

Finally, direct social control attempts were examined. Neither self-reports of direct social control (b = .09, p = .58) nor partner-reports (b = -.11, p = .39) were predictive of activities engaged in without one's partner through Wave 3 (Table 40, Analysis 4). Self-reports of direct social control received were, however, significantly related to activities without one's partner (Table 41, Analysis 4; b = .31, p = .01), such that receiving more direct social control attempts was associated with engaging in more physical activities without one's partner. There was also a trend association between partner-reports of direct social control given and reports of physical activities without one's partner (b = -.27, p = .07), such that partner-reports of more direct social control

were associated with fewer reports of engaging in physical activities without one's partner through Wave 4.

Social control and training class attendance (Q2A). Receiving social control attempts was not significantly associated with the number of training classes participants attended (Table 42; Group 1 only).

Summary. There was limited support for Hypothesis Q2A, which predicted that social control, and specifically positive social control, would be associated with increases in health behavior engagement. Positive social control was not associated with changes in eating healthy, however self-reports of indirect social control and partner-reports of direct social control were each significantly associated with less healthy eating through Wave 3. There were also trend associations such that partner-reports of more negative social control were associated with less healthy eating through Wave 3, and self-reports of more indirect social control were associated with less healthy eating through Wave 4.

Considering next physical activity with one's partner, partner-reports of more positive social control attempts were also significantly associated with reporting more physical activity with one's partner through Wave 3 and Wave 4, providing partial support for Hypothesis Q2A. Finally, considering physical activity without one's partner, partner-reports of more positive social control were associated with engaging in less activity without one's partner, through Wave 4, providing further partial support for Hypothesis Q2A. Self-reports of more indirect social control were also associated with less activity without one's partner, through Wave 3. Self-reports of direct social control were significantly associated with reporting more activity without one's partner, through

Wave 4, whereas there was a trend association between partner-reports of direct social control and reports of engaging in less physical activity without one's partner through Wave 4.

Eating healthy and subsequent health (Q2B). Baseline reports of eating healthy were used to predict body mass index and body fat percentage through Wave 3 and through Wave 4. Beginning with BMI, a trend association was found between reporting eating healthy at baseline and having a lower BMI through Wave 3 (Table 43, Analysis 1; b = -.03, p = .07). When BMI through Wave 4 was considered, the trend between eating healthy at baseline and subsequent BMI was no longer observed (Table 44, Analysis 1; b = -.06, p = .19).

Next, eating healthy at baseline was examined in relation to subsequent body fat percentage. A trend association was again found, such that reporting eating healthier at baseline was associated with having a lower body fat percentage through Wave 3 (Table 45, Analysis 1; b = -.05, p .06). When the time period was extended to include body fat percentage through Wave 4, a significant association was found between eating healthy at baseline and subsequent body fat percentage (Table 46, Analysis 1; b = -.08, p = .01).

Activity levels and subsequent health (Q2B). Activities with and without one's study partner were examined next. There were no significant or trend associations between the activity levels engaged in with one's partner (Analysis 2) and without one's partner (Analysis 3) and subsequent BMI (Tables 42 – 43) or body fat percentage (both p $\geq$.84) (Tables 45 – 46).

Training class attendance and subsequent health (Q2B). The number of training classes that participants attended was examined as a predictor of BMI (Group 1 only). Attending more training classes was significantly predictive of lower BMI through Wave 3 (Table 43, Analysis 4; b = -.05, p = .02) and Wave 4 (Table 44, Analysis 4; b = -.14, p = .02). Training class attendance was also examined in relation to subsequent body fat percentage (Analysis 4). Attending more training classes was significantly associated with a lower body fat percentage through Wave 3 (Table 45; b = -.07, p = .03) and Wave 4 (Table 46; b = -.09, p = .02).

Summary. Hypothesis Q2B received partial support. Trend associations were observed between reports of healthy eating at baseline and lower BMI and body fat percentage through Wave 3. In addition, healthy eating was significantly associated with lower body fat percentage through Wave 4. Contrary to Hypothesis Q2B, neither activity levels with one's partner nor activity levels without one's partner were associated with subsequent BMI or body fat percentage. Finally, consistent with Hypothesis Q2B, training class attendance was significantly associated with lower BMI and lower body fat percentage through Wave 3 and Wave 4.

Cross-lagged associations between social control and BMI (Q2C). First, positive social control was examined, with Sex and Group included as covariates (Figure 2). There was a trend association such that receiving more positive social control was associated with a lower subsequent BMI at Wave 2 and Wave 3, (b = -.09, p = .08), but not at Wave 4 (b = .32, p = .54). BMI was not associated with subsequent reports of positive social control received at either Wave 2 or 3 (b = .00, p = .94) or Wave 4 (b =

.00, p = .89). There were no significant cross-lagged associations in either direction between BMI and negative social control (Figure 3), indirect social control (Figure 4), and direct social control (Figure 5).

Participants' affective responses to receiving social control from their partner were also examined, with Sex and Group included as covariates. Analyses revealed that BMI significantly predicted positive emotional responses to a partner's subsequent social control attempts (Figure 6) at Waves 2 and 3 (b = -.03, p = .03) but not at Wave 4 (b = .01, p = .77). Positive emotional responses to a partner's social control attempts did not predict subsequent BMI at Wave 2 or 3 (b = -.05, p = .46) or Wave 4 (b = .11, p = .65). Negative emotional responses to a partner's social control attempts also demonstrated cross-lagged associations with BMI (Figure 7). BMI was not associated with negative emotional responses at Waves 2 and 3 (b = -.00, p = .87). BMI at Wave 3, however, did significantly predict negative emotional responses at Wave 4, such that participants with higher BMI at Wave 3 were less likely to report negative emotional responses to their partner's social control attempts at Wave 4 (b = -.03, p = .02). Negative emotional responses did not predict subsequent BMI at Waves 2 and 3 (b = -.11, p = .35) or Wave 4 (b = .68, p = .57).

Summary. Hypothesis Q2C received very limited support. Specifically, a trend association was observed such that receiving positive social control at Waves 1 and 2 was associated with lower subsequent BMI through Wave 3. Contrary to Hypothesis Q2C, cross-lagged associations between negative social control, indirect social control, and direct social control and BMI were not observed in either direction. Additional

associations not specified in Hypothesis Q2C, however, were observed. Lower BMI at Waves 1 and 2, for example, was significantly associated with higher subsequent reports of positive emotional responses to social control attempts at Waves 2 and 3. Lower BMI at Wave 3 was also significantly associated with more negative emotional responses to social control attempts at Wave 4.

Research Question 3: Are qualitative reports of obstacles to losing weight associated with personality, social control, health behaviors, or health?

Content-coding descriptions of obstacles (Q3A). Responses to a question regarding the biggest obstacle participants have faced in their attempts to lose weight came from the Get Fit Challenge application form, which was completed before selection into the 10-week challenge began. These prospective responses were content-coded into five possible categories obstacles: 1) diet-related obstacle; e.g., "Love eating junk food," 2) exercise-related; e.g., "Not keeping up with exercise," 3) time-related; e.g., "No time for the gym," 4) motivation; e.g., "Procrastinating the thought that I'll start tomorrow," and 5) other; e.g., "Keeping the weight off." The prevalence of the types of obstacles were as follows: diet-related, 39%; exercise-related, 19%; time-related, 12%; motivation-related, 35%; and other, 19%. Participants who described multiple obstacles were given multiple codes, resulting in these percentages totaling over 100%. Tables 47 – 51 contain the participant responses that were classified into each category. These obstacles were then examined in relation to personality and self-reports of giving and receiving social control (Table 52) and in relation health behaviors and health (Table 53). These

exploratory correlational analyses do not account for pair dependency; thus, correlations of .16 or greater, reflecting small effects sizes or greater are emphasized.

Obstacles to weight loss and personality (Q3B). Agreeableness and conscientiousness were not associated with reports of obstacles to losing weight. Individuals high on neuroticism were relatively less likely to report diet-related obstacles (r = -.21) and there was a small effect such that they were more likely to report motivation-related obstacles (r = .16), relative to individuals low on neuroticism. Individuals high on extraversion were relatively less likely to report motivation-related obstacles, relative to individuals low on extraversion (r = -.23). Finally, individuals high on openness were more likely to report time-related obstacles, relative to individuals low on openness (r = .19).

Summary. Neuroticism, extraversion, and openness showed some small associations with diet-, motivation-, or time-related obstacles, whereas agreeableness and conscientiousness were not associated with specific obstacles to weight loss in exploratory analyses.

Obstacles to weight loss and social control (Q3B). Obstacles to weight loss were next examined in relation to giving and receiving social control. Exercise-related obstacles were not associated with the giving of social control to a partner. Individuals with diet-related obstacles were more likely to give positive social control (r = .17), negative social control (r = .17), and direct social control (r = .23) to a partner at baseline. Time-related obstacles were not associated with the giving of social control, though motivation-related obstacles were associated giving less direct social control at baseline

(r = -.28). Reporting other types of obstacles was not associated with giving social control to a partner. Furthermore, obstacle descriptions were not associated with reports of receiving any kind of social control at baseline.

Summary. Describing diet- and motivation-related obstacles showed small associations with giving (but not receiving) a variety of social control attempts at baseline. Describing exercise, time, and other obstacles was not associated with the giving or receiving of social control.

Obstacles to weight loss and health behaviors (Q3B). Obstacle descriptions were also examined in relation to each health behavior, both at baseline and at last report (Wave 2, 3, or 4, depending on availability). Beginning with healthy eating, a small effect was found such that individuals with motivation-related obstacles reported less healthy eating at baseline (r = -.17). Individuals who initially reported exercise- or diet-related obstacles reported eating healthier at last report (r = .23 and r = .21, respectively), whereas individuals with motivation-related obstacles reported less healthy eating at last report (r = -.19).

Regarding physical activity, describing obstacles related to something other than exercise, diet, time or motivation was associated with engaging in less physical activity with one's partner at baseline (r = -.23) and describing diet-related obstacles was associated with engaging in less physical activity with one's partner at last report (r = -.18). Describing time-related obstacles was associated with engaging in more physical activities without one's partner at baseline (r = .20). In addition, describing more total obstacles was associated with reporting more physical activities without one's partner at

last report (r = .24), as was specifically describing exercise-related obstacles (r = .17) or diet-related obstacles (r = .16). Lastly, individuals in Group 1 who described exercise-related obstacles attended more training classes throughout the challenge (r = .26). Describing diet-related obstacles was also associated with attending more training classes (r = .17), whereas describing motivation-related obstacles was associated with attending fewer training classes (r = -.16).

Summary. Exercise-, diet-, time-, motivation-, and total obstacles were each related to healthy eating, physical activity with a partner, physical activity without a partner, or training classes, either at baseline or last report.

Obstacles to weight loss and subsequent health (Q3B). Finally, obstacles were examined in relation to anthropometric measures at baseline and last report. Describing more total obstacles to losing weight was associated with having a higher BMI and body fat percentage at baseline (r = .18 and r = .24, respectively). In addition, describing time-related obstacles was associated with having a higher BMI at last report (r = .20). Describing motivation-related obstacles was associated with having a higher body fat percentage at last report (r = .19), as was describing diet-related obstacles (r = .16).

Summary. Diet-, time-, motivation-, and total obstacles were associated with anthropometric measures at baseline or last report.

Discussion

Social control theory suggests that relationships, and specifically marriage, may be beneficial to health when spouses monitor and attempt to improve one another's health behaviors (Rook & Pietromonaco, 1987; Tucker & Anders, 2001). Little is known about

the factors that may influence the giving of social control and the variety of relationships that may be important to health earlier in the lifespan. This dissertation expanded upon recent theoretical models of social control (Hughes & Gove, 1981; Ingersoll-Dayton et al., 1997; Rook, 1990; Tucker & Anders, 2001) by proposing the Individual Differences in Social Control (IDISC) Model, which emphasizes individual differences. The IDISC Model examines the characteristics of who is most likely to offer health-related social control and the downstream impacts on a partner's health behaviors and health outcomes. Pairs of students signed up to take part in a weight loss challenge, and psychosocial surveys, along with physical assessments at the Campus Health Center, were completed at four waves spanning over six months. Overarching goals of the current study were two-fold. First, this study examined whether social control could be predicted, whether social control predicted health behaviors and health, and the role perceived obstacles played in achieving fitness outcomes in a research setting that included both partners, each with fitness goals, in an extended longitudinal design in order to address a dearth of research on the giving of social control using informative partner-based and longitudinal design features. Second, although social control theory is rooted in the study of spouses, the present program examined younger college-age students who selected their own partner (80% friend dyads), extending prior research by making social control theory more generalizeable to individuals and health issues earlier in the lifespan and also to different social relationships important to early health.

Can Social Control Attempts be Predicted?

Relationship satisfaction has consistently been linked to better health (Kiecolt-Glaser & Newton, 2001; Vie et al., 2012), and this study sought to uncover whether giving more social control attempts may be a potential mechanism in this process. Beyond relationship satisfaction potentially moderating the association between social control and health behavior processes, as the contextual model of social control predicts (Ingersoll-Dayton et al., 1997), the current study found that relationship satisfaction was strongly associated with the giving and receiving of health-related social control to a partner. Specifically, the present study found that individuals who were more satisfied with their relationship, relative to those who were less satisfied with their relationship, gave more positive, indirect, and direct social control to their partner, according to both self- and partner-reports. A similar pattern of associations, with somewhat weaker partner effects, was found between relationship satisfaction and receiving social control. Surprisingly, relationship satisfaction was not associated with the amount of negative social control given to a partner. It might be that individuals satisfied with their relationship use all four types of social control, whereas individuals less satisfied with their relationship primarily rely on the use of negative social control.

The parallel nature of the findings associated with predicting giving versus receiving social control was likely due to the shared nature of relationship satisfaction (correspondence between partners was $r = .51$). In a relationship in which both members were satisfied and attempting to motivate one another to get healthy, for example, both members would be expected to report giving more positive and helpful social control

attempts and also receiving more of these attempts from their partner. Links between relationship satisfaction and giving social control to a partner suggest that social control should continue to be considered as a potential mediator of the observed associations between partner relationship satisfaction and other characteristics and health outcomes (e.g., Roberts et al., 2009; Vie et al., 2012). Examining relationship satisfaction, health behaviors, and health outcomes in a dyadic longitudinal design with a larger sample, as well as a wider age range and a variety of relationship types, would be ideal for further examining this very important mediational pathway.

Building upon prior work (Tucker, Elliott, et al., 2006), this study also examined the five major domains of personality in relation to giving and receiving health-related social control. Whereas agreeableness was hypothesized to be associated with giving fewer direct social control attempts, the present study found that agreeableness was associated with giving more direct social control, according to self-reports. The measure of direct social control used in this study asked how often partners encouraged one another to change a health behavior in the past month, whereas prior studies have asked about the extent to which partners urged one another to change their health behaviors in general. Additionally, the present study only considered the health-enhancing subscale, due to a lack of responses to the two items regarding health-compromising behaviors (i.e., being encouraged to quit or reduce drinking and smoking behaviors). Whereas both scale formats assess direct attempts to change a partner's health behaviors, encouraging a partner to engage in health-enhancing behaviors has a much more positive connotation. It might be that agreeable individuals feel comfortable using more positive forms of

direct social control because these social control attempts are less likely to result in conflict. Future work should examine patterns associated with 'encouraging' versus 'urging' a close partner to change his or her health behaviors.

Prior work has linked higher conscientiousness with better partner health (Roberts et al., 2009) and with receiving more indirect social control and reporting more positive affective responses to social control attempts (Tucker, Elliott, et al., 2006). Based on these findings, the present study hypothesized that higher conscientiousness would be associated with giving and receiving more positive and indirect social control attempts. Analyses revealed that higher conscientiousness was in fact associated with giving more positive social control, according to self- and partner-reports. Conscientiousness was also associated with giving more direct social control, according to self-reports, and with receiving less negative social control, according to partner-reports. Although altering the wording of the direct social control prompt may explain the unexpected association with direct social control, the present study also failed to replicate the association between conscientiousness and receiving more indirect social control. This could be due to differences in the samples (college age versus a full age range) or the context in which the research questions were considered (partnered weight-loss challenge versus phone interview).

Based on research linking neuroticism to reports of receiving more direct social control attempts (Tucker, Elliott, et al., 2006), the present study hypothesized that neuroticism would be associated with giving more direct social control attempts. This hypothesis was not supported; however, neuroticism was associated with giving less

negative social control to a partner and receiving less positive social control from a partner, both according to partner-reports. Neuroticism has been associated with engaging in fewer wellness behaviors (Booth-Kewley & Vickers, 1994), and it is possible that receiving less positive social control from a partner partially explains this association.

Exploratory analyses considered extraversion and social control attempts. Higher extraversion was associated with giving more positive, negative, and direct social control to a partner. Associations with both positive and negative social control attempts parallel associations found between extraversion and both health-promoting and health-compromising behaviors (Booth-Kewley & Vickers, 1994; Raynor & Levine, 2009). Future work should examine whether extraverted individuals use positive and negative social control in different contexts (e.g., for different types of health behaviors) or in tandem.

Given the modest associations between openness and health behaviors (Hong & Paunonen, 2009), analyses examining openness and social control were also exploratory. The present study found that openness was associated with receiving more positive and direct social control attempts, according to self-reports, and with receiving fewer negative and indirect social control attempts, according to partner-reports. Although openness was not associated with giving social control, it was associated with receiving each type of social control. Future work should attempt to replicate this finding, as it seems fitting that openness to experience could matter most to how individuals experience receiving social control from a partner.

In addition to examining individuals' own giving of social control, the present study also examined the social control attempts individuals received from others. It has been theorized that people make their own environments, such as through evocative processes in which individuals elicit particular responses from those around them (Scarr & McCartney, 1983), and genetically informed studies have demonstrated that spouses do elicit responses from one another (Spotts et al., 2004). The consistent associations found between openness and receiving social control provide some support for this theory, whereas the few associations found between the other four personality traits and receiving social control suggest weak effects but a lack of significant patterns. Future work should continue to examine whether eliciting particular health-related social control attempts from a partner is one way in which people shape their environments.

Can Subsequent Health Behaviors and Health be Predicted?

Although social control has been linked to engaging in more health-enhancing behaviors and fewer health-compromising behaviors (Lewis & Butterfield, 2007; Lewis & Rook, 1999; C. N. Markey et al., 2008; Stephens et al., 2009), associations between social control and health behaviors in the present study were somewhat sparse. Self-reports of indirect social control were associated with less healthy eating and engaging in less physical activity without one's partner (through Wave 3), whereas self-reports of direct social control were associated with engaging in more activity without one's partner. Partner-reports of positive social control attempts were related to engaging in more activities with one's partner and engaging in fewer activities without one's partner (through Wave 4 only), whereas partner-reports of more direct social control predicted

less healthy eating (though Wave 3) and engaging in less physical activity without one's partner (through Wave 4).

There are likely three main reasons that a consistent pattern of associations was not found between social control attempts and health behaviors. First, the present study prospectively examined changes in health behaviors, rather than examining concurrent or retrospective associations. It is possible that the difference in study design reduced a possible recall bias or lead to the assessment of a related, but separate, phenomena. Second, due to the small sample size in the analyses examining subsequent health behaviors and health, there was insufficient power to capture the small to moderate associations expected between social control, health behaviors, and health. Third, there were measurement concerns with the health behavior measures. Specifically, during data cleaning, extreme responses were observed in relation to the number of mild, moderate, and strenuous activities participants reported engaging in with and without their partner in an average week (6 total response fields). Values exceeding engaging in an activity 8 times per week were recoded to have a value of 8, resulting in a possible range of 0 to 8 activities per week, per response field. This recoding reduced the precision of the measures of physical activity with and without a partner during an average week. The healthy eating scale was quite reliable, but as it asked about the prior 30 days, it is possible that very small healthy decisions or changes were difficult to detect. A daily food journal may help capture some of the small steps participants take toward healthy eating.

Attending more training classes was predictive of subsequent BMI and body fat percentage through Wave 3 and Wave 4, and eating healthy at baseline showed modest associations with lower subsequent BMI and body fat percentage. Given the lack of precision in the activity level measures, it was not surprising that activity level, with or without one's partner, was not associated with subsequent BMI or body fat percentage. The links between participating in training classes, eating healthy, and reductions in BMI and body fat percentage are consistent with the well-established associations between diet, exercise, and maintaining a healthy weight. Indeed, these healthy outcomes were targeted in the Get Fit Challenge (see Appendix 1).

Examining associations between social control and BMI across all four waves yielded some interesting patterns of associations. Specifically, there was a trend association such that receiving more positive social control preceded reductions in BMI between Wave 1 and Wave 3, providing modest support for the social control theory that positive social control leads to better health. When BMI was examined in relation to affective responses to social control, the direction of associations was reversed. Lower BMI preceded reports of more positive affective responses to a partner's social control attempts between Wave 1 and Wave 3, consistent, at a general level, with the findings of BMI moderation in the affective responses to social control (Novak & Webster, 2011). Additionally, lower BMI at Wave 3 preceded reports of more negative affective responses to a partner's social control attempts at Wave 4. The associations between lower BMI and positive responses during the challenge (Waves 1-3) and lower BMI and negative responses at follow up (Waves 3-4) are intriguing. It might be that persons with

a lower BMI during the challenge found success in the Get Fit Challenge, which may have increased receptivity to their partner's social control attempts. If these individuals then discontinued their newly acquired health behaviors after the end of the challenge, and possibly even gained back some of their weight or body fat, that could explain the development of negative affective responses to their partner's social control attempts.

Are Qualitative Reports of Obstacles to Losing Weight Associated with Personality, Social Control, Health Behaviors, or Health?

Obstacles to weight loss reported on the initial Get Fit Challenge application were content-coded into five possible categories: diet-related obstacles, exercise-related obstacles, time-related obstacles, motivation-related obstacles, and other obstacles. Using a mixed-method (qualitative and quantitative) approach, these obstacles were then examined in relation to study measures. Diet and motivation were the most frequently reported obstacles to weight loss, whereas feeling as though one did not have enough time for weight loss was the least frequently reported obstacle. As for personality, individuals higher on neuroticism were less likely to report diet-related obstacles and somewhat more likely to report motivation-related obstacles. The trend association between higher neuroticism and problems with motivation is consistent with the meta-analytic finding that neuroticism significantly relates to lower performance motivation (Judge & Ilies, 2002). In contrast, the prior finding that higher conscientiousness relates to higher motivation was not supported in the present study (Judge & Ilies, 2002). Additionally, in the current study extraversion was associated with a reduced likelihood of reporting motivation obstacles, which is also consistent with previous, although

slightly weaker, meta-analytic findings (Judge & Ilies, 2002). Prior, although also slightly weaker, findings linking low agreeableness and high openness to lower motivation (Judge & Ilies, 2002) were not observed in the present study. Openness, however, was associated with an increased likelihood of reporting time-related obstacles. Future work should examine associations between personality and the types of barriers to weight loss that people perceive facing, and in particular, the links between motivation-related obstacles and high neuroticism, low extraversion, and possibly low conscientiousness.

Obstacles to losing weight were also linked to social control attempts. Individuals who had motivation-related problems reported giving less direct social control to their partner. The finding that individuals who themselves were struggling to stay motivated to lose weight refrained from motivating their partner to be healthy using direct social control is consistent with prior findings of small, albeit consistent, positive associations between self-perceptions of academic competence and motivation in friend dyads in a middle-school sample (Altermatt & Pomerantz, 2003). If partners struggling with motivation decide to get healthy together, they may be less likely to give and receive direct social control attempts to help encourage one another. Such low motivation partnerships may potentially benefit most from targeted interventions that provide the training and knowledge regarding staying motivated despite the challenges that arise. Yet, individuals who described diet-related obstacles gave more direct social control, and trend patterns were observed in the same direction for positive and negative social control. This suggests that some self-reported obstacles pose greater barriers to providing social control than others. Future work should further explore the correlates of

perceiving certain types of obstacles, such as motivation-related obstacles, to better understand their role in the health behavior change process.

Importantly, the correlational analyses suggest some domain-specific improvements in health behaviors over the course of the study. For example, individuals who reported exercise-related obstacles attended significantly more training classes and reported healthier eating at their last report than those who did not report exercise-related obstacles. Similarly, individuals with diet-related obstacles tended to report healthier eating at their last report. Together these findings may suggest that for people who have the awareness to identify the specific behaviors with which they struggle most, making the decision to join a fitness challenge or community program aimed at providing the tools to overcome their challenges may be exactly what is needed to help them overcome their obstacles.

Reporting more total obstacles was also associated with higher activity levels without one's partner at last report. This finding lends modest support to the notion that those with the most obstacles were able to increase their physical activity by the last report (i.e., after making the decision to join the Get Fit Challenge). Additionally, reporting more total obstacles was associated with higher BMI and body fat percentage at baseline, but not at last report. The reduced association with poor health outcomes, and body fat percentage in particular, suggests that the individuals with the most total obstacles may have found sufficient tools or motivation after having made a decision to enroll in the Get Fit Challenge to alter their health behaviors and reduce their health disadvantage.

In contrast to the positive associations between total obstacles and later health, those who initially reported motivational obstacles tended to report less healthy eating at baseline and at last report. Additionally, motivation-related obstacles were associated with a tendency to have a higher body fat percentage at baseline. These associations highlight the unique challenges persons who identify with motivation-related obstacles may face when attempting to successfully manage their weight. The obstacles people perceive as barriers should be considered when designing interventions aimed at improving health behaviors.

Limitations

A high rate of attrition between Wave 1 and Wave 2, both in the survey data (27%) and in particular in the in-person physical assessment data (35%), resulted in a reduction in the power to detect some of the effects of interest, especially at later waves. The reduction in physical assessment data prevented the use of parallel analyses examining changes in objective and self-reported BMI, and it prevented the examination of social control and body fat percentage across all four waves. Additionally, the ability to test for potential moderators, such as sex and relationship type, was limited by sample size, though there is mixed evidence regarding whether sex moderates social control, health behavior, and health processes (Novak & Webster, 2011). There were also problems precisely measuring the health behaviors of interest (e.g., such as activities with and without one's partner), which made it difficult to connect receiving social control to BMI and body fat percentage through health behaviors. Finally, given the relative sparseness of data at later waves, there was unstable variation in change parameters with

respect to health behaviors and health across the four waves in this study, which precluded conducting the analyses of greatest interest, i.e., latent growth curve analyses.

Directions for Future Research

The IDISC Model should be incorporated into future research, so that a better understanding of the predictors of giving and receiving health-related social control can be attained. Longitudinal dyadic designs will be most helpful in informing these processes and the downstream health behavior and health changes that follow. Additionally, it is important that a wide range of ages and a variety of relationship types continue to be considered in studies of social control, so that a deeper understanding can be achieved regarding how social control processes vary for different health behaviors, developmental periods, and relationship types.

Additionally, as Novak and Webster (2011) argue, attention should be given to the way in which social control is conceptualized and measured. Social control is often classified as either positive or negative or either direct or indirect. Classifying along only one dimension or the other prevents researchers for capturing the extent to which these scales overlap, e.g., positive social control may be direct or indirect. Additionally, the findings that BMI moderates the affective responses individuals feel in response to a partner's social control attempts highlights the importance of considering whether the terms "positive" and "negative" remain the most useful and accurate labels for specific social control constructs or whether there might be additional ways to conceptualize and classify different social control attempts. An analysis of all current social control items, building upon the work of Novak and Webster (2011), would likely help inform these

issues. Finally, future research should apply social control findings, such as the finding that certain individuals (e.g., agreeable, conscientious, and extraverted individuals who are satisfied with their relationship) are more likely to receive social control attempts from a partner than others, to the development of health-related interventions and programs that may benefit the community.

Conclusion

In the context of a dyadic longitudinal study, relationship satisfaction and personality were both found to significantly predict the giving and receiving of health-related social control. Specifically, higher relationship satisfaction, conscientiousness, agreeableness, and extraversion tended to predict helpful social control attempts (e.g., more positive and direct social control). Social control was associated with health behaviors, and both positive social control and health behavior reports showed associations with lower subsequent BMI. Importantly, these processes were observed in a college-age sample comprised primarily of friends, suggesting a need to further examine the importance of different relationship types to health across the lifespan. Theoretical models of social control processes should be expanded to reflect individuals' differential likelihood of giving and receiving health-related social control from a partner, in order to more fully portray the processes involved.

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Table 1

Descriptive Statistics for first report of Relationship Satisfaction, Personality, and Social Control

Variable		N	Mean	SD	Min	Max
Personality						
Agreeableness		113	4.08	.56	2.78	5.00
Conscientiousness		113	3.60	.62	1.89	5.00
Extraversion		113	3.41	.80	1.13	5.00
Neuroticism		113	2.81	.73	1.00	4.50
Openness		113	3.51	.54	1.60	4.60
Satisfaction						
Relationship Satisfaction		115	18.68	4.33	4.00	25.00
Giving social control						
Positive SC:	self-report	110	1.79	1.22	.00	4.00
	partner-report	85	1.51	1.21	.00	4.00
Negative SC:	self-report	109	.59	.78	.00	4.00
	partner-report	85	.51	.66	.00	2.50
Negative SC (log):	self-report	109	.37	.42	.00	1.61
	partner-report	85	.34	.39	.00	1.25
Indirect SC:	self-report	101	2.98	1.17	1.00	5.00
	partner-report	81	3.31	.98	1.00	5.00
Direct SC:	self-report	112	2.62	.98	1.00	4.00
	partner-report	85	2.53	.95	1.00	4.00
Receiving social control						
Positive SC:	self-report	116	1.48	1.18	.00	4.00
	partner-report	80	1.81	1.21	.00	4.00
Negative SC:	self-report	116	.59	.77	.00	3.25
	partner-report	80	.59	.72	.00	4.00
Negative SC (log):	self-report	116	.37	.42	.00	1.45
	partner-report	80	.38	.40	.00	1.61
Indirect SC:	self-report	111	3.14	1.08	1.00	5.00
	partner-report	74	3.20	1.09	1.00	5.00
Direct SC:	self-report	117	2.45	.91	1.00	4.00
	partner-report	82	2.70	.94	1.00	4.00
Emotional response to social control						
Positive:	self-report	96	2.67	.97	1.00	4.00
Negative:	self-report	96	1.39	.47	1.00	3.00

Note. SC = Social Control.

Table 2

Descriptive Statistics for First Report of Health Behaviors, Anthropometric Measures, and Participation Indices

Variable	N	Mean	SD	Min	Max
Health behaviors					
Eating healthy	113	4.42	.89	1.71	6.36
Activity with partner	84	29.60	28.15	3.00	136.00
Activity with partner (log)	84	3.01	.88	1.10	4.91
Activity without partner	107	43.41	30.52	3.00	136.00
Activity without partner (log)	107	3.50	.80	1.10	4.91
Training classes	89	4.09	2.00	1.00	7.00
Anthropometric measures					
BMI measured	102	28.01	6.06	17.60	46.70
BMI self report	127	27.11	5.33	17.54	41.96
BMI any source	142	27.55	5.84	17.60	46.70
Body fat percentage	103	32.62	9.44	11.8	51.80
Participation indices					
First survey reported (baseline)	117	1.13	.36	1.00	3.00
First health assessment (baseline)	103	1.08	.30	1.00	3.00

Table 3

Descriptive Statistics for Receiving Social Control and BMI, by Wave

Variable		N	Mean	SD	Min	Max
Receive Social Control Attempts						
Positive SC:	Wave 1	101	1.52	1.16	0.00	4.00
	Wave 2	72	1.38	1.22	0.00	3.67
	Wave 3	57	1.49	1.20	0.00	3.83
	Wave 4	45	1.08	1.16	0.00	4.00
Negative SC:	Wave 1	102	0.37	0.41	0.00	1.39
	Wave 2	73	0.31	0.45	0.00	1.45
	Wave 3	57	0.36	0.48	0.00	1.45
	Wave 4	45	0.24	0.43	0.00	1.61
Indirect SC:	Wave 1	99	3.17	1.09	1.00	5.00
	Wave 2	71	2.98	1.09	1.00	5.00
	Wave 3	53	2.78	1.19	1.00	5.00
	Wave 4	46	2.33	1.05	1.00	4.75
Direct SC:	Wave 1	103	2.43	0.92	1.00	4.00
	Wave 2	78	2.46	1.01	1.00	4.00
	Wave 3	55	2.42	1.01	1.00	4.00
	Wave 4	48	2.05	0.94	1.00	4.00
Emotional Response to Social Control						
Positive:	Wave 1	96	2.67	0.97	1.00	4.00
	Wave 2	73	2.61	0.97	1.00	4.00
	Wave 3	54	2.61	0.99	1.00	4.00
	Wave 4	43	2.56	1.05	1.00	4.00
Negative:	Wave 1	96	1.39	0.47	1.00	3.00
	Wave 2	73	1.33	0.42	1.00	2.75
	Wave 3	54	1.44	0.52	1.00	2.75
	Wave 4	43	1.36	0.48	1.00	2.75
BMI	Wave 1	129	27.71	5.91	17.60	46.70
	Wave 2	101	27.21	5.88	17.50	47.20
	Wave 3	83	27.45	6.25	18.00	47.60
	Wave 4	58	27.22	6.41	17.30	44.91

Note. SC = Social Control.

Table 4

Examining Relationship Satisfaction and Personality Similarity between Partners

		Partner 1				
Partner 2	Rel. Sat.	A	C	N	E	O
Rel. Sat.	.51**					
A		.16				
C			.10			
N				-.21		
E					-.24	
O						.14

Note. Rel. Sat. = Relationship Satisfaction. A = Agreeableness. C = Conscientiousness. N = Neuroticism. E = Extraversion. O = Openness. N range = 27 – 30 pairs. Correlational statistics presented.

$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 5

Examining Associations between Measures of Giving Social Control

		Positive SC		Negative SC		Indirect SC		Direct SC	
		Self	Partner	Self	Partner	Self	Partner	Self	Partner
Positive SC	Self	1	0.38***	0.58***	0.25*	0.57***	0.28*	0.73***	0.30*
	Partner		1	0.19	0.50***	0.41***	0.37***	0.40***	0.54***
Negative SC	Self			1	0.34**	0.40***	0.11	0.53***	0.22^{+}
	Partner				1	0.21^{+}	0.33**	0.35**	0.41***
Indirect SC	Self					1	0.20	0.53***	0.32**
	Partner						1	0.31*	0.42***
Direct SC	Self							1	0.43***
	Partner								1

Note. SC = Social Control. N range Self-Self 99-109. N range Partner-Partner 80-85. N range Self-Partner 62-73. Correlational statistics presented.

$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 6

Examining Associations between Measures of Receiving Social Control

	Positive SC		Negative SC		Indirect SC		Direct SC		Pos. Resp.	Neg. Resp.
	Self	Partner	Self	Partner	Self	Partner	Self	Partner	Self	Self
Positive SC Self	1	0.38**	0.51***	0.19	0.45***	0.41***	0.57***	0.40***	0.59***	0.17+
Partner		1	0.25*	0.59***	0.28*	0.57***	0.30*	0.70***	0.29*	0.06
Negative SC Self			1	0.34**	0.39***	0.21+	0.36***	0.35**	0.22*	0.47***
Partner				1	0.11	0.32**	0.22+	0.53***	0.16	0.12
Indirect SC Self					1	0.20	0.47***	0.31*	0.50***	0.25*
Partner						1	0.32**	0.50***	0.41**	0.20
Direct SC Self							1	0.43***	0.54***	0.18+
Partner								1	0.37**	0.18
Positive Response Self									1	0.09

Note. SC = Social Control. Pos. Resp. = Positive Response. Neg. Resp. = Negative Response. N range Self-Self 95-116. N range Partner-Partner 72-80. N range Self-Partner 55-72. Correlational statistics presented.
$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 7

Examining Associations between Self-Reports of Giving and Receiving Social Control

	Giving			
	Positive SC	Negative SC	Indirect SC	Direct SC
Receiving				
Positive SC	0.64***	0.41***	0.45***	0.40***
Negative SC	0.33***	0.54***	0.28**	0.29**
Indirect SC	0.38***	0.35***	0.82***	0.42***
Direct SC	0.48***	0.39***	0.42***	0.62***
Positive Response	0.46***	0.30**	0.45***	0.43***
Negative Response	0.22*	0.35***	0.25*	0.19+

Note. SC = Social Control. N range 93-112. Correlational statistics presented.
+$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 8

Examining Correlational Analyses between Relationship Satisfaction, Personality, and Giving Social Control

						Positive SC		Negative SC		Indirect SC		Direct SC	
	A	C	E	N	O	Self	Partner	Self	Partner	Self	Partner	Self	Partner
Rel. Sat.	0.04	0.10	0.15	-0.05	0.07	0.21*	0.30**	0.04	-0.03	0.29**	0.24*	0.21*	0.40***
A	1	0.54***	0.20*	-0.30**	0.18^{+}	0.16	0.14	-0.22*	-0.15	0.16	-0.03	0.16^{+}	-0.14
C		1	0.29**	-0.39***	0.18^{+}	0.23*	0.19	-0.12	-0.21^{+}	0.15	-0.00	0.24*	-0.01
E			1	-0.33***	0.44***	0.22*	0.07	0.15	0.03	0.11	0.07	0.28**	0.13
N				1	-0.06	-0.01	-0.27*	0.06	-0.05	-0.01	-0.08	-0.13	-0.05
O					1	0.18^{+}	-0.05	0.14	-0.17	0.06	-0.03	0.18^{+}	0.00

Note. Rel. Sat. = Relationship Satisfaction. A = Agreeableness. C = Conscientiousness. E = Extraversion. N = Neuroticism. O = Openness. SC = Social Control. Relationship Satisfaction and Personality are all self-reports. N range with Self-ratings = 97 – 113. N range with Partner-ratings = 69 – 75.

$^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 9

Examining Associations with Health Behaviors and Receiving Social Control

	Activity with Partner	Activity without Partner	BMI	Body Fat %	Positive SC		Negative SC		Indirect SC		Direct SC	
					Self	Partner	Self	Partner	Self	Partner	Self	Partner
Healthy Eating	-0.05	0.28**	0.01	0.07	0.09	0.08	0.03	-0.08	0.02	0.06	0.03	0.03
Activity with Partner	1	0.30**	-0.27*	-0.29*	0.36***	0.10	0.42***	0.27*	0.28*	0.17	0.35**	0.32*
Activity without Partner		1	0.13	0.07	0.03	0.10	0.04	-0.01	0.10	0.12	-0.02	0.02
BMI			1	0.86***	-0.09	0.04	-0.04	-0.08	-0.04	0.17	-0.00	0.03
Body Fat Percentage				1	0.05	0.05	-0.02	-0.08	0.02	0.21	0.12	0.05

Note. SC = Social Control. N range across health behaviors = 66-107. N range Self SC = 78 – 117. N range Partner SC = 54 – 82. Correlational statistics presented.

$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 10

Restructuring the Social Control Reports

Original Structure	Transposed and Rearranged
Partner 1	Gives social control (Partner 1)
Gives social control	Partner 1 – Gives social control (self-report)
Receives social control	Partner 2 – Receives social control (partner-report)
Partner 2	Gives social control (Partner 2)
Gives social control	Partner 2 – Gives social control (self-report)
Receives social control	Partner 1 – Receives social control (partner-report)

Table 11

Relationship Satisfaction as a Predictor of Giving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.44	.28	5.08	.00
Relationship satisfaction	.22	.10	2.23	.03
Sex	.01	.09	.08	.94
Group	-.02	.10	-.18	.86
Matched	-.09	.15	-.60	.55
Wave	.09	.11	.78	.43
Partner-report of SC				
Intercept	1.38	.31	4.44	.00
Relationship satisfaction	.32	.10	3.16	.00
Sex	-.08	.11	-.69	.49
Group	.06	.10	.58	.56
Matched	-.13	.10	-1.36	.17
Wave	.14	.10	1.37	.17
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.33	.30	4.49	.00
Relationship satisfaction	.08	.10	.82	.41
Sex	-.19	.11	-1.77	.08
Group	-.01	.10	-.07	.95
Matched	.00	.13	.03	.98
Wave	.07	.11	.60	.55
Partner-report of SC				
Intercept	1.16	.34	3.44	.00
Relationship satisfaction	.00	.14	.00	1.00
Sex	-.16	.13	-1.24	.21
Group	-.07	.17	-.40	.69
Matched	-.25	.10	-2.41	.02
Wave	.28	.12	2.41	.02

Note. N = 110 participants (74 pairs) in each analysis. SC = Social Control.

Table 12

Relationship Satisfaction as a Predictor of Giving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	2.64	.38	6.96	.00
Relationship satisfaction	.24	.11	2.14	.03
Sex	.04	.11	.37	.71
Group	-.28	.10	-2.96	.00
Matched	-.08	.10	-.78	.44
Wave	-.02	.12	-.18	.86
Partner-report of SC				
Intercept	3.54	.60	5.92	.00
Relationship satisfaction	.35	.12	2.86	.00
Sex	-.01	.14	-.10	.92
Group	-.09	.17	-.52	.60
Matched	.11	.06	1.77	.08
Wave	.25	.12	2.07	.04
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.88	.31	9.32	.00
Relationship satisfaction	.22	.10	2.30	.02
Sex	-.08	.09	-.93	.35
Group	-.06	.09	-.61	.54
Matched	-.21	.13	-1.64	.10
Wave	.21	.09	2.26	.02
Partner-report of SC				
Intercept	2.86	.28	10.34	.00
Relationship satisfaction	.41	.10	3.93	.00
Sex	-.13	.10	-1.32	.19
Group	.02	.11	.21	.84
Matched	-.20	.09	-2.15	.03
Wave	.22	.10	2.23	.03

Note. N range 107-110 participants (71-74 pairs). SC = Social Control.

Table 13

Relationship Satisfaction as a Predictor of Receiving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.42	.24	5.99	.00
Relationship satisfaction	.48	.09	5.57	.00
Sex	-.07	.08	-.90	.37
Group	.02	.08	.26	.80
Matched	.07	.12	.60	.55
Wave	-.02	.08	-.28	.78
Partner-report of SC				
Intercept	1.83	.43	4.25	.00
Relationship satisfaction	.21	.12	1.66	.10
Sex	-.12	.15	-.82	.41
Group	-.14	.14	-.99	.32
Matched	-.24	.08	-3.01	.00
Wave	-.05	.12	-.43	.67
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.41	.28	5.08	.00
Relationship satisfaction	.07	.11	.62	.54
Sex	-.24	.10	-2.32	.02
Group	.07	.11	.60	.55
Matched	.06	.12	.52	.60
Wave	.00	.10	.02	.99
Partner-report of SC				
Intercept	1.28	.30	4.20	.00
Relationship satisfaction	.14	.11	1.26	.21
Sex	-.17	.13	-1.28	.20
Group	.06	.17	.38	.71
Matched	-.20	.06	-3.19	.00
Wave	.16	.15	1.10	.27

Note. N = 112 participants (76 pairs) in each analysis. SC = Social Control.

Table 14

Relationship Satisfaction as a Predictor of Receiving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	3.07	.38	8.13	.00
Relationship satisfaction	.21	.12	1.79	.07
Sex	.00	.11	.02	.98
Group	-.18	.10	-1.85	.07
Matched	-.07	.11	-.61	.54
Wave	-.07	.10	-.67	.50
Partner-report of SC				
Intercept	2.97	.65	4.57	.00
Relationship satisfaction	.43	.12	3.51	.00
Sex	-.07	.16	-.46	.65
Group	-.22	.13	-1.74	.08
Matched	.03	.06	.51	.61
Wave	.24	.14	1.68	.09
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.73	.26	10.71	.00
Relationship satisfaction	.39	.10	4.11	.00
Sex	-.03	.08	-.36	.72
Group	-.06	.08	-.77	.44
Matched	-.18	.12	-1.49	.14
Wave	.22	.08	2.64	.01
Partner-report of SC				
Intercept	3.15	.42	7.55	.00
Relationship satisfaction	.26	.13	2.04	.04
Sex	-.13	.12	-1.08	.28
Group	-.07	.09	-.74	.46
Matched	-.25	.10	-2.48	.01
Wave	.13	.08	1.61	.11

Note. N range 111-112 participants (75-76 pairs). SC = Social Control.

Table 15

Agreeableness as a Predictor of Giving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.52	.28	5.54	.00
Agreeableness	.18	.10	1.90	.06
Sex	-.03	.09	-.35	.73
Group	.01	.11	.05	.96
Matched	-.19	.13	-1.50	.14
Wave	.13	.15	.86	.39
Partner-report of SC				
Intercept	1.58	.31	5.09	.00
Agreeableness	.16	.10	1.53	.13
Sex	-.13	.11	-1.14	.26
Group	.01	.10	.05	.96
Matched	-.26	.09	-2.80	.01
Wave	.11	.15	.71	.48
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.36	.31	4.37	.00
Agreeableness	-.18	.10	-1.79	.07
Sex	-.20	.12	-1.74	.08
Group	-.04	.10	-.41	.68
Matched	.00	.13	.00	1.00
Wave	.12	.13	.93	.35
Partner-report of SC				
Intercept	1.21	.35	3.47	.00
Agreeableness	-.10	.11	-.87	.38
Sex	-.17	.13	-1.36	.17
Group	-.11	.15	-.77	.44
Matched	-.06	.11	-.50	.62
Wave	.34	.15	2.31	.02

Note. N range 108-109 participants (74-75 pairs). SC = Social Control.

Table 16

Agreeableness as a Predictor of Giving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	2.62	.37	7.05	.00
Agreeableness	.08	.09	.88	.38
Sex	.05	.11	.48	.63
Group	-.32	.11	-3.07	.00
Matched	-.16	.13	-1.23	.22
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.58	.65	5.52	.00
Agreeableness	-.08	.14	-.59	.55
Sex	-.01	.16	-.04	.97
Group	-.13	.22	-.58	.56
Matched	-.11	.16	-.71	.48
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.86	.28	10.08	.00
Agreeableness	.19	.09	2.14	.03
Sex	-.08	.08	-1.02	.31
Group	-.05	.10	-.56	.57
Matched	-.25	.12	-2.01	.04
Wave	.25	.09	2.98	.00
Partner-report of SC				
Intercept	2.80	.34	8.17	.00
Agreeableness	-.10	.12	-.83	.41
Sex	-.06	.12	-.48	.64
Group	-.08	.13	-.60	.55
Matched	-.29	.10	-3.00	.00
Wave	.11	.17	.64	.52

Note. N range 105-108 participants (71-74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 17

Conscientiousness as a Predictor of Giving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.59	.27	5.87	.00
Conscientiousness	.26	.10	2.77	.01
Sex	-.07	.09	-.76	.45
Group	-.01	.10	-.13	.89
Matched	-.15	.12	-1.19	.23
Wave	.20	.11	1.82	.07
Partner-report of SC				
Intercept	1.65	.33	5.03	.00
Conscientiousness	.23	.11	2.19	.03
Sex	-.16	.13	-1.28	.20
Group	-.04	.10	-.34	.73
Matched	-.20	.09	-2.29	.02
Wave	.14	.13	1.12	.27
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.40	.32	4.44	.00
Conscientiousness	-.04	.09	-.41	.68
Sex	-.23	.12	-1.86	.06
Group	-.02	.10	-.17	.86
Matched	-.01	.13	-.05	.96
Wave	.18	.13	1.43	.15
Partner-report of SC				
Intercept	1.16	.35	3.28	.00
Conscientiousness	-.16	.12	-1.34	.18
Sex	-.15	.13	-1.13	.26
Group	-.08	.15	-.55	.58
Matched	-.08	.12	-.71	.48
Wave	.31	.14	2.25	.02

Note. N range 108-109 (74-75 pairs). SC = Social Control.

Table 18

Conscientiousness as a Predictor of Giving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	2.64	.38	6.96	.00
Conscientiousness	.09	.10	.83	.41
Sex	.04	.12	.37	.72
Group	-.33	.10	-3.29	.00
Matched	-.14	.12	-1.12	.27
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.60	.63	5.70	.00
Conscientiousness	.00	.14	-.02	.98
Sex	-.02	.15	-.10	.92
Group	-.10	.20	-.48	.63
Matched	-.10	.17	-.57	.57
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.92	.29	9.92	.00
Conscientiousness	.27	.10	2.84	.01
Sex	-.11	.09	-1.35	.18
Group	-.07	.09	-.79	.43
Matched	-.21	.12	-1.79	.07
Wave	.29	.07	3.96	.00
Partner-report of SC				
Intercept	2.82	.35	8.10	.00
Conscientiousness	.01	.11	.12	.91
Sex	-.08	.13	-.59	.56
Group	-.04	.11	-.32	.75
Matched	-.27	.10	-2.78	.01
Wave	.14	.15	.91	.37

Note. N range 105-108 (71-74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 19

Extraversion as a Predictor of Giving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.51	.26	5.92	.00
Extraversion	.21	.09	2.47	.01
Sex	-.01	.09	-.14	.89
Group	.00	.10	-.03	.98
Matched	-.17	.13	-1.37	.17
Wave	.04	.12	.31	.75
Partner-report of SC				
Intercept	1.60	.29	5.51	.00
Extraversion	.06	.12	.48	.64
Sex	-.11	.11	-1.01	.32
Group	-.01	.12	-.08	.94
Matched	-.27	.09	-2.85	.00
Wave	-.06	.11	-.55	.59
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.42	.29	4.86	.00
Extraversion	.19	.08	2.38	.02
Sex	-.24	.11	-2.19	.03
Group	.03	.11	.30	.77
Matched	.03	.13	.20	.84
Wave	.06	.14	.44	.66
Partner-report of SC				
Intercept	1.20	.34	3.49	.00
Extraversion	.05	.11	.43	.67
Sex	-.15	.13	-1.13	.26
Group	-.04	.19	-.21	.83
Matched	-.07	.11	-.65	.51
Wave	.09	.15	.62	.54

Note. N range 108-109 (74-75 pairs). SC = Social Control.

Table 20

Extraversion as a Predictor of Giving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	2.64	.32	8.16	.00
Extraversion	.05	.10	.45	.66
Sex	.05	.10	.54	.59
Group	-.34	.10	-3.37	.00
Matched	-.15	.13	-1.21	.23
Wave	-.05	.15	-.36	.72
Partner-report of SC				
Intercept	3.59	.60	5.94	.00
Extraversion	.05	.13	.36	.72
Sex	-.02	.14	-.12	.91
Group	-.09	.23	-.37	.71
Matched	-.09	.16	-.55	.58
Wave	.03	.13	.22	.83
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.83	.26	11.11	.00
Extraversion	.27	.08	3.52	.00
Sex	-.05	.07	-.70	.49
Group	-.05	.10	-.46	.64
Matched	-.23	.13	-1.84	.07
Wave	.09	.13	.64	.52
Partner-report of SC				
Intercept	2.84	.33	8.74	.00
Extraversion	.15	.11	1.34	.18
Sex	-.08	.12	-.68	.50
Group	-.01	.11	-.08	.94
Matched	-.28	.10	-2.71	.01
Wave	.00	.12	-.01	.99

Note. N range 105-108 (71-74 pairs). SC = Social Control.

Table 21

Neuroticism as a Predictor of Giving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.48	.29	5.12	.00
Neuroticism	.00	.11	.02	.99
Sex	.00	.10	.01	.99
Group	-.03	.10	-.34	.74
Matched	-.19	.13	-1.50	.13
Wave	.10	.14	.74	.46
Partner-report of SC				
Intercept	1.57	.29	5.34	.00
Neuroticism	-.22	.11	-1.99	.05
Sex	-.11	.10	-1.04	.30
Group	-.02	.11	-.18	.86
Matched	-.26	.09	-2.80	.01
Wave	.06	.15	.38	.71
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.40	.31	4.49	.00
Neuroticism	.04	.09	.50	.62
Sex	-.23	.12	-1.96	.05
Group	-.01	.10	-.05	.96
Matched	.00	.13	.03	.98
Wave	.15	.14	1.07	.29
Partner-report of SC				
Intercept	1.23	.34	3.67	.00
Neuroticism	-.03	.10	-.26	.79
Sex	-.19	.13	-1.50	.13
Group	-.09	.15	-.61	.54
Matched	-.06	.11	-.50	.62
Wave	.35	.15	2.36	.02

Note. N range 108-109 (74-75 pairs). SC = Social Control.

Table 22

Neuroticism as a Predictor of Giving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	2.60	.38	6.82	.00
Neuroticism	-.01	.11	-.07	.95
Sex	.07	.11	.60	.55
Group	-.34	.10	-3.43	.00
Matched	-.16	.13	-1.25	.21
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.61	.63	5.78	.00
Neuroticism	-.06	.14	-.41	.68
Sex	-.02	.15	-.13	.89
Group	-.10	.22	-.47	.64
Matched	-.09	.15	-.57	.57
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.83	.29	9.94	.00
Neuroticism	-.10	.08	-1.20	.23
Sex	-.06	.08	-.73	.47
Group	-.09	.10	-.89	.37
Matched	-.25	.12	-2.03	.04
Wave	.23	.08	3.04	.00
Partner-report of SC				
Intercept	2.82	.33	8.53	.00
Neuroticism	-.06	.09	-.66	.51
Sex	-.08	.12	-.69	.49
Group	-.05	.11	-.49	.62
Matched	-.28	.10	-2.87	.00
Wave	.14	.16	.84	.40

Note. N range 105-108 (71-74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 23

Openness as a Predictor of Giving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.52	.29	5.18	.00
Openness	.14	.11	1.37	.17
Sex	-.02	.10	-.20	.84
Group	-.05	.10	-.52	.61
Matched	-.17	.12	-1.38	.17
Wave	.16	.11	1.39	.17
Partner-report of SC				
Intercept	1.53	.32	4.75	.00
Openness	-.07	.14	-.53	.59
Sex	-.09	.12	-.74	.46
Group	-.07	.13	-.50	.62
Matched	-.28	.09	-3.17	.00
Wave	.09	.12	.74	.46
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.47	.32	4.66	.00
Openness	.14	.10	1.46	.14
Sex	-.26	.12	-2.15	.03
Group	-.02	.10	-.16	.87
Matched	.04	.12	.30	.76
Wave	.18	.13	1.40	.16
Partner-report of SC				
Intercept	1.18	.32	3.70	.00
Openness	-.21	.13	-1.64	.10
Sex	-.16	.12	-1.30	.19
Group	-.16	.15	-1.11	.27
Matched	-.12	.13	-.97	.33
Wave	.32	.13	2.46	.01

Note. N range 108-109 (74-75 pairs). SC = Social Control.

Table 24

Openness as a Predictor of Giving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	2.61	.39	6.66	.00
Openness	.05	.09	.56	.58
Sex	.06	.12	.52	.60
Group	-.35	.10	-3.48	.00
Matched	-.15	.12	-1.18	.24
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.58	0.64	5.61	0.00
Openness	-0.06	0.15	-0.39	0.70
Sex	-0.01	0.15	-0.04	0.97
Group	-0.12	0.23	-0.52	0.60
Matched	-0.11	0.16	-0.66	0.51
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.85	.30	9.54	.00
Openness	.14	.10	1.39	.16
Sex	-.06	.09	-.69	.49
Group	-.11	.10	-1.11	.27
Matched	-.27	.13	-2.07	.04
Wave	.21	.08	2.69	.01
Partner-report of SC				
Intercept	2.79	.34	8.29	.00
Openness	-.08	.13	-.61	.54
Sex	-.06	.12	-.51	.61
Group	-.10	.13	-.74	.46
Matched	-.31	.10	-3.02	.00
Wave	.13	.14	.95	.34

Note. N range 105-108 (71-74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 25

Relationship Satisfaction, Personality and Giving Social Control: Equating Self and Partner Paths

	$\Delta\chi^2$	df	p
RQ1: Relationship satisfaction			
Positive SC	1.34	1	.25
Negative SC	.35	1	.55
Indirect SC	.07	1	.79
Direct SC	3.70	1	.05
RQ2A: Personality			
Agreeableness			
Positive SC	.11	1	.74
Negative SC	.56	1	.45
Indirect SC	1.04	1	.31
Direct SC	4.04	1	.04
Conscientiousness			
Positive SC	.13	1	.72
Negative SC	1.05	1	.30
Indirect SC	.64	1	.42
Direct SC	4.35	1	.04
Extraversion			
Positive SC	1.61	1	.20
Negative SC	1.49	1	.22
Indirect SC	.00	1	.95
Direct SC	1.67	1	.20
Neuroticism			
Positive SC	1.81	1	.18
Negative SC	.38	1	.54
Indirect SC	.04	1	.83
Direct SC	.16	1	.69
Openness			
Positive SC	1.76	1	.18
Negative SC	7.68	1	.01
Indirect SC	.40	1	.53
Direct SC	2.11	1	.15

Note. SC = Social Control. All analyses include covariates.

Table 26

Agreeableness as a Predictor of Receiving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.52	.29	5.23	.00
Agreeableness	.11	.09	1.14	.26
Sex	-.10	.10	-1.02	.31
Group	.00	.10	-.05	.96
Matched	-.21	.12	-1.76	.08
Wave	.05	.11	.49	.63
Partner-report of SC				
Intercept	1.83	.49	3.77	.00
Agreeableness	-.10	.12	-.82	.41
Sex	-.11	.16	-.71	.48
Group	-.23	.13	-1.82	.07
Matched	-.25	.13	-1.99	.05
Wave	.19	.14	1.37	.17
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.39	.28	4.99	.00
Agreeableness	.01	.10	.09	.93
Sex	-.22	.10	-2.20	.03
Group	.03	.11	.27	.79
Matched	-.04	.10	-.40	.69
Wave	.05	.11	.51	.61
Partner-report of SC				
Intercept	1.13	.38	3.00	.00
Agreeableness	-.23	.13	-1.79	.07
Sex	-.06	.14	-.39	.70
Group	.02	.16	.10	.92
Matched	-.16	.15	-1.06	.29
Wave	.17	.18	.93	.36

Note. N = 108 in each analysis (74 pairs). SC = Social Control.

Table 27

Agreeableness as a Predictor of Receiving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	3.12	.40	7.74	.00
Agreeableness	.04	.10	.35	.73
Sex	-.01	.12	-.05	.96
Group	-.25	.11	-2.30	.02
Matched	-.19	.14	-1.40	.16
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.02	.75	4.02	.00
Agreeableness	-.09	.11	-.80	.42
Sex	-.04	.20	-.19	.85
Group	-.24	.17	-1.43	.15
Matched	-.11	.14	-.78	.43
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.89	.31	9.28	.00
Agreeableness	.09	.10	.94	.35
Sex	-.08	.10	-.79	.43
Group	-.07	.09	-.75	.45
Matched	-.26	.10	-2.67	.01
Wave	.19	.07	2.76	.01
Partner-report of SC				
Intercept	3.25	.46	7.11	.00
Agreeableness	-.01	.13	-.08	.94
Sex	-.13	.14	-.97	.33
Group	-.13	.10	-1.35	.18
Matched	-.27	.16	-1.72	.09
Wave	.14	.13	1.04	.30

Note. N = 108 in each analysis (74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 28

Conscientiousness as a Predictor of Receiving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.55	.30	5.12	.00
Conscientiousness	.10	.11	.88	.38
Sex	-.12	.11	-1.09	.28
Group	-.02	.09	-.24	.81
Matched	-.18	.12	-1.56	.12
Wave	.10	.09	1.10	.27
Partner-report of SC				
Intercept	1.86	.50	3.75	.00
Conscientiousness	.00	.12	.03	.98
Sex	-.13	.17	-.76	.45
Group	-.21	.14	-1.43	.15
Matched	-.24	.13	-1.81	.07
Wave	.22	.12	1.78	.08
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.37	.29	4.75	.00
Conscientiousness	-.06	.09	-.65	.52
Sex	-.21	.11	-1.97	.05
Group	.01	.11	.13	.89
Matched	-.05	.11	-.51	.61
Wave	.07	.10	.70	.48
Partner-report of SC				
Intercept	1.01	.37	2.70	.01
Conscientiousness	-.26	.12	-2.15	.03
Sex	-.02	.15	-.13	.90
Group	.10	.14	.70	.48
Matched	-.20	.15	-1.40	.16
Wave	.16	.16	.99	.32

Note. N = 108 in each analysis (74 pairs). SC = Social Control.

Table 29

Conscientiousness as a Predictor of Receiving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	3.10	.42	7.46	.00
Conscientiousness	-.02	.10	-.22	.82
Sex	.01	.12	.04	.97
Group	-.26	.10	-2.53	.01
Matched	-.20	.14	-1.43	.15
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.04	.73	4.15	.00
Conscientiousness	.03	.12	.25	.80
Sex	-.05	.19	-.27	.79
Group	-.23	.17	-1.37	.17
Matched	-.08	.14	-.54	.59
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.92	.31	9.53	.00
Conscientiousness	.12	.09	1.29	.20
Sex	-.09	.10	-.94	.35
Group	-.08	.09	-.91	.36
Matched	-.24	.10	-2.52	.01
Wave	.20	.07	2.78	.01
Partner-report of SC				
Intercept	3.27	.46	7.16	.00
Conscientiousness	.03	.13	.24	.81
Sex	-.14	.14	-.99	.32
Group	-.12	.10	-1.26	.21
Matched	-.26	.16	-1.63	.10
Wave	.14	.12	1.23	.22

Note. N = 108 in each analysis (74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 30

Extraversion as a Predictor of Receiving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.53	.28	5.46	.00
Extraversion	.12	.09	1.32	.19
Sex	-.10	.10	-1.01	.32
Group	-.01	.10	-.10	.92
Matched	-.19	.11	-1.69	.09
Wave	.00	.08	-.04	.97
Partner-report of SC				
Intercept	1.91	.42	4.60	.00
Extraversion	-.01	.12	-.06	.96
Sex	-.12	.14	-.81	.42
Group	-.21	.17	-1.27	.20
Matched	-.26	.13	-2.02	.04
Wave	-.07	.13	-.54	.59
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.43	.25	5.70	.00
Extraversion	.13	.08	1.58	.12
Sex	-.23	.09	-2.50	.01
Group	.05	.11	.44	.66
Matched	-.03	.09	-.28	.78
Wave	-.02	.10	-.20	.84
Partner-report of SC				
Intercept	1.15	.35	3.25	.00
Extraversion	-.21	.11	-1.89	.06
Sex	-.04	.14	-.28	.78
Group	.00	.18	.01	.99
Matched	-.16	.14	-1.13	.26
Wave	-.02	.13	-.11	.91

Note. N = 108 in each analysis (74 pairs). SC = Social Control.

Table 31

Extraversion as a Predictor of Receiving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	3.12	.39	7.99	.00
Extraversion	.04	.10	.36	.72
Sex	-.01	.11	-.06	.96
Group	-.26	.11	-2.42	.02
Matched	-.19	.14	-1.37	.17
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.04	.71	4.30	.00
Extraversion	.03	.14	.19	.85
Sex	-.05	.18	-.27	.79
Group	-.22	.19	-1.13	.26
Matched	-.08	.13	-.61	.55
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.84	.32	8.91	.00
Extraversion	.05	.08	.63	.53
Sex	-.05	.10	-.44	.66
Group	-.06	.09	-.73	.46
Matched	-.27	.10	-2.64	.01
Wave	.08	.09	.83	.41
Partner-report of SC				
Intercept	3.28	.43	7.66	.00
Extraversion	.06	.12	.52	.60
Sex	-.13	.13	-1.04	.30
Group	-.08	.11	-.79	.43
Matched	-.28	.16	-1.71	.09
Wave	-.02	.10	-.21	.83

Note. N = 108 in each analysis (74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 32

Neuroticism as a Predictor of Receiving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.50	.30	5.04	.00
Neuroticism	-.04	.11	-.39	.69
Sex	-.09	.10	-.85	.39
Group	-.02	.09	-.25	.81
Matched	-.21	.11	-1.82	.07
Wave	.04	.10	.38	.70
Partner-report of SC				
Intercept	1.88	.46	4.12	.00
Neuroticism	-.18	.11	-1.66	.10
Sex	-.14	.15	-.90	.37
Group	-.21	.15	-1.39	.16
Matched	-.24	.14	-1.73	.08
Wave	.20	.12	1.65	.10
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.39	.28	5.00	.00
Neuroticism	-.04	.10	-.36	.72
Sex	-.23	.10	-2.20	.03
Group	.03	.11	.28	.78
Matched	-.04	.10	-.41	.68
Wave	.05	.11	.51	.61
Partner-report of SC				
Intercept	1.16	.35	3.36	.00
Neuroticism	-.05	.09	-.54	.59
Sex	-.09	.14	-.65	.52
Group	.07	.17	.40	.69
Matched	-.14	.15	-.91	.36
Wave	.21	.16	1.31	.19

Note. N = 108 in each analysis (74 pairs). SC = Social Control.

Table 33

Neuroticism as a Predictor of Receiving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	3.11	.40	7.71	.00
Neuroticism	.01	.10	.08	.94
Sex	.00	.12	.00	1.00
Group	-.26	.11	-2.48	.01
Matched	-.19	.13	-1.44	.15
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	3.31	.72	4.25	.00
Neuroticism	-.09	.14	-.62	.54
Sex	-.05	.19	-.27	.79
Group	-.22	.19	-1.21	.23
Matched	-.07	.13	-.54	.59
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.87	.31	9.15	.00
Neuroticism	-.02	.09	-.18	.86
Sex	-.07	.10	-.66	.51
Group	-.08	.08	-.99	.32
Matched	-.27	.10	-2.68	.01
Wave	.17	.06	2.76	.01
Partner-report of SC				
Intercept	3.25	.45	7.23	.00
Neuroticism	-.06	.10	-.64	.52
Sex	-.14	.14	-1.01	.31
Group	-.13	.10	-1.31	.19
Matched	-.27	.16	-1.69	.09
Wave	.14	.12	1.12	.26

Note. N = 108 in each analysis (74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 34

Openness as a Predictor of Receiving Positive and Negative Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Self-report of SC				
Intercept	1.57	.31	5.02	.00
Openness	.22	.09	2.48	.01
Sex	-.11	.11	-1.05	.30
Group	-.05	.09	-.52	.61
Matched	-.15	.11	-1.30	.19
Wave	.07	.09	.85	.40
Partner-report of SC				
Intercept	1.79	.47	3.80	.00
Openness	-.12	.15	-.81	.42
Sex	-.10	.16	-.63	.53
Group	-.28	.13	-2.16	.03
Matched	-.30	.13	-2.35	.02
Wave	.17	.10	1.65	.10
Analysis 2: Negative Social Control				
Self-report of SC				
Intercept	1.44	.29	4.94	.00
Openness	.17	.09	1.87	.06
Sex	-.24	.11	-2.28	.02
Group	.01	.11	.10	.92
Matched	.02	.10	.15	.88
Wave	.08	.11	.75	.45
Partner-report of SC				
Intercept	1.09	.33	3.27	.00
Openness	-.33	.14	-2.35	.02
Sex	-.04	.13	-.30	.77
Group	-.07	.14	-.50	.62
Matched	-.23	.13	-1.72	.09
Wave	.20	.14	1.46	.15

Note. N = 108 in each analysis (74 pairs). SC = Social Control.

Table 35

Openness as a Predictor of Receiving Indirect and Direct Social Control Attempts

	β	S.E.	Est./S.E.	p
Analysis 1: Indirect Social Control				
Self-report of SC				
Intercept	3.14	.42	7.54	.00
Openness	.09	.10	.94	.35
Sex	-.01	.12	-.09	.93
Group	-.27	.10	-2.62	.01
Matched	-.17	.13	-1.30	.19
Wave	*0*	-	-	-
Partner-report of SC				
Intercept	2.82	.70	4.01	.00
Openness	-.26	.11	-2.33	.02
Sex	.01	.18	.03	.98
Group	-.33	.16	-2.01	.05
Matched	-.14	.11	-1.20	.23
Wave	*0*	-	-	-
Analysis 2: Direct Social Control				
Self-report of SC				
Intercept	2.91	.31	9.46	.00
Openness	.18	.09	2.07	.04
Sex	-.07	.10	-.75	.45
Group	-.10	.08	-1.22	.22
Matched	-.26	.10	-2.48	.01
Wave	.14	.07	2.09	.04
Partner-report of SC				
Intercept	3.25	.46	7.12	.00
Openness	-.02	.16	-.10	.92
Sex	-.12	.14	-.85	.40
Group	-.15	.10	-1.53	.13
Matched	-.29	.16	-1.81	.07
Wave	.10	.11	.93	.35

Note. N = 108 in each analysis (74 pairs). Wave path in Analysis 1 was fixed to 0. SC = Social Control.

Table 36

Predicting Healthy Eating, through Wave Three, from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	6.63	.82	.13	.67
Self-report of SC	.09	.13	.67	.50
Partner-report of SC	-.14	.16	-.90	.37
Baseline healthy eating	.32	.16	2.00	.05
Sex	.01	.11	.06	.95
Group	-.01	.08	-.10	.92
Wave	-.19	.15	-1.22	.22
Analysis 2: Negative Social Control				
Intercept	6.68	.74	9.01	.00
Self-report of SC	.00	.17	-.02	.99
Partner-report of SC	-.24	.14	-1.72	.09
Baseline healthy eating	.30	.15	1.99	.05
Sex	.02	.13	.16	.87
Group	-.02	.10	-.22	.83
Wave	-.17	.15	-1.09	.28
Analysis 3: Indirect Social Control				
Intercept	6.41	.74	8.66	.00
Self-report of SC	-.54	.18	-2.90	.00
Partner-report of SC	.24	.17	1.39	.17
Baseline healthy eating	.27	.17	1.55	.12
Sex	.09	.13	.65	.51
Group	-.14	.10	-1.39	.17
Wave	-.17	.14	-1.27	.21
Analysis 4: Direct Social Control				
Intercept	6.64	.66	10.07	.00
Self-report of SC	.02	.11	.22	.83
Partner-report of SC	-.31	.14	-2.26	.02
Baseline healthy eating	.31	.14	2.19	.03
Sex	-.02	.09	-.20	.85
Group	-.01	.09	-.15	.88
Wave	-.21	.14	-1.52	.13

Note. N range 41-47 (27-33 pairs). SC = Social Control.

Table 37

Predicting Healthy Eating, through Wave Four, from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	7.33	.89	8.21	.00
Self-report of SC	-.16	.16	-1.01	.31
Partner-report of SC	.13	.12	1.03	.30
Baseline healthy eating	.55	.12	4.68	.00
Sex	-.13	.09	-1.54	.13
Group	.10	.08	1.37	.17
Wave	-.29	.16	-1.79	.07
Analysis 2: Negative Social Control				
Intercept	7.33	.67	10.92	.00
Self-report of SC	-.04	.13	-.33	.75
Partner-report of SC	-.07	.13	-.57	.57
Baseline healthy eating	.51	.11	4.50	.00
Sex	-.12	.08	-1.52	.13
Group	.07	.09	.76	.45
Wave	-.24	.16	-1.53	.13
Analysis 3: Indirect Social Control				
Intercept	7.15	.72	10.00	.00
Self-report of SC	-.36	.19	-1.85	.06
Partner-report of SC	.18	.19	.96	.34
Baseline healthy eating	.50	.12	4.01	.00
Sex	-.03	.09	-.34	.74
Group	-.01	.11	-.05	.96
Wave	-.25	.17	-1.51	.13
Analysis 4: Direct Social Control				
Intercept	7.20	.62	11.71	.00
Self-report of SC	-.14	.12	-1.19	.23
Partner-report of SC	-.16	.10	-1.54	.12
Baseline healthy eating	.52	.11	4.63	.00
Sex	-.12	.07	-1.74	.08
Group	.05	.08	.62	.54
Wave	-.29	.14	-2.10	.04

Note. N range 43-50 (27-34 pairs). SC = Social Control.

Table 38

Predicting Activity with Partner, through Wave Three, from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	1.87	.71	2.63	.01
Self-report of SC	-.15	.22	-.69	.49
Partner-report of SC	.49	.19	2.62	.01
Baseline Activity with Partner	.64	.14	4.54	.00
Sex	.02	.06	.25	.80
Group	.30	.18	1.61	.11
Wave	.18	.19	.96	.34
Analysis 2: Negative Social Control				
Intercept	2.57	.63	4.07	.00
Self-report of SC	.06	.21	.31	.76
Partner-report of SC	.30	.20	1.45	.15
Baseline Activity with Partner	.48	.14	3.45	.00
Sex	-.07	.11	-.63	.53
Group	.25	.17	1.47	.14
Wave	.13	.20	.66	.51
Analysis 3: Indirect Social Control				
Intercept	2.86	.72	3.96	.00
Self-report of SC	.27	.24	1.11	.27
Partner-report of SC	-.12	.22	-.52	.60
Baseline Activity with Partner	.48	.15	3.27	.00
Sex	-.09	.12	-.71	.48
Group	.31	.16	2.02	.04
Wave	.07	.21	.32	.75
Analysis 4: Direct Social Control				
Intercept	2.82	.51	5.53	.00
Self-report of SC	.04	.20	.21	.83
Partner-report of SC	.11	.28	.40	.69
Baseline Activity with Partner	.51	.24	2.13	.03
Sex	-.15	.33	-.45	.65
Group	.70	.60	1.16	.25
Wave	.20	.42	.47	.64

Note. N range 26-29 (19-22 pairs). SC = Social Control.

Table 39

Predicting Activity with Partner, through Wave Four, from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	2.25	.43	5.28	.00
Self-report of SC	-.01	.18	-.07	.94
Partner-report of SC	.39	.13	2.99	.00
Baseline Activity with Partner	.40	.12	3.24	.00
Sex	.03	.04	.79	.43
Group	.35	.11	3.17	.00
Wave	.05	.15	.32	.75
Analysis 2: Negative Social Control				
Intercept	3.03	.47	6.41	.00
Self-report of SC	-.04	.20	-.22	.83
Partner-report of SC	.30	.22	1.36	.17
Baseline Activity with Partner	.34	.14	2.38	.02
Sex	-.06	.09	-.73	.46
Group	.28	.11	2.45	.01
Wave	.05	.15	.32	.75
Analysis 3: Indirect Social Control				
Intercept	2.86	.72	3.96	.00
Self-report of SC	.27	.24	1.11	.27
Partner-report of SC	-.12	.22	-.52	.60
Baseline Activity with Partner	.48	.15	3.27	.00
Sex	-.09	.12	-.71	.48
Group	.31	.16	2.02	.04
Wave	.07	.21	.32	.75
Analysis 4: Direct Social Control				
Intercept	3.13	.49	6.42	.00
Self-report of SC	.14	.23	.60	.55
Partner-report of SC	.12	.16	.77	.44
Baseline Activity with Partner	.27	.19	1.39	.17
Sex	-.02	.07	-.29	.77
Group	.29	.13	2.27	.02
Wave	.03	.16	.16	.88

Note. N range 26-33 (19-25 pairs). SC = Social Control.

Table 40

Predicting Activity without Partner, through Wave Three, from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	4.41	.71	6.18	.00
Self-report of SC	.10	.14	.72	.47
Partner-report of SC	-.14	.12	-1.15	.25
Baseline Activity without Partner	.61	.11	5.64	.00
Sex	.11	.09	1.13	.26
Group	.26	.09	2.91	.00
Wave	-.23	.13	-1.80	.07
Analysis 2: Negative Social Control				
Intercept	4.91	.59	8.28	.00
Self-report of SC	-.28	.19	-1.53	.13
Partner-report of SC	-.11	.17	-.65	.52
Baseline Activity without Partner	.54	.09	5.91	.00
Sex	.05	.09	.61	.55
Group	.23	.09	2.55	.01
Wave	-.28	.12	-2.37	.02
Analysis 3: Indirect Social Control				
Intercept	4.25	.70	6.12	.00
Self-report of SC	-.27	.14	-1.93	.05
Partner-report of SC	-.03	.11	-.24	.81
Baseline Activity without Partner	.73	.10	7.43	.00
Sex	.15	.09	1.71	.09
Group	.20	.13	1.51	.13
Wave	-.26	.12	-2.09	.04
Analysis 4: Direct Social Control				
Intercept	4.32	.69	6.23	.00
Self-report of SC	.09	.16	.56	.58
Partner-report of SC	-.11	.13	-.86	.39
Baseline Activity without Partner	.60	.11	5.72	.00
Sex	.08	.09	.86	.39
Group	.27	.09	2.86	.00
Wave	-.21	.13	-1.55	.12

Note. N range 31-37 (24-30 pairs). SC = Social Control.

Table 41

Predicting Activity without Partner, through Wave Four, from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	4.79	1.03	4.65	.00
Self-report of SC	.16	.14	1.14	.25
Partner-report of SC	-.30	.15	-2.04	.04
Baseline Activity without Partner	.33	.15	2.21	.03
Sex	.18	.19	.99	.32
Group	.03	.07	.45	.65
Wave	-.10	.12	-.86	.39
Analysis 2: Negative Social Control				
Intercept	4.74	1.01	4.69	.00
Self-report of SC	-.07	.17	-.38	.71
Partner-report of SC	-.21	.20	-1.05	.30
Baseline Activity without Partner	.27	.16	1.66	.10
Sex	.18	.21	.88	.38
Group	.10	.10	.91	.36
Wave	-.09	.11	-.80	.43
Analysis 3: Indirect Social Control				
Intercept	4.39	1.23	3.57	.00
Self-report of SC	-.17	.15	-1.13	.26
Partner-report of SC	-.05	.13	-.35	.73
Baseline Activity without Partner	.38	.18	2.11	.04
Sex	.20	.22	.91	.36
Group	.04	.10	.43	.67
Wave	-.08	.13	-.64	.52
Analysis 4: Direct Social Control				
Intercept	4.63	1.05	4.40	.00
Self-report of SC	.31	.13	2.50	.01
Partner-report of SC	-.27	.15	-1.82	.07
Baseline Activity without Partner	.35	.16	2.21	.03
Sex	.12	.18	.68	.50
Group	.04	.07	.56	.58
Wave	-.08	.12	-.65	.51

Note. N range 40-48 (27-34 pairs). SC = Social Control.

Table 42

Predicting Training Class Attendance from Received Social Control

	β	S.E.	Est./S.E.	p
Analysis 1: Positive Social Control				
Intercept	1.98	.51	3.90	.00
Self-report of SC	.15	.11	1.28	.20
Partner-report of SC	.04	.12	.29	.77
Sex	.07	.11	.66	.51
Matched	-.25	.10	-2.53	.01
Analysis 2: Negative Social Control				
Intercept	2.10	.39	5.42	.00
Self-report of SC	.23	.16	1.42	.16
Partner-report of SC	-.15	.11	-1.39	.17
Sex	.10	.10	1.05	.30
Matched	-.26	.10	-2.71	.01
Analysis 3: Indirect Social Control				
Intercept	2.26	.44	5.08	.00
Self-report of SC	-.02	.13	-.15	.88
Partner-report of SC	.15	.12	1.27	.20
Sex	.05	.12	.36	.72
Matched	-.26	.10	-2.60	.01
Analysis 4: Direct Social Control				
Intercept	2.22	.42	5.32	.00
Self-report of SC	.06	.13	.47	.64
Partner-report of SC	.00	.14	-.03	.98
Sex	.06	.12	.53	.59
Matched	-.32	.12	-2.65	.01

Note. N range 54-61 (30-33 pairs). SC = Social Control.

Table 43

Predicting Body Mass Index, through Wave Three, from Health Behaviors

	β	S.E.	Est./S.E.	p
Analysis 1: Healthy Eating				
Intercept	4.66	.31	15.20	.00
Baseline healthy eating	-.03	.02	-1.82	.07
Baseline BMI	.98	.02	65.04	.00
Sex	.00	.03	.05	.96
Group	-.01	.04	-.20	.84
Matched	.03	.04	.82	.41
Wave (first BMI)	.02	.02	1.11	.27
Wave (last BMI)	.01	.02	.56	.57
Measure type (last BMI)	.07	.02	3.20	.00
Analysis 2: Activity with Partner				
Intercept	4.63	.33	14.00	.00
Baseline activity with partner	-.01	.04	-.24	.81
Baseline BMI	.98	.02	51.00	.00
Sex	.03	.02	1.57	.12
Group	-.03	.02	-1.28	.20
Matched	.01	.03	.52	.60
Wave (first BMI)	0	-	-	-
Wave (last BMI)	-.01	.01	-.87	.39
Measure type (last BMI)	.08	.02	3.36	.00
Analysis 3: Activity without Partner				
Intercept	4.66	.30	15.59	.00
Baseline activity without partner	-.03	.03	-.96	.34
Baseline BMI	.98	.02	60.26	.00
Sex	-.02	.03	-.50	.62
Group	-.01	.04	-.31	.76
Matched	.04	.04	1.04	.30
Wave (first BMI)	.02	.02	1.13	.26
Wave (last BMI)	.01	.02	.29	.77
Measure type (last BMI)	.08	.02	3.35	.00
Analysis 4: Training Class Attendance				
Intercept	4.37	.35	12.38	.00
Training class attendance	-.05	.02	-2.25	.02
Baseline BMI	.98	.02	57.17	.00
Sex	.00	.03	-.11	.91
Matched	.03	.04	.76	.45
Wave (last BMI)	.02	.02	.87	.38
Measure type (last BMI)	.03	.02	1.67	.10

Note. N range 71-93 (45-66 pairs). Path for first BMI wave was fixed to 0 in Analysis 2. SC = Social Control.

Table 44

Predicting Body Mass Index, through Wave Four, from Health Behaviors

	β	S.E.	Est./S.E.	p
Analysis 1: Healthy Eating				
Intercept	4.23	.41	10.23	.00
Baseline healthy eating	-.06	.05	-1.32	.19
Baseline BMI	.92	.03	28.25	.00
Sex	.06	.04	1.58	.12
Group	.05	.08	.64	.52
Matched	.07	.04	1.51	.13
Wave (first BMI)	.02	.04	.40	.69
Wave (last BMI)	.03	.03	1.00	.32
Measure type (last BMI)	.06	.03	2.33	.02
Analysis 2: Activity with Partner				
Intercept	4.45	.43	10.27	.00
Baseline activity with partner	.00	.04	-.07	.94
Baseline BMI	.95	.03	30.47	.00
Sex	.08	.03	2.76	.01
Group	-.02	.04	-.44	.66
Matched	.01	.04	.25	.80
Wave (first BMI)	.06	.03	2.25	.03
Wave (last BMI)	-.01	.03	-.24	.81
Measure type (last BMI)	.07	.03	2.20	.03
Analysis 3: Activity without Partner				
Intercept	4.15	.41	10.05	.00
Baseline activity without partner	-.02	.04	-.50	.62
Baseline BMI	.92	.03	28.61	.00
Sex	.05	.04	1.43	.15
Group	.05	.08	.65	.51
Matched	.09	.04	2.07	.04
Wave (first BMI)	.03	.04	.66	.51
Wave (last BMI)	.03	.04	.90	.37
Measure type (last BMI)	.07	.03	2.47	.01
Analysis 4: Training Class Attendance				
Intercept	4.10	.39	10.42	.00
Training class attendance	-.14	.06	-2.38	.02
Baseline BMI	.94	.02	38.75	.00
Sex	.04	.04	1.04	.30
Matched	.05	.04	1.19	.24
Wave (last BMI)	.03	.04	.77	.44
Measure type (last BMI)	.01	.03	.24	.81

Note. N range 75-100 (45-71 pairs). SC = Social Control.

Table 45

Predicting Body Fat Percentage, through Wave Three, from Health Behaviors

	β	S.E.	Est./S.E.	p
Analysis 1: Healthy Eating				
Intercept	3.75	.29	12.99	.00
Baseline healthy eating	-.05	.03	-1.87	.06
Baseline body fat percentage	.99	.02	60.69	.00
Sex	.00	.02	.01	.99
Matched	-.04	.02	-1.60	.11
Wave (last body fat percentage)	-.05	.03	-1.70	.09
Analysis 2: Activity with Partner				
Intercept	3.85	.37	10.44	.00
Baseline activity with partner	-.01	.03	-.20	.84
Baseline body fat percentage	.97	.02	55.78	.00
Sex	.01	.03	.42	.67
Matched	-.01	.02	-.44	.66
Wave (last body fat percentage)	-.06	.03	-1.80	.07
Analysis 3: Activity without Partner				
Intercept	3.65	.28	13.17	.00
Baseline activity without partner	.00	.03	.11	.92
Baseline body fat percentage	.98	.02	51.63	.00
Sex	.01	.03	.31	.76
Matched	-.02	.03	-.91	.36
Wave (last body fat percentage)	-.05	.03	-1.95	.05
Analysis 4: Training Class Attendance				
Intercept	3.52	.23	15.28	.00
Training class attendance	-.07	.03	-2.14	.03
Baseline body fat percentage	.98	.02	63.56	.00
Sex	.00	.02	.22	.83
Matched	-.03	.03	-1.04	.30
Wave (last body fat percentage)	.00	.03	.18	.86

Note. N range 44-58 (29-36 pairs). SC = Social Control.

Table 46

Predicting Body Fat Percentage, through Wave Four, from Health Behaviors

	β	S.E.	Est./S.E.	p
Analysis 1: Healthy Eating				
Intercept	3.66	.30	12.19	.00
Baseline healthy eating	-.08	.03	-2.65	.01
Baseline body fat percentage	.98	.02	41.73	.00
Sex	.03	.04	.67	.50
Matched	-.08	.03	-2.75	.01
Wave (last body fat percentage)	-.07	.03	-1.98	.05
Analysis 2: Activity with Partner				
Intercept	3.66	.38	9.72	.00
Baseline activity with partner	-.02	.04	-.53	.60
Baseline body fat percentage	.94	.03	35.08	.00
Sex	.04	.05	.92	.36
Matched	-.06	.03	-1.70	.09
Wave (last body fat percentage)	-.06	.04	-1.54	.12
Analysis 3: Activity without Partner				
Intercept	3.55	.30	11.81	.00
Baseline activity without partner	-.03	.03	-1.01	.31
Baseline body fat percentage	.96	.03	34.57	.00
Sex	.03	.05	.68	.50
Matched	-.05	.03	-1.95	.05
Wave (last body fat percentage)	-.07	.04	-1.87	.06
Analysis 4: Training Class Attendance				
Intercept	3.46	.24	14.49	.00
Training class attendance	-.09	.04	-2.42	.02
Baseline body fat percentage	.97	.02	40.16	.00
Sex	.01	.03	.42	.67
Matched	-.06	.02	-2.37	.02
Wave (last body fat percentage)	-.03	.03	-.98	.33

Note. N range 47-59 (31-38 pairs). SC = Social Control.

Table 47

Participant Responses Coded as Exercise-related Obstacles

Exercise-related Obstacles (N = 28)
Physically challenging. Both going to the gym and eating less. When I work out, I get hungrier so I eat more.
… I have been doing Zumba for over a month and I have seen minimal results. I feel like I have been working out and nothing has happened. It's difficult because in high school I used to do cross country, track, and basketball so having this excess weight affects how I feel about myself.
Leaving exercise as a last priority
Maintaining a strict exercise schedule
Keeping a daily exercise, eating habits, or not pushing myself enough to burn the fat off.
Motivation, portion control, exercising
Exercising frequently
Cannot do all exercises due to a back problem
Sticking to working out
Staying in shape
Not keeping up with exercise
Eating healthy and consistent exercise
Eating 5 small meals with fruits and vegetables while minimizing carbs and consistent exercise.
Eating right and exercising consistently
Exercising regularly and eating healthier (2 Total)
Hard to maintain diet and exercise with school
Getting fit and a healthier diet
Keep going to the gym
Inconsistent exercise (2 Total)
Consistency and time to exercise
Starting to go to the gym
Maintaining a healthy diet; exercising
Not exercising and eating whatever I want
Eating right/ going to the gym regularly
Exercising
Exercising /eating habits

* Potentially identifying information was removed from the statement.

Table 48

Participant Responses Coded as Diet-related Obstacles

Diet-related Obstacles (N = 61)
Love eating junk food
Can't control what I eat (2 Total)
Love to eat
Dieting
Keeping a daily exercise, eating habits, or not pushing myself enough to burn the fat off.
Keeping it off, eating healthy, and time
A healthy diet and sticking to a routine
Keeping to a diet and eating right
Consistency and food
Physically challenging. Both going to the gym and eating less. When I work out, I get hungrier so I eat more.
Eating healthy and consistent exercise
Eating 5 small meals with fruits and vegetables while minimizing crabs and consistent exercise.
Eating right and exercising consistently
Exercising regularly and eating healthier (2 Total)
Gourmet diet
Sea salt, vinegar, kettle chips, cooking
Hard to maintain diet and exercise with school
Not giving up unhealthy foods
Loosing midsection as well as eating habits
Time management, no motivation or diet plans
Snacks
Food and laziness (3 Total)
Nutrition (4Total)
Eating too much (2 Total)
Portion control and caloric intake
Motivation, portion control, exercising
Food and the energy to go to the gym
Food (5 Total)
Eating healthy
Food plan management, consistency
Exercising /eating habits
Not being able to stick to the diet
Couldn't stay on the diet
Eating
Junk food
Loves sweets and sugar; hates lettuce (salads)
Over eating
Maintaining a healthy diet; exercising
I eat when I'm not even hungry
Food consumption

Diet-related Obstacles continued
Not exercising and eating whatever I want
The food, she eats out a lot, and eats a lot in general
Ice cream, not enough money to buy good food
Portion control and making smart choices
Eating right/ going to the gym regularly
Do not have discipline to push myself to have a hard workout and trouble eating right.
My biggest obstacle is balancing healthy diet and restricting food amounts.
Getting fit and a healthier diet
Proper diet

Table 49

Participant Responses Coded as Time-related Obstacles

Time-related Obstacles (N = 17)
Leaving exercise as a last priority
Maintaining a strict exercise schedule
Time to exercise
Motivation and time
Finding time and sticking to it
Finding effective routine
No time for the gym
Inconsistent schedule
Keeping it off, eating healthy, and time
Laziness and not much time to workout
A healthy diet and sticking to a routine
Discipline and busy
Time management, no motivation or diet plans
Too busy
Schedule
Motivation, time
Making time to work out

Table 50

Participant Responses Coded as Motivation-related Obstacles

Motivation-related Obstacles (N = 51)
Leaving exercise as a last priority
Motivation and time (2 total)
Finding time and sticking to it
Laziness and not much time to workout
Discipline and busy
Time management, no motivation or diet plans
Keeping a daily exercise, eating habits, or not pushing myself enough to burn the fat off.
Motivation, portion control, exercising
Sticking to working out
Not enough Motivation
Discouragement
Sticking to a plan
Discipline and lack of knowledge of effective ways
Motivation (2 Total)
Not being consistent or motivated
Not strong willed when it comes exercising regularly
No motivation and laziness (2 Total)
Committing to a plan
Self discipline
Laziness
Gets lazy
Laziness and commitment
Discipline and laziness
Do not have discipline to push myself to have a hard workout and trouble eating right.
Lack of motivation (2 Total)
Following through for more than three weeks
Lack of motivation to exercise
Sticking to a plan
Being unmotivated, feeling depressed
Losing motivation
Consistency and discipline
Food and laziness (3 Total)
Motivating myself to workout
Food and the energy to go to the gym
Starting
Keeping up with it and getting there
Commitment (4 Total)
Can't keep up without any motivation
No motivation
Starting and Maintaining weight loss
Procrastinating the thought that I'll start tomorrow
Staying motivated

Table 51

Other Obstacles Described by Participants

Other Obstacles (N = 28)
Discipline and lack of knowledge of effective ways
Not being consistent or motivated
Being unmotivated, feeling depressed
Consistency and discipline
Starting and Maintaining weight loss
Finding effective routine
… I have been doing Zumba for over a month and I have seen minimal results. I feel like I have been working out and nothing has happened. It's difficult because in high school I used to do cross country, track, and basketball so having this excess weight affects how I feel about myself.*
Cannot do all exercises due to a back problem
Hard to maintain diet and exercise with school
Consistency and time to exercise
No idea
Lack of knowledge
Consistency and food
Food plan management, consistency
Staying with the plan
I lose in areas I don't particularly want to and don't lose in areas I want to.
Body does not work with me
Gaining muscle mass rather than just losing weight
Losing weight was easy, not gaining wasn't
Keeping the weight off
Loosing midsection as well as eating habits
Keeping it off
Lack of consistency
Haven't tried
Nothing
Losing weight then keeping it off
Portion control and making smart choices
Ice cream, not enough money to buy good food

* Potentially identifying information was removed from the statement.

Table 52

Examining Correlations between Reports of Obstacles and Personality and Social Control

			Obstacles			
	Total	Exercise	Diet	Time	Motivation	Other
Personality						
Agreeableness	.00	-.06	.02	-.01	.00	.05
Conscientiousness	-.01	.04	-.02	.00	-.09	.09
Extraversion	-.04	.03	.14	-.03	-.23*	.12
Neuroticism	-.01	.11	-.21*	-.04	.16^{+}	-.08
Openness	.05	.08	-.09	.19*	-.14	.15
Giving Social Control						
Positive SC	.04	-.04	.17^{+}	.01	-.14	.14
Negative SC	.07	-.06	.17^{+}	-.02	-.12	.18^{+}
Indirect SC	.12	-.09	.11	.15	-.03	.10
Direct SC	-.04	.01	.23*	-.06	-.28**	.13
Receiving Social Control						
Positive SC	-.07	-.10	.08	.07	-.10	-.03
Negative SC	.05	-.04	.11	.03	-.04	.07
Indirect SC	-.02	-.06	.02	.02	.08	-.06
Direct SC	-.04	-.01	.12	-.00	-.11	-.05

Note. Personality and social control N range 101-117. Self-reports of social control are considered here. Correlational analyses do not account for pair dependency.
$^{+}p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 53

Examining Correlations between Reports of Obstacles and Health Behaviors and Anthropometric Measures

		Obstacles					
		Total	Exercise	Diet	Time	Motivation	Other
Health Behaviors							
Healthy eating:	Baseline	.06	.12	.15	-.05	-.17^{+}	.09
	Last	.13	.23*	.21^{+}	-.15	-.19^{+}	.06
Activity_withP:	Baseline	-.04	-.10	.03	.13	.10	-.23*
	Last	-.14	-.18	-.09	-.14	.09	.13
Activity_withoutP:	Baseline	.12	-.10	.14	.20*	-.11	.11
	Last	.24*	.17	.16	-.03	.02	.04
Training class attendance		.17	.26*	.17	-.03	-.16	.01
Anthropometric measures							
BMI:	Baseline	.18*	.06	.09	.04	.06	.05
	Last	.14	-.03	.04	.20*	.09	-.04
Body fat %:	Baseline	.24*	.02	.15	.10	.19^{+}	-.01
	Last	.05	-.09	.16	.05	.11	-.07

Note. P = Partner. Health behavior baseline N range 84 – 113, last N range 45-89. BMI: baseline N = 142, last N = 109. Body fat percentage: baseline N = 103, last N = 64. Correlational analyses do not account for pair dependency.
$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

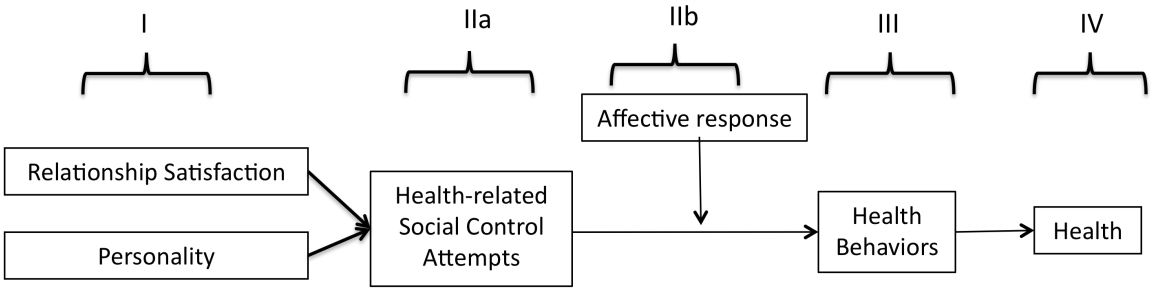

Figure 1. Theoretical model. Relationship satisfaction and personality together influence the frequency and type of social control given and received. Received social control then relates to subsequent health behaviors and health, and an individual's affective response to receiving social control attempts may influence this process.

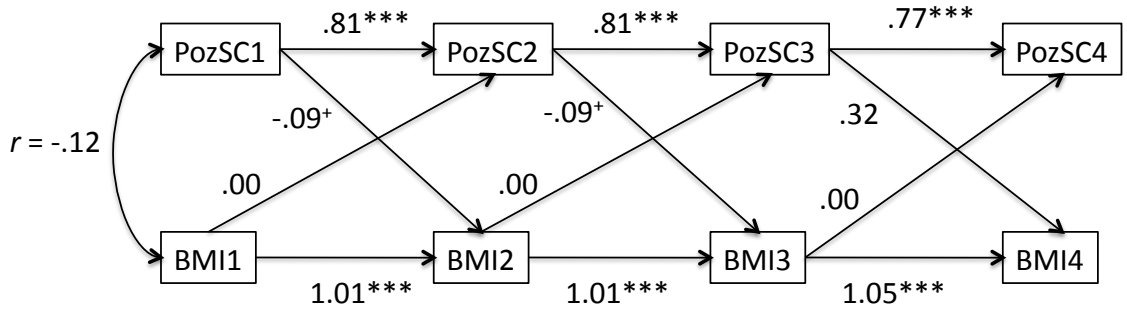

Figure 2. PozSC = Receiving Positive Social Control. BMI = Body Mass Index. Wave is indicated by the number at the end of each variable name. Autoregressive model of received positive social control predicting subsequent BMI and BMI predicting subsequent receipt of positive social control attempts. Within each measure, the paths between Wave 1 and 2 and Wave 2 and 3 were equated.
*$p < .05$. **$p < .01$. ***$p < .001$.

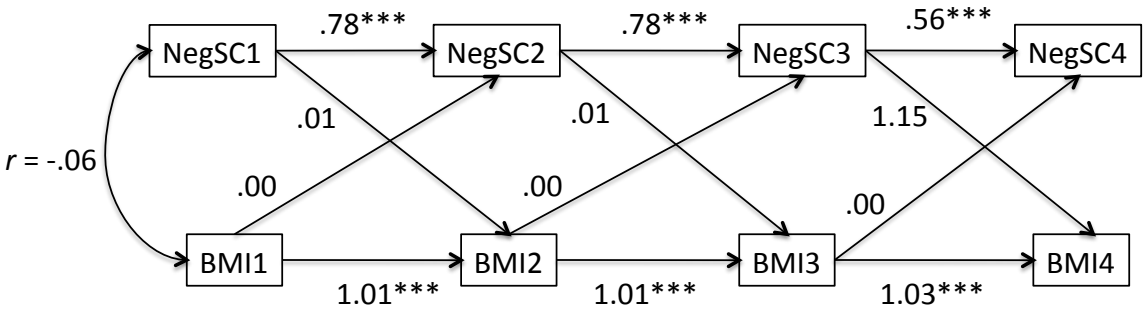

Figure 3. NegSC = Receiving Negative Social Control. BMI = Body Mass Index. Wave is indicated by the number at the end of each variable name. Autoregressive model of received negative social control predicting subsequent BMI and BMI predicting subsequent receipt of negative social control attempts. Within each measure, the paths between Wave 1 and 2 and Wave 2 and 3 were equated.
*$p < .05$. **$p < .01$. ***$p < .001$.

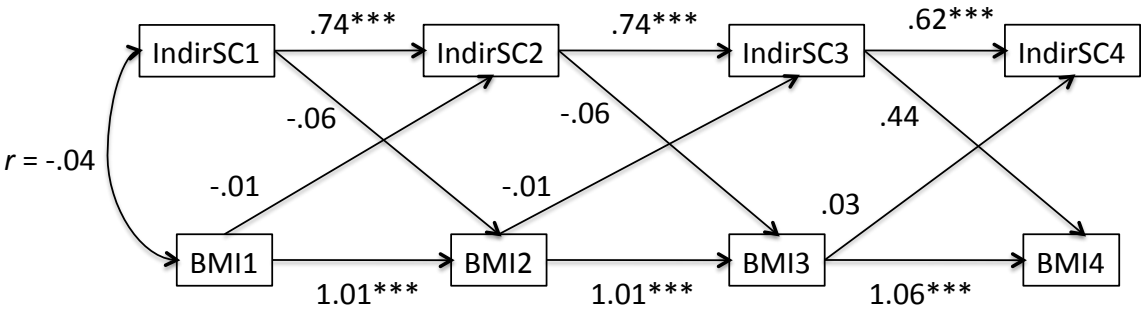

Figure 4. IndirSC = Receiving Indirect Social Control. BMI = Body Mass Index. Wave is indicated by the number at the end of each variable name. Autoregressive model of received indirect social control predicting subsequent BMI and BMI predicting subsequent receipt of indirect social control attempts. Within each measure, the paths between Wave 1 and 2 and Wave 2 and 3 were equated.
*$p < .05$. **$p < .01$. ***$p < .001$.

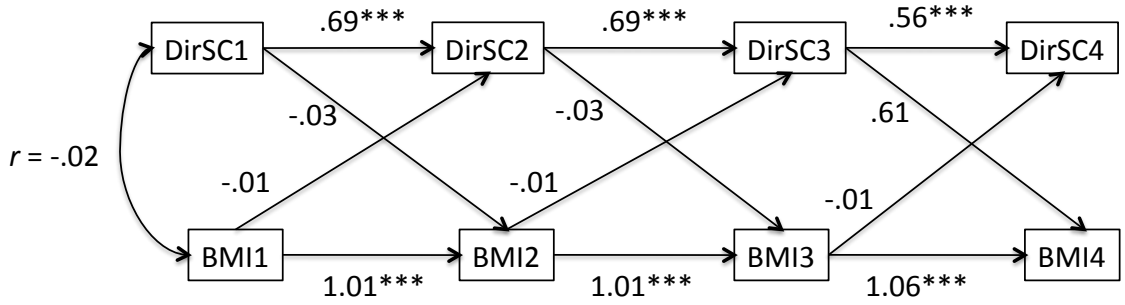

Figure 5. DirSC = Receiving Direct Social Control. BMI = Body Mass Index. Wave is indicated by the number at the end of each variable name. Autoregressive model of received direct social control predicting subsequent BMI and BMI predicting subsequent receipt of direct social control attempts. Within each measure, the paths between Wave 1 and 2 and Wave 2 and 3 were equated.
*$p < .05$. **$p < .01$. ***$p < .001$.

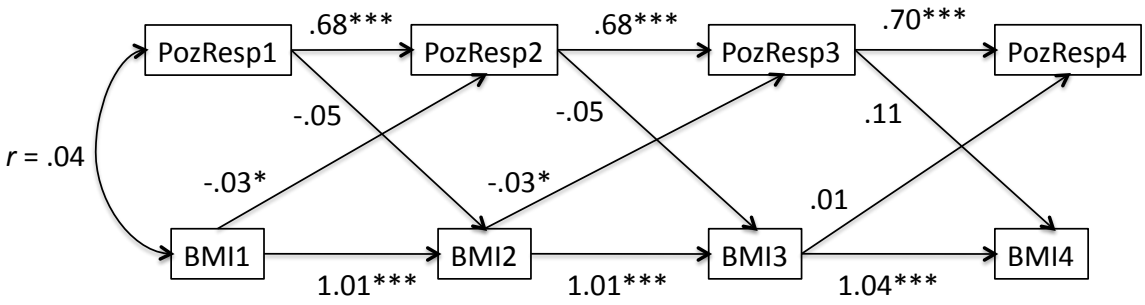

Figure 6. PozResp = Positive affective response to receiving social control. BMI = Body Mass Index. Wave is indicated by the number at the end of each variable name. Autoregressive model of positive affective responses to social control predicting subsequent BMI and BMI predicting subsequent affective responses to social control. Within each measure, the paths between Wave 1 and 2 and Wave 2 and 3 were equated. *$p < .05$. **$p < .01$. ***$p < .001$.

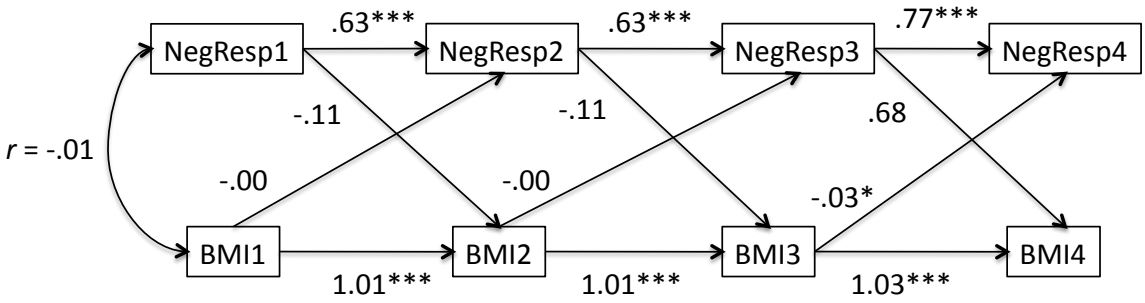

Figure 7. NegResp = Negative affective response to receiving social control. BMI = Body Mass Index. Wave is indicated by the number at the end of each variable name. Autoregressive model of negative affective responses to social control predicting subsequent BMI and BMI predicting subsequent negative affective responses to social control. Within each measure, the paths between Wave 1 and 2 and Wave 2 and 3 were equated.
*$p < .05$. **$p < .01$. ***$p < .001$.

Appendix 1. *Get Fit Challenge Supplemental Materials*

1A. Media materials
1B. Application
1C. Weekly training session themes
1D. In-person assessment protocol

Appendix 1A. *Get Fit Challenge advertisement*

Appendix 1B. *Get Fit Challenge application*

UCR'S GET FIT TEAM CHALLENGE APPLICATION FORM

DUE Friday, March4TH*, 2011 @ 4:30 PM

NAME:_____ **PHONE:** _____

EMAIL:_____ **AGE:** _____

MALE:_____**FEMALE:** _____

FULL TIME STUDENT _____ **PART TIME STUDENT**_____

NAME:_____ **PHONE:** _____

EMAIL:_____ **AGE:** _____

MALE:_____**FEMALE:** _____

FULL TIME STUDENT _____ **PART TIME STUDENT**_____

ARE YOU BOTH AVAILABLE Wednesdays FROM 3:15-4:15?

Yes_____ **No**_____

Yes_____ **No**_____

HOW HAVE YOU TRIED TO LOSE WEIGHT IN THE PAST?

Person(1):_____

Person(2):_____

WHAT'S YOUR BIGGEST OBSTACLE WITH LOSING WEIGHT?
Person(1):_____
Person(2):_____

HOW MUCH WEIGHT DOES EACH OF YOU WANT TO LOSE? _____

TO SEE MAXIMUM RESULTS YOU MUST BE WILLING TO COMMIT TO A MODERATE INTENSITY FOR THE FULL DURATION OF THE CONTEST.

IF YOU DO NOT THINK YOU CAN COMMIT TO THE FULL 9 WEEKS, PLEASE DO NOT SUBMIT AN APPLICATION.

Drop off your application and fee to the Campus Health Center.

THE BIGGEST LOSER PROGRAM IS SPONSORED BY THE PREVENTIVE CARE ADVOCATES & THE PREVENTIVE CARE CLINIC @ THE CAMPUS HEALTH CENTER

* Deadline later extended to March 18th

Appendix 1C. *Weekly training session schedule*

Component	Description
General Procedures	Participants arrived at each training class and were signed in by L. Vie. Training classes lasted for one hour.
Exercise Training Session #1	A yoga DVD was set up for participants at the Student Recreation Center (SRC).
Exercise Training Session #2	An instructor from the SRC led participants in a resistance band workout.
Exercise Training Sessions #3 - 7	Participants were split into up to four groups and SRC personal trainers lead each group through a circuit training. Sample circuits included lunges, squats, and crunches.

Appendix 1D. *In-person assessment protocol*

Participants completed the physical assessments either alone or with their partner. Assessments were performed by L. Vie, paid graduate student interns of the Campus Health Center, trained undergraduate Preventative Care Advocates, trained Psychology undergraduate research assistants, or the Get Fit Challenge coordinator. The two-point foot-to-foot Tanita TBF-300A body composition analyzer was used to assess BMI and body fat percentage (Tanita Corporation of America, 2011). Participant age, sex, and height were entered into the device before each assessment. In addition, all participant body types were entered as Standard, and a clothing adjustment of two pounds was subtracted from each participant's weight. Once the device was programmed, participants stood barefoot on the sensors, and the device provided a printout of each participant's BMI and body fat percentage, which was then recorded. Participants were able to keep their print out, and they had the opportunity to ask questions regarding any of their levels. For the blood pressure measurements, participants were assessed in a seated position, with their palm facing upward.

The standard procedure was for participants to complete the body composition measurement first, and the blood pressure measurement second. If two participants arrived at the same time, one individual completed the body composition measurement and the other completed the blood pressure measurement, and subsequently the remaining measurements were completed.

Note. Blood pressure levels were not examined in the present study.

Body Composition Analyzer Station

Blood Pressure Station

Appendix 2. *Get Fit Challenge and research study timeline*

Wave	Get Fit Challenge	Get Fit Challenge Date(s)	Research Component	Research Date(s)
	Applications due	Mar. 10 – Mar. 18		
1	Phys. assess. #1	Mar. 28 – Apr. 1		
	Orientation	Mar. 30	Recruitment	Mar. 30
			Survey #1	Apr. 1 – Apr. 15
	Training class #1	Apr. 6		
	Training class #2	Apr. 13		
	Training class #3	Apr. 20		
2	Phys. assess. #2	Apr. 25 – Apr. 29		
			Survey #2	Apr. 29 – May 11
			Phys. assess. #2	May 2 – May 6
	Training class #4	May 4		
	Training class #5	May 11		
	Training class #6	May 18		
	Training class #7	May 25		
3	Phys. assess. #3	May 27 – May 31		
			Survey #3	May 28 – June 15
	Final party	June 1		
			Phys. assess. #3	June 1 – June 7
4			Survey #4	Oct. 15 – Oct. 27
			Phys. assess. #4	Oct. 17 – Oct. 21

Note. Phys. assess. = Physical assessment. Physical assessment #1 was only available through the Get Fit Challenge. Participants in Group 2 were invited to participate in the physical assessments beginning with physical assessment #2.

Appendix 3. *Summary of measures*

Domain	Trait(s)	Citation
Relationship Satisfaction	Relationship Satisfaction	Funk & Rogge (2007)
Personality	A, C, N, E, O	BFI: John, Donahue, & Kentle (1991)
Social Control	Direct Control	Lewis & Rook (1999); Tucker, Elliott, & Klein (2006)
	Indirect Control	Tucker, Elliott, & Klein (2006)
	Positive and Negative Control	Lewis & Rook (1999); Okun, Huff, August, & Rook (2007)
	Affective Response	Tucker, Elliott, & Klein (2006); Brunstein, Dangelmayer, & Schultheiss (1996)
Health Behaviors	Eating Behaviors	Dailey, Richards, & Romo (2010)
	Physical Activity	Godin & Shephard (1985); Dailey, Richards, & Romo (2010)
	Training Class Attendance	(No citation)
Health	Body Mass Index	Tanita Corporation of America (2011)
	Body Fat Percentage	Tanita Corporation of America (2011)

Appendix 4. *Sample survey: Get Fit Challenge group*

UCR NetID (The ID you type to log in to your UCR email)**:** _____

*Note: The online version of these surveys had an option of "I prefer not to answer" or the option to leave an item blank for every question so that participants were free to skip any question they did not wish to answer.

ABOUT ME:

1. How much do you weigh in pounds? _____

2. How tall are you without shoes on? _____ feet _____ inches

3. How would you describe your ethnic background?

____ American Indian or Alaska Native
____ Asian
____ Black or African American
____ Caucasian
____ Hispanic or Latino
____ Native Hawaiian or Other Pacific Islander
____ Other, please specify: _____

[Additional background and health questions were asked.]

MY GET FIT CHALLENGE PARTNER:

1. What is your relationship to your Get Fit Challenge partner? (circle one)

Married	Engaged	Dating	Friends	Relatives	Acquaintance

[Additional relationship questions were asked.]

* Questions 4 – 7 comprise the 4-item version of the Relationship Satisfaction Index (Funk & Rogge, 2007)

4. Please indicate the degree of happiness, all things considered, of your relationship. (Circle one)

Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect

5. I have a warm and comfortable relationship with my partner. (Circle one)

Not at all TRUE	A little TRUE	Some-what TRUE	Mostly TRUE	Almost Completely TRUE	Completely TRUE

For each item below, check one response.	**Not at all**	**A little**	**Some-what**	**Mostly**	**Almost Completely**	**Completely**
6. In general, how satisfied are you with your relationship?						
7. How rewarding is your relationship with your partner?						

HEALTH BEHAVIORS:

* Direct Social Control Attempts Received (Lewis & Rook, 1999; Tucker, Elliott, & Klein, 2006)

1. In the past month, how often has your Get Fit Challenge partner encouraged you to:	**Never**	**Rarely**	**Sometimes**	**Often**
a) Start exercising or exercise more frequently				
b) Lose/gain weight				
c) Eat healthier foods				
d) Sleep more/sleep less				
e) Drink less coffee, tea, or soft drinks				
f) Cut down on my stress				
g) Manage ongoing health conditions				
*Note: For **h** and **i** below, write N/A if you do not engage in the behavior:*				
h) Quit smoking or smoke less				
i) Quit drinking alcohol or drink less				

[Questions about the importance of changing one's health behaviors were also asked.]

* Positive and Negative Social Control Attempts Received (Okun, Huff, August, & Rook, 2007; Lewis & Rook, 1999)

3. How true or untrue is it that your Get Fit Challenge partner did the following things to get you to change your health behavior(s) in the past month:	**FALSE 0**	**1**	**2**	**3**	**TRUE 4**
a) offered to help me change my health behavior(s)	**0**	**1**	**2**	**3**	**4**
b) tried to make me feel guilty	**0**	**1**	**2**	**3**	**4**
c) showed concern about my health	**0**	**1**	**2**	**3**	**4**
d) pressured me to change my health behavior(s)	**0**	**1**	**2**	**3**	**4**
e) rewarded me when I tried to change my behavior(s)	**0**	**1**	**2**	**3**	**4**
f) ridiculed me, and made me feel bad	**0**	**1**	**2**	**3**	**4**
g) tried to be understanding of my situation	**0**	**1**	**2**	**3**	**4**
h) compared me to people who were unable to change their health behavior(s)	**0**	**1**	**2**	**3**	**4**
i) pointed out people who had already successfully changed their health behavior(s)	**0**	**1**	**2**	**3**	**4**
j) given me information about how I could change my health behavior(s)	**0**	**1**	**2**	**3**	**4**

* Indirect Social Control Received (Tucker, Elliott, & Klein, 2006)

	Not at all	**Slightly**	**Somewhat**	**Moderately**	**Extremely**
4. How important is it to your Get Fit partner that you try to be physically fit?					
5. How much do you feel responsible or obligated to your Get Fit partner to try to stay healthy?					
6. How much does your Get Fit partner depend on you to stay healthy?					
7. How much would your Get Fit partner be disappointed if you did not make an effort to be healthy?					

* Affective Response to Social Control (Tucker, Elliott, & Klein, 2006, adapted from Brunstein, Dangelmayer, & Schultheiss, 1996)

8. In the past month, how much have your Get Fit partner's attempts made you feel:	**Never**	**Sometimes**	**Usually**	**Always**
a) Loved				
b) Embarrassed				
c) Valued				
d) Pleased				
e) Anxious				
f) Hurt				
g) Inspired				
h) Irritated				

* Direct Social Control Attempts Given (Lewis & Rook, 1999; Tucker, Elliott, & Klein, 2006)

9. In the past month, how often have you encouraged your Get Fit Challenge partner to:	**Never**	**Rarely**	**Sometimes**	**Often**
a) Start exercising or exercise more frequently				
b) Lose/gain weight				
c) Eat healthier foods				
d) Sleep more/sleep less				
e) Drink less coffee, tea, or soft drinks				
f) Cut down on his or her stress				
g) Manage ongoing health conditions				
*Note: For **h** and **i** below, write N/A if your Get Fit partner does not engage in the behavior:*				
h) Quit smoking or smoke less				
i) Quit drinking alcohol or drink less				

* Positive and Negative Social Control Strategies Given (Okun, Huff, August, & Rook, 2007; Lewis & Rook, 1999)

10. How true or untrue is it that *you* did the following things to get your *Get Fit Challenge partner* to change his or her health behavior(s) in the past month:	**FALSE 0**	**1**	**2**	**3**	**TRUE 4**
a) offered to help your Get Fit partner change his/her health behavior(s)					
b) tried to make your Get Fit partner feel guilty					
c) showed concern about your Get Fit partner's health					
d) pressured your Get Fit partner to change the health behavior(s)					
e) rewarded your Get Fit partner when he or she tried to change the behavior(s)					
f) ridiculed your Get Fit partner, and made him or her feel bad					
g) tried to be understanding of his/her situation					
h) compared your Get Fit partner to people who were unable to change their health behavior(s)					
i) pointed out people who had already successfully changed their health behavior(s)					
j) given your Get Fit partner information about how he or she can change the health behavior(s)					

* Indirect Social Control Given (Tucker, Elliott, & Klein, 2006)

	Not at all	**Slightly**	**Somewhat**	**Moderately**	**Extremely**
11. How important is it to you that your Get Fit partner try to be physically fit?					
12. How responsible or obligated to you is your Get Fit partner to try to stay healthy?					
13. How much do you depend on your Get Fit partner to stay healthy?					
14. How disappointed would you be if your Get Fit partner did not make an effort to be healthy?					

* Dailey, Richards, & Kluever Romo (2010)

EATING HABITS – Please rate how frequently you have done each action from a 1 (very rarely) to a 7 (every day).

1. In the past 30 days:	**Very rarely 1**	**2**	**3**	**4**	**5**	**6**	**Every day 7**
a) I ate a variety of foods	**1**	**2**	**3**	**4**	**5**	**6**	**7**
b) I monitored the portions of my snacks and meals	**1**	**2**	**3**	**4**	**5**	**6**	**7**
c) I ate fresh fruits	**1**	**2**	**3**	**4**	**5**	**6**	**7**
d) I ate fried foods	**1**	**2**	**3**	**4**	**5**	**6**	**7**
e) I drank high calorie beverages (e.g., soda, coffees)	**1**	**2**	**3**	**4**	**5**	**6**	**7**
f) I ate foods high in sugar	**1**	**2**	**3**	**4**	**5**	**6**	**7**
g) I went long periods without eating during the day	**1**	**2**	**3**	**4**	**5**	**6**	**7**
h) I drank eight glasses (8 oz) or more of water	**1**	**2**	**3**	**4**	**5**	**6**	**7**
i) I ate processed foods (e.g., chips, packaged meals, fast food)	**1**	**2**	**3**	**4**	**5**	**6**	**7**
j) I ate natural foods	**1**	**2**	**3**	**4**	**5**	**6**	**7**
k) I ate foods with a high amount of fat	**1**	**2**	**3**	**4**	**5**	**6**	**7**
l) I ate fresh vegetables	**1**	**2**	**3**	**4**	**5**	**6**	**7**
m) I was uncomfortably full after meals	**1**	**2**	**3**	**4**	**5**	**6**	**7**
n) I only ate when I was hungry	**1**	**2**	**3**	**4**	**5**	**6**	**7**

[Additional questions were asked about meals shared between partners.]

* Dailey, Richards, & Kluever Romo (2010) adapted from Godin & Shephard's 1985 Leisure Time Exercise Questionnaire

PHYSICAL ACTIVITY

1. Considering an average 7-Day period (a week) in the past month, how many times on the average did you do the following kinds of exercise for more than 20 minutes during your free time (write on each line the appropriate number).

	Times Per Week WITHOUT Get Fit partner	**Times Per Week WITH Get Fit partner**
a) Strenuous Exercise (Heart Beats Rapidly) (e.g., running, jogging, basketball, vigorous swimming, vigorous long distance bicycling)		
b) Moderate Exercise (Not Exhausting) (e.g., fast walking, baseball, tennis, easy bicycling, volleyball, easy swimming)		
c) Mild Exercise (Minimal Effort) (e.g., bowling, golf, easy walking, yoga)		

2. Considering an average 7-Day period (a week) in the past month, during your leisure-time, how often did you engage in any regular activity long enough to work up a sweat (heart beats rapidly), WITHOUT your Get Fit partner? (Circle one)

Never/Rarely	Sometimes	Often

3. Considering an average 7-Day period (a week) in the past month, during your leisure-time, how often did you engage in any regular activity long enough to work up a sweat (heart beats rapidly) WITH your Get Fit partner? (Circle one)

Never/Rarely	Sometimes	Often

[Questions 2 and 3 above were not examined.]

* John, O. P., Donahue, E. M., & Kentle, R. L. (1991)

PERSONALITY

The BFI Personality Inventory was obtained and administered at each wave.