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# Outsourcing Self-Regulation: A Direct Replication

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**OUTSOURCING SELF-REGULATION: A DIRECT REPLICATION**

by

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# CHAPTER 1

## INTRODUCTION

Self-regulation has been widely explored as a mechanism for understanding obesity and maladaptive diet and exercise behaviors, but it has been mostly examined as a means to modify behavior for *an individual* (Genugten, Empelen, Flink, & Oenema, 2010). The social and interpersonal influences on self-regulation have received considerably less attention (Fitzsimons & Finkel, 2010). Given that self-regulation and goal pursuit in social contexts have not been satisfactorily explored, a closer look at how self-regulation is bolstered or undermined in the context of social relations is warranted. Self-regulatory outsourcing is one unique social psychological phenomenon that may help explain how diet and exercise goals can be undermined in the context of romantic relationships (Fitzsimons & Finkel, 2011).

**Purpose.** The purpose of this paper is to take a social psychological approach to diet and fitness that examines the unique ways in which social relationships influence self-regulation. More specifically, I will argue that "outsourcing self-regulation" is a topic worthy of exploration to see how social relationships can both help and hinder diet goals. To date, there is a single paper on outsourcing self-regulation (Fitzsimons & Finkel, 2011), and while the studies in this paper illustrated the concept of outsourcing self-regulation, the effects have not been explored beyond this inceptive 2011 paper, nor have they been replicated. The studies proposed here seek to replicate the 2011 Outsourcing Self-Regulation paper to provide a solid foundation for examining outsourcing self-regulation in everyday life for diet and exercise behaviors.

This paper provides a review of the self-regulation literature, and underscores both the theoretical difficulties and practical obstacles to fulfilling long term diet and fitness goals. The idea of outsourcing self-regulation is explored as a novel construct that may help partially explain the spread of obesity in the United States, and the sparse literature on the topic of interpersonal influences on self-regulation and goal pursuit is also reviewed and applied to outsourcing self-regulation for diet goals. The proposed replication studies seek to address how outsourcing self-regulation can be helpful or detrimental to health, diet, and fitness goals in the context of romantic relationships. Finally, the discussion section outlines several proposed future studies to examine the applicability of interpersonal influences on self-regulation in everyday life for couples with weight loss goals.

**Self-Regulation and Diet Behaviors**

Self-regulation refers to both conscious and unconscious attempts to modify behavior (or cognitions) in order to achieve a goal (Herman, Roth, & Polivy, 2003; Muraven, Gagné, & Rosman, 2008). Self-regulation has many obstacles and is influenced by a number of factors. For instance, self-regulation is considered a limited resource (Baumeister, Vohs, & Tice, 2007), it can be undermined when one feels rejected (Baumeister, DeWall, Ciarocco, & Twenge, 2005), and it operates more effectively when one feels autonomous (Muraven, Gagné, & Rosman, 2008; Muraven, Shmueli, & Burkley, 2006). Thus, it is clear that self-regulatory efforts can be quickly used up, particularly when one has been under stress, and when perceived autonomy is low. In addition, self-regulation varies in success based on construal level (Fujita, Trope, Liberman, & Levin-Sagi, 2006), it changes with age (Freund, Hennecke, & Riediger,

2010), and it is influenced by "appropriateness standards" in social environments (Ridder, Vet, Stok, Adriaanse & Wit, 2013). There are a great number of factors that influence self-regulatory efforts and self-regulatory success, but research on self-regulation challenges has focused almost exclusively on the individual.

The conditions under which self-control prevails have been informed by Fishbach, Friedman, and Kruglanski's (2003) theory of temptation-elicited goal activation, in which a tempting cue activates a dieting goal; however, it seems that previous self-regulatory success is a prime determinant of future dieting success (Stroebe, Mensink, Aarts, Schut, & Kruglanski, 2008; Stroebe Van Koningsbruggen, Papies, & Aarts, 2013). Studies have illustrated that dieters and non-dieters respond to eating enjoyment and weight control cues very differently. For example, dieters who are primed with eating enjoyment have a subsequently harder time accessing weight-control thoughts compared to non-dieters (Stroebe et al., 2008). For dieters who are successful, however, chronically accessible self-reported weight control goals can override eating enjoyment goals through strong, learned associations (Fishbach, Friedman, & Kruglanski, 2003).

With the multifaceted nature of self-regulation and the inherent difficulties of successfully self-regulating, the desire to outsource such an effortful and constant task seems both logical and necessary. I will discuss how the term "outsourcing" will be used, and I will then explore the role of interpersonal relationships in influencing goal pursuit and dieting behaviors.

**Outsourcing Self-Regulation**

Outsourcing is defined as obtaining goods and/or services from an outside supplier; this is usually done because the outside supplier can reduce costs, increase product quality, and make businesses more productive and cost efficient (Pine, 2014). In the context of self-regulation for dieting, outsourcing in this sense would be relying on other people to obtain the "good or service" of self-regulation. In order to obtain self-regulation from others, one could literally rely on other people to regulate their choices and behaviors, or one could rely on others to define self-regulatory standards. While this seems to stand in opposition to the concept of *self*-regulation, it is not irreconcilable. Fitzsimons and Finkel (2011) operationalized "outsourcing" as simply thinking of an example of how one's partner helps with diet and fitness goals; this simple instruction served as the "outsourcing manipulation" that translated to decreased intentions to engage in goal relevant behavior in the upcoming week, compared to participants who were instructed to think of an example of how their partner helped them with a goal that was irrelevant to health and fitness (Fitzsimons & Finkel, 2011). Fitzsimons and Finkel (2011) conducted three studies to explore outsourcing self-regulation in couples, with their hypotheses driven by cognitive theory, and the studies proposed in this paper constitute a direct, pre-registered replication of the Fitzsimons and Finkel (2011) paper. Their methods will be expanded upon during the study overview.

Festinger's social comparison theory (1954) is compatible with the idea of outsourcing self-regulation; for example, people define the standard for "excessive eating" and "obesity" by comparing how much they eat to how much other people are eating. People conceptualize "excessive eating" as "eating more than other people," without careful consideration of what the actual amount of food may be (Herman et al.,

2003). Everyone must outsource self-regulation to some extent, especially when health and diet is concerned. For instance, several nights a week, people may outsource their need to prepare meals to a local restaurant; similarly, many people outsource coffee making (particularly specialty coffee making such as calorie dense cappuccinos) to local cafes. These acts of outsourcing speak directly to self-regulation, because other people (the chef in the restaurant who sets portion size and the barista at the coffee shop who uses whole milk, or even the governmental regulatory agency) set the standard for how much food and/or beverages should be consumed from any given "outsourcing instance."

In a similar vein, romantic partners can unconsciously influence self-regulation, and romantic partners may function as the "outsourcees" (the people being outsourced to) in a romantic relationship (Fitzsimons & Finkel, 2010; Fitzsimons & Finkel, 2011). The Michelangelo phenomenon posits that members of couples can help shape each other's skills by imparting their own skills and goals (Rusbult, Finkel, & Kumashiro, 2009), which suggests that members of romantic relationships naturally outsource self-regulation to the member of the couple who possesses a sounder set of self-regulatory skills. By extension, people may get better at self-regulating if they have partners who are particularly good at self-regulation, but it is also possible that partners will outsource their need to self-regulate to the partner who is more competent in this domain. There is not yet any literature exploring the possible moderators associated with outsourcing self-regulation to partners, but cognitive-based theory posits that if people anticipate needing self-regulation or self-control for upcoming tasks, they will conserve their self-regulatory resources as much as possible (Muraven, Shmueli, & Burkley, 2006).

Conserving self-regulatory resources could be achieved in romantic relationships by outsourcing self-regulation whenever possible.

Outsourcing self-regulation is merely one way in which interpersonal relationships influence dieting behavior; there are many other important social influences on dieting behaviors including establishing social norms, triggering goal activation and monitoring, and depleting self-regulation. The ways in which interpersonal relationships can negatively influence health goal pursuit have not yet garnered much attention, but exploring the links between romantic relationships, diet habits, goal pursuit, and self-regulation could lend valuable insight for treating and preventing obesity.

**Interpersonal Relationships and Goal Pursuit**

Social relations influence goal activation and goal pursuit in multiple ways. Goal contagion occurs when one observes another person's behavior, which triggers goal-directed action and goal adoption (Aarts, Gollwitzer, & Hassin, 2004). Role models can inspire people to set new goals (Lockwood & Kunda, 1997), and other people help monitor goal progress for self-relevant goals (Pinkus, Lockwood, Schimmack, & Fournier, 2008). In general, social support has been associated with increased goal attainment, and it logically follows that romantic partners tend to help each other with their goal pursuits (Brunstein, Dangelmayer, & Schultheiss, 1996; Feeney, 2004; Rusbult, Finkel, & Kumashiro, 2009). However, Chartrand, Dalton, & Fitzsimons (2007) showed that relationship reactance can occur when one considers a partner to be controlling, such that people will pursue the opposite goal of the one desired by that controlling partner. This would suggest that if someone has a controlling partner who

wants them to engage in healthy eating behaviors, the person with the controlling partner would be unconsciously motivated to pursue the opposite goal to the one vocalized by their partner. Although relationship reactance is beyond the scope of the studies outlined in this paper, it is important to note that there are likely important moderators that determine how one's goal pursuit is undermined (outsourcing self-regulation) or bosltered (through social support).

While partners can sometimes cue people to pursue suboptimal goals, social support is generally considered helpful for achieving one's goals. However, there are ways that perceived support can undermine motivation to engage in healthy behaviors, such as when support for a partner's unhealthy weight eliminates motivation to change that unhealthy weight (Averett, Sikora, & Argys, 2008). For example, if one partner voices the opinion "I'm so fat--I really need to lose some weight," and his or her partner responds with, "I think you look great!" this supportive, positive response may undermine the motivation to pursue a weight loss goal. By contrast, some social support literature suggests that perceived emotional support can help boost one's autonomy and feelings of competence that are necessary to pursue a goal (Malecki & Demaray, 2003; Deci & Ryan, 1985). Particularly in the context of a couple, thinking of an instrumental partner can potentially undermine self-regulatory efforts (Fitzsimons & Finkel, 2011). That is to say, thinking of how a partner can be helpful to health and fitness may lead one to unconsciously feel as if "my partner will take care of that for me, so I do not have to." While this may not always be the case, it is important to explore the circumstances under which social support may boost self-regulatory effort, and instances in which partner support may undermine goal-directed effort.

The quality of interpersonal relationships can also influence dieting behaviors. Markey, Markey, & Birch (2001) found that marital satisfaction and dieting behaviors were related such that couples with higher marital satisfaction engaged in less *unhealthy* dieting behaviors than those with lower reported martial satisfaction. In terms of outsourcing self-regulation, it is also possible that relationship quality influences the conditions under which someone may elect to outsource effort. While it is not yet known how relationship quality may influence outsourcing self-regulation, motivation research suggests that *goal importance* could influence when one chooses to outsource self-regulation. For example, if outsourcing functions as a *multifinal means* (advances more than one goal) to relationship and dieting goals, when diet goals are made more important than relationship maintenance goals, the romantic partner may become less cognitively accessible; thus, people may rely less on their partner for self-regulation to pursue the important diet goal (Kopetz, Faber, Fishbach, & Kruglanski, 2011). That is to say, if people outsource in order to serve the dual purpose of fulfilling relationship goals and dieting goals, but the dieting goal is made more important, people will outsource less and this effect would not be influenced by relationship satisfaction. By contrast, if outsourcing is a "unifinal" means to fulfill diet goals, and the partner is viewed as the epistemic authority (the "expert" in diet), when diet goals are made more important, the partner should become more accessible because of their expertise; thus outsourcing should increase, and relationship satisfaction *would* moderate the outsourcing effect such that those with greater relationship satisfaction would outsource more than those with lower relationship satisfaction. While the reasons for outsourcing self-regulation are not explored in this paper, it is important to note that romantic relationships exert

influence on self-regulation and health goal pursuit. This paper explores the question of whether or not outsourcing self-regulation bolsters health goal pursuit or undermines health goal pursuit.

While there are rich bodies of literature on self-regulation, interpersonal relations, and dieting behavior, there is a relative lack of literature on the potential ways that *interpersonal relationships* influence eating behaviors and even less literature on outsourcing self-regulation. Social relations, self-regulation, and dieting behaviors have not been examined together in detail, nor has the concept of outsourcing self-regulation; the proposed replication studies as well as follow up studies proposed in the *Discussion* section seek to address this gap.

**The Current Study: Replicating Outsourcing Self-Regulation**

The aims of this set of direct replication studies are to 1) Establish that the previously found effect of outsourcing self-regulation replicates in different samples, and 2) Lay the groundwork for future studies that will be more thoroughly explained in the *Discussion* section.

In light of the lack of literature on outsourcing self-regulation, direct replications of Studies 1 through 3 from the original outsourcing self-regulation paper are proposed. A replication of Fitzsimons and Finkel's (2011) paper would confirm the expected effect of outsourcing self-regulation, or may reveal a different set of effects, which will help lay the groundwork for exploring interpersonal influences on self-regulation more exhaustively. Finally, several potential follow up studies are outlined in the *Discussion* section to test how relationship partners may influence self-regulation and health goal pursuit in everyday life, outside of the lab. It should be noted that the direct replication

targets women exclusively as participants for studies 1 and 3, as women are typically believed to care more about health and fitness relative to men (Fitzsimons & Finkel, 2011). Study 2 was conducted on college students during the academic year, since this study used ongoing academic achievement goals as the "target goal" to test the conservation hypothesis. Future studies will focus on both sexes as well as couples, but the nature of preregistered replication studies calls for following the original study protocol as closely as possible.

**Outsourcing Self-Regulation: The Fitzsimons and Finkel Paradigm.** In the Fitzsimons and Finkel (2011) paper, in Study 1, female participants in relationships were recruited using an online data collection service and randomly assigned to one of four conditions. Participants were asked to provide an example of how their partner helps with a diet and fitness goal (target goal condition) or to provide an example of how their partner helps them with a career goal (control goal condition). Participants responded to these prompts after completing a depleting task (High Depletion) or a non-depleting task (Low Depletion), thus the design of the study was 2 (Target versus Control goal) X 2 (High Depletion versus Low Depletion), with intentions to engage in goal relevant behavior as the dependent variable.

In the original Study 2, during the academic year, male and female college students were recruited using an online University subject pool (however in the present replication Study 2, MTurk was used instead of a University subject pool, as suggested by the original author). Participants were randomly assigned to one of six conditions. Participants were asked to provide an example of how their partner helps with an ongoing academic achievement goal (target goal condition), to provide an example of

how their partner helps them with a recreational goal (control goal condition), or to list one thing that they liked about their partner (control non-goal condition). Participants responded to their assigned prompt and were subsequently given one of two sets of instructions for the upcoming initial task: participants were either told that the initial task was depleting of cognitive resources (making the successful completion of the second task, a difficult academic achievement task, more difficult), or they were told that the initial task was not cognitively depleting, and would not drain cognitive resources for the second task. Thus the design of Study 2 was 3 (Target goal versus Control goal versus Control non-goal) X 2 (Depletion Frame versus No-Depletion Frame), with time spent procrastinating on the first task as the dependent variable.

In Study 3, female participants in relationships were recruited using an online data collection service; participants were randomly assigned to one of three conditions. Participants were asked to provide an example of how their partner helps with a diet and fitness goal (target goal condition), to provide an example of how their partner helps them with a career goal (control goal condition), or to list one thing that they like about their partner (control non-goal condition). Participants then reported on their intentions to engage in goal relevant behavior, and reported on commitment to their partner. Intentions to engage in goal relevant behavior and level of commitment towards their partners were the dependent variables.

The three studies outlined above constitute the proposed replication studies in this paper. As mentioned previously, this is a preregistered direct replication study, and the original procedures and materials were followed as closely as possible. To summarize, social support is typically helpful to people when pursuing goals (Brunstein,

Dangelmayer, & Schultheiss, 1996; Feeney, 2004; Rusbult, Finkel, & Kumashiro, 2009), thus it *should* follow that thinking about a supportive partner would encourage people to work harder and be motivationally bolstering. However, Fitzsimons and Finkel argued in their 2011 Outsourcing Self-Regulation paper that *thinking about available resources can undermine motivation to pursue goals*, resulting in people spending less time and effort pursuing their goals. People tend to not exert as much effort when goal progress is possible through more than one route (Kruglanski et al., 2002), as well as when others are striving to achieve the same goal, such as in social loafing (Latane, Williams, & Harkins, 1979). In addition, people conserve their resources when they are able to, (Muraven et al., 2006) and research on ego depletion shows that self-control can be undermined when a participant must engage in effortful tasks (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Finally, interdependence theory suggests that relying on a partner to achieve a goal increases the feelings for dependence on one's partner, which in turn increases subjective commitment (Berscheid & Ammazzalorso, 2001; Walker & Kelley, 1981). In the present replication studies, cognitive theory and interdependence theory converge to inform predictions about self-regulatory outsourcing and intentions for goal-relevant behavior.

**Summary of Hypotheses**

The lines of research outlined above give rise to the following hypotheses:

Hypothesis 1. In Study 1, people who are prompted to think of how an instrumental partner helps them with their health and fitness goals will plan to spend *less time and effort* on health and fitness goals in the upcoming week (compared to those who were prompted to think of how their partners helped them with a *career* goal).

Hypothesis 2. In Study 1, people who have had their resources depleted should be especially susceptible to outsourcing. We expect that the effect of outsourcing on planned goal pursuit will be stronger in the “high-depletion condition” than in the “low-depletion condition.” In other words, the effect of outsourcing will be moderated by depletion such that those who are highly depleted will outsource to a greater degree, and those who are less depleted will outsource to a lesser degree.

Hypothesis 3. In Study 2, people who are prompted to think of how an instrumental partner can help them with an ongoing academic achievement goal will procrastinate longer than people who are prompted to think of how their partner helps them with a recreational goal, or people who are prompted to think of one thing that they like about their partner.

Hypothesis 4. In Study 2, people who are told that the initial puzzle task is “draining of cognitive resources” will spend less time on the puzzle task than those who are told that the initial task is not “draining of cognitive resources.”

Hypothesis 5. In Study 2, when the initial task is framed as depleting, people in the target goal condition will spend more time on the initial task compared to those in the control goal condition or the control non-goal condition.

Hypothesis 6. In Study 3, in the focal goal condition, people who outsource goal-directed effort to their partners will report greater commitment to that partner than those who do not outsource effort to their partners.

Fitzsimons and Finkel (2011) found that in Study 1, participants who were in the outsourcing condition had decreased intentions to spend time and effort on their health and fitness goals in the upcoming week compared to participants in the goal-irrelevant

condition. That is, participants who provided one example of how their partner helped them with their health and fitness goals had decreased intentions to engage in goal relevant behavior compared to participants who provided one example of how their partner helped them with a career goal. As expected, among participants in the outsourcing condition who were cognitively depleted, the effect of outsourcing self-regulation to their partner was stronger than for participants who were in the "low depletion" outsourcing condition.

In Study 2, Fitzsimons and Finkel (2011) found support for their conservation hypothesis, in which participants who were reminded of how a partner helps with an ongoing academic achievement goal procrastinated more (and did not feel as much of a need to conserve cognitive resources) compared to those who were not reminded of how their partners help them with academic achievement goals. Furthermore, they found a significant task-frame by condition interaction, such that the outsourcing effect was particularly strong when the initial task that participants engaged in was framed as "depleting." Participants in the target goal/depletion frame condition spent more time procrastinating compared to those in the control goal/depletion frame condition and the control non-goal/depletion frame condition.

Finally, in Study three, Fitzsimons and Finkel (2011) found that of those participants who outsourced effort to their partners and planned to spend less time on their target goal reported significantly higher levels of commitment to their partner compared to those who did not outsource effort to their partners. In sum, the researchers found support for all of their hypotheses, and we expect to find similar results.

# CHAPTER 2

# METHOD

## Participants

The guidelines for replication studies dictate that participants shall be eligible based on the same criteria as the original study. Participants were eligible for Studies 1 and 3 if they were female, between the ages of 18 and 49, and if the potential participant identified as being "in a committed relationship." For Study 2, the eligibility criteria were the same, with the exception that males were recruited with females, and participants were active, current college students. Across the three replication studies, 935 participants were recruited (263 participants for study 1, 370 participants for study 2, and 302 participants for study 3), and data from 819 participants were analyzed (210 participants for Study 1, 316 participants for Study 2, and 293 participants for Study 3).

## Procedures

These studies were preregistered, direct replications of Studies 1, 2, and 3 from the Fitzsimons and Finkel (2011) "Outsourcing Self-Regulation" paper (see https://osf.io/hkxda/ for the pre-registered studies). Consistent with the procedures followed by Fitzsimons and Finkel, people were recruited for a study investigating interpersonal relationships and goals. Participants were recruited through Mechanical Turk (MTurk) to take part in an online study. MTurk participants were directed to an online survey on Qualtrics, via an advertisement and link on MTurk. Upon completion of the survey, participants were given a survey code which they entered into a prompt window in the MTurk system in order obtain their compensation. Participants were

compensated with $1.00 each for completing the survey. This study was approved by the Institutional Review Board at Wayne State University.

**Study 1.** Participants first completed a depletion manipulation (see Appendix G) before going through the instrumentality manipulation (see Appendix H). Finally, participants reported on intentions to engage in goal relevant behavior in the up-coming week (see appendix I).

**Study 2.** Participants first completed the instrumentality manipulation (see Appendix H), before receiving the task frame manipulation by means of the instructions for the two tasks in the study (see Appendix J). Participants played the entertaining game for as long as they desired, before ostensibly moving on to the challenging academic task (see Appendix K). In reality, the study ended once participants decided to stop playing the initial task. Time spent on the initial task was recorded.

**Study 3.** Participants first completed the instrumentality manipulation (see Appendix H) before reporting on intentions to engage in goal relevant behavior in the upcoming week and reporting on relationship commitment (see Appendix I).

**Measures**

**Demographics.** Information regarding participants' gender, age, ethnicity, and romantic relationship status was collected (Appendix L).

**One way partners help with health and fitness goals.** Participants in the target goal condition typed out one way in which their partner helps them with a health and fitness goal.

**One way that partners help with a career goal.** Participants in the control goal condition in Studies 1 and 3 typed out one way in which their partner helps them with a career goal.

**One way that partners help with a recreational goal.** Participants in the control goal condition in Study 2 typed out one way in which their partner helps them with a recreational goal.

**One thing that participants like about their partners.** Participants in the control non-goal conditions in Studies 2 and 3 typed out one thing that they like about their partner.

**Intentions to spend time on health and fitness goals.** In studies 1 and 3, participants responded to the statement "Please rate how much time you will spend on health and fitness in the upcoming week," reported on a 5-point scale (1 = much less than usual to 5 = much more than usual).

**Intentions to spend energy on health and fitness goals.** In studies 1 and 3, participants responded to the statement "Please rate how much energy you will spend on health and fitness in the upcoming week," reported on a 5-point scale (1 = much less than usual to 5 = much more than usual).

**Health and fitness goal importance.** Participants were asked to respond to the following statement: "My health and fitness goals are important to me." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Health and fitness progress importance.** Participants were asked to respond to the following statement: "I care about my progress on my health and fitness goals."

Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Progress satisfaction on health and fitness goals.** Participants were asked to respond to the following statement: "I feel satisfied with my recent progress on my health and fitness goals." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Academic achievement goal importance.** Participants were asked to respond to the following statement: "My academic achievement goals are important to me." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Academic achievement progress importance.** Participants were asked to respond to the following statement: "I care about my progress on my academic achievement goals." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Academic achievement goal progress recent perception.** Participants were asked to respond to the following statement: "I have made good progress on my academic achievement goals lately." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Academic achievement goal progress general perception.** Participants were asked to respond to the following statement: "I am pleased with my progress in academic achievement." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Progress satisfaction on academic achievement goals.** Participants were asked to respond to the following statement: "I feel satisfied with my progress on my academic achievement goals lately." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Career goal progress recent perception.** Participants were asked to respond to the following statement: "I have made good progress on my career goals lately." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Career goal progress general perception.** Participants were asked to respond to the following statement: "I am pleased with my progress towards my career." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Progress satisfaction on career goals.** Participants were asked to respond to the following statement: "I feel satisfied with my progress on my career goals lately." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Time spent procrastinating.** In Study 2, time (in minutes) spent on the initial task was measured as a proxy for outsourcing effort.

**Commitment measure 1.** Participants were asked to respond to the following statement: "I am highly committed to my current partner." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree).

**Commitment measure 2: Plans to stay with partner.** Participants were asked to respond to the following statement: "I believe I will stay with this partner for the rest of

my life." Participants responded on a seven-point scale from 1 (I completely disagree) to 7 (I completely agree) (see Appendix I for all measures).

# CHAPTER 3

# RESULTS

## Preliminary Data Analyses

**A priori power analyses and post hoc power analyses.** Guidelines for direct replication studies suggest an estimate of at least 95% power to detect anticipated effects, with an error rate of $\alpha$ = .05. For Study 1, based on the calculations using G.Power software for F-Tests, "ANOVAS, Fixed and Special Effects, and Interactions," with an estimated effect size of *f* = .25, the numerator degrees of freedom = 1, and the number of groups = 4, the minimum total participants needed was 210 (see appendix A). In order to be certain that there would be enough power to detect effects after data screening, a total of 263 participants were recruited. The first 210 eligible, fully completed surveys were analyzed to satisfy the requirement of 95% power for Study 1. Post hoc power analysis was also conducted using G.Power; partial $\eta^2$ = .076, with an effect size of *f* = .28, and post hoc power with 210 participants, numerator degrees of freedom = 1, and groups = 4, was 98.5% (See Appendix D).

For Study 2, based on the calculations using G.Power software for F-Tests, "ANOVAS, Fixed and Special Effects, and Interactions," with an estimated effect size of *f* = .25, the numerator degrees of freedom = 2, and the number of groups = 6, the total participants needed was 251 (see appendix B). However, to again be certain that enough surveys would be complete for data analysis, a total of 370 participants were recruited, and 316 were analyzed. Post hoc power analysis was also conducted using G.Power; partial $\eta^2$ = .01, the effect size was *f* = .10, and post hoc power with 316

participants, numerator degrees of freedom = 2, and groups = 6, was only 34%, as the detected effect size was much smaller than anticipated (See Appendix E).

For Study 3, based on the calculations using G.Power software for F-Tests, "ANOVA: fixed effects, omnibus, one-way" with an estimated effect size of $f$ = .25, and the number of groups = 3, the total participants needed to achieve 95% power was 252 (See Appendix C). Again, to be certain that enough surveys would be complete for data analysis, a total of 302 participants were recruited, and 293 were analyzed. Post hoc power analysis was also conducted using G.Power for an omnibus one-way ANOVA; partial $\eta^2$ = .00012, the effect size was $f$ = .011, and post hoc power with 293 participants was calculated to be only 5% due to the substantially smaller anticipated effect size (See Appendix F).

**Data screening and preparation.** For study 1, 263 participants were recruited; however, seven participants were male, five participants did not follow the instructions to give an example of how their partner was supportive of a goal, and 41 participants did not complete the depletion manipulation as instructed. Thus, these participants were excluded from analyses. A total of 210 participants were analyzed for Study 1 (100% female, 74.3% White/Caucasian, 9% Black/African American, 4.8% East Asian, 6.7% Hispanic, 1% Native American, 4.3% Multiracial, $M_{age}$ = 35.03, $SD_{age}$ = 11.38; See Table 1). The reports of anticipated time (DV1) and energy (DV2) spent in the upcoming week on health and fitness goals were averaged to create an index of planned goal pursuit as the DV ($\alpha$=.939), as in the original Outsourcing Self-Regulation study.

For Study 2, a total of 370 participants were recruited, however, 54 participants did not follow instructions to give an example of how their partner helped with a goal,

and were thus excluded from analysis. A total of 316 participants were analyzed for Study 2 (55.4% female, 69.9% White/Caucasian, 8.5% Black/African American, 7.6% East Asian, .3% Middle Eastern, 9.2% Hispanic, .6% Native American, 2.8% Multiracial, .9% Other, $M_{age}$ = 26.41 $SD_{age}$ = 6.03; See Table 1). Qualtrics survey software recorded the time spent on the "entertaining task" in seconds, which was converted to minutes for analysis as the DV.

A total of 302 participants were recruited for Study 3, however, nine participants did not follow the instructions to give an example of how a partner was supportive of a current goal. Thus, data from 293 participants were analyzed (100% female, 71.7% White/Caucasian, 10.2% Black/African American, 6.5% East Asian, 6.5% Hispanic, .7% Native American, 4.4% Multiracial, $M_{age}$ = 33.26, $SD_{age}$ = 9.89; See Table 1). Again, the reports of anticipated time (DV1) and energy (DV2) spent in the upcoming week on health and fitness goals ($\alpha$ = .920) were averaged to create an index of planned goal pursuit, as in the original Outsourcing Self-Regulation study. The two partner commitment items were also averaged ($\alpha$ = .810) to create an index of partner commitment, as in the original study.

**Study 1 analyses: H1 and H2.** Two-way ANOVAS were conducted to assess differences between the four comparison groups. Differences were assessed for the planned-goal-pursuit measures (anticipated time and anticipated effort spent on health and fitness goals in the upcoming week; $\alpha$=.939), with between subjects factors of depletion (low vs. high) and partner instrumentality (focal goal vs. control goal). It was hypothesized that those in the focal goal condition would plan to spend less time and

effort on their health and fitness goals (H1), and that this effect would be especially strong for those who had been cognitively depleted (H2).

Similar to Fitzsimons and Finkel (2011), there was no main effect of depletion on planned goal pursuit, $F(1, 206) = .449$, $p = .503$. There was a significant main effect of partner instrumentality on planned goal pursuit, $F(1, 206) = 11.52$, $p = .001$; however, participants planned to spend ***more time and effort*** on their health and fitness goals in the focal-goal condition ($M = 3.34$, $SD = 1.03$) than in the control-goal condition ($M = 2.96$, $SD = 0.80$; See Table 2), which was the opposite pattern found by Fitzsimons and Finkel (2011). Thus, the first hypothesis was not supported, and in fact, the opposite pattern of results emerged.

A moderation analysis was then conducted for partner instrumentality and depletion level (the Partner Instrumentality × Depletion interaction), to test the second hypothesis, that the partner instrumentality effect would be stronger for the highly depleted participants. The moderation analysis revealed a significant interaction, $F(1, 206) = 7.29$, $p = .008$. Follow up one-way ANOVAs showed that the effect of the instrumentality condition on planned goal pursuit was stronger in the high-depletion condition, $F(1, 88) = 17.04$, $p < .001$, than in the low-depletion condition, $F(1, 118) = 0.27$, $p = .60$, which supported H2; however, it should be noted that this interaction effect was in the opposite direction to the original study, such that depleted participants in the target goal condition planned to *spend more time and effort* on health and fitness goals (See Table 3 and Figure 1).

Two-way ANOVAs were also conducted on goal commitment items, in order to see if the difference in planned time and effort on health and fitness goals was driven by

an increased reported commitment to health and fitness. Although these comparisons were not anticipated to be significant, two-way ANOVAs revealed that there were indeed significant main effects of instrumentality for goal importance, such that greater partner instrumentality led to increased health goal importance, $F(1, 206) = 8.67$, $p = .004$, and the identical pattern emerged for the second goal commitment item of caring about goal progress, $F(1, 206) = 5.22$, $p = .023$. These results were not consistent with Fitzsimons and Finkel (2011) who found no significant effects of partner instrumentality on the two goal commitment measures.

**Exploratory study 1 analyses.** When the pattern of results revealed the opposite effects of the original study, and in addition, revealed significant effects of partner instrumentality on goal commitment, a mediation analysis was conducted to test if partner instrumentality increased goal importance and/or increased caring about progress (two items that were averaged to create an index of goal commitment; $\alpha = .952$), which *in turn* increased planned goal pursuit. Indeed, mediation analysis revealed that the effects of goal type (partner instrumentality) on planned goal pursuit was mediated by goal commitment (there was a significant indirect effect of 0.17, 95% CI [.0387, .3139]). Greater partner instrumentality led to increased goal commitment, which in turn increased planned goal pursuit (See Figure 2).

**Study 2 analyses: H3, H4, and H5.** For Study 2, two-way ANOVAS were conducted to assess differences between the six comparison groups. Differences were assessed for the amount of time spent procrastinating on the initial task (in minutes), with between subjects factors of depletion frame on initial task (depleting versus non depleting) and partner instrumentality (focal goal vs. control goal vs. control non-goal). A

moderation analysis was also conducted for partner instrumentality and depletion frame (the Partner Instrumentality × Depletion Frame interaction). It was hypothesized that people who were prompted to think of how an instrumental partner could help them with an ongoing academic achievement goal (those in the target-goal condition) would procrastinate longer than people who were prompted to think of how their partner helps with a recreational goal (control goal condition), or people who were prompted to think of one thing that they liked about their partner (control non-goal condition) (H3). This hypothesized main effect of partner instrumentality on procrastination did not emerge; $F(2, 310) = .125$, $p = .883$. Participants spent approximately the same amount of time on the distractor task in the focal-goal condition ($M = 4.97$ min, $SD = 2.54$ min) as in the control-goal condition ($M = 4.83$ min, $SD = 2.46$), $F(1, 205) = .172$, $p = .678$, and in the control-non-goal condition ($M = 4.82$ min, $SD = 2.50$), $F(1, 209) = .210$, $p = .647$. The means of the two control conditions did not differ significantly from each other, $F(1, 212) = .002$, $p = .965$ (See Table 4). Thus, the third hypothesis was not supported.

It was also hypothesized that people who were told that the initial puzzle task was "draining of cognitive resources" would spend less time on the puzzle task than those who were told that the initial task was not "draining of cognitive resources" (H4). This hypothesized main effect of depletion frame on procrastination time was not supported; $F(1, 310) = .742$, $p = .390$. Participants spent approximately the same amount of time on the distractor task regardless of whether it was framed as depleting of resources for the target task ($M = 4.75$ min, $SD = 2.53$) or framed as non-depleting of resources for the target task ($M = 5.00$ min, $SD = 2.46$). Thus, the fourth hypothesis was not supported.

It was also hypothesized that when the initial task was framed as depleting, people in the target goal condition would spend more time on the initial task compared to those in the control goal condition or the control non-goal condition. However, this hypothesized interaction effect was not supported; there was no significant Instrumentality Condition × Task Frame interaction, $F(2, 310) = 1.10$, $p = .336$. When the task was framed as being "depleting," participants in the focal-goal condition spent approximately the same amount of time on the distractor task ($M = 5.07$ min, $SD = 2.41$) as the participants in the control-goal condition ($M = 4.45$ min, $SD = 2.59$), and the participants in the control-non-goal condition ($M = 4.76$ min, $SD = 2.57$); follow up tests revealed that there were no significant mean differences between groups in the high depletion frame condition, $p$'s > .691. When the task was framed as "non-depleting," there were no significant differences in time spent on the distractor task (focal-goal condition: $M = 4.89$ min, $SD = 2.67$; control-goal condition: $M = 5.26$ min, $SD = 2.26$; control-non-goal condition: $M = 4.87$ min, $SD = 2.45$), and none of the conditions differed significantly from each other within the no-depletion frame condition, $p$'s > .461 (See Table 5). Thus, the fifth hypothesis was not supported.

Follow up two-way ANOVAs were not conducted on goal commitment and on perceived goal progress in order to see if the time spent procrastinating was driven by a reduced reported commitment to academic achievement goals, or by an increase in perceived goal progress, because there were no significant main effects or interactions.

**Study 3 analyses: H6.** For Study 3, a one-way ANOVA was conducted to assess differences between the three comparison groups. Differences were assessed for the planned goal pursuit measures (anticipated time and anticipated effort spent on

health and fitness goals in the upcoming week; $\alpha$ = .92), with the between subjects factor of partner instrumentality (focal goal vs. control goal vs. control non-goal). Those in the target instrumentality condition were expected to report less anticipated goal directed effort in the up-coming week compared to those in the control goal condition and the control non-goal condition. However, no main effect of condition emerged, $F(2, 290) = 0.02$, $p = .982$ (See Table 7); participants in the focal-goal condition planned to spend the same amount of time pursuing the focal goal ($M = 3.16$, $SD = 0.78$) as participants in the control-goal condition ($M = 3.16$, $SD = 0.91$) and participants in the control non-goal condition ($M = 3.14$, $SD = 0.85$; See Table 6).

After correlating the two relationship commitment items ($\alpha$ = .81), the relationship commitment scores were averaged to create an index of relationship commitment. In a multiple regression analysis, relationship commitment was regressed on Condition, Planned Goal Pursuit, and the Condition by Planned Goal Pursuit interaction. The Condition by Planned Goal Pursuit interaction was anticipated to be significant, and it was hypothesized that greater outsourcing for those in the target instrumentality condition would lead to greater relationship commitment. However, when relationship commitment was regressed onto condition, goal pursuit intentions, and the Instrumentality Condition × Intention interaction, no significant interaction emerged, $F(3, 298) = 1.22$, $p = .303$, and there were no significant main effects (all $p$'s > .07), which did not support H6. As in the original Outsourcing Self-Regulation paper (Fitzsimons & Finkel, 2011), correlations between goal intentions and relationship commitment within each condition were calculated. Correlations showed that the association of intentions with relationship commitment was negative and nonsignificant in the target goal

condition and in the control condition (target-goal condition, $r = -.07$, $p = .50$; control-goal condition, $r = -.12$, $p = .23$) and positive and nonsignificant in the control non-goal condition, $r = .14$, $p = .17$. Thus for women who thought about how their partner helped them achieve their health and fitness goals and/or career goals, there was no influence on intentions, and thus no relationship between instrumentality and relationship commitment.

**Exploratory Study 3 analyses.** Due to the null effects of study 3, combined with the exploratory mediation findings in Study 1 (showing that instrumentality condition significantly predicted goal commitment, which in turn increased goal-relevant intentions), a mediation analysis was again conducted to test if partner instrumentality increased goal commitment, which in turn increased planned goal pursuit. Indeed, mediation analysis again revealed, as in Study 1, that the effects of goal type (partner instrumentality) on planned goal pursuit was mediated by goal commitment, and a significant indirect effect was observed (indirect effect = .07, 95% CI [.0176, .1334]). Greater partner instrumentality led to increased goal commitment, which in turn increased planned goal pursuit (See Figure 3).

# CHAPTER 4

# DISCUSSION

The primary goal of the present studies was to directly replicate the three studies from Fitzsimons and Finkel's (2011) Outsourcing Self-Regulation paper. Interestingly, results from the present studies did not support the findings from the original Outsourcing Self-Regulation paper, and were not in line with our hypotheses. Although the original idea of "outsourcing self-regulation" posits that people will reduce intentions to engage in goal relevant behavior when reminded of a supportive significant other (Fitzsimons & Finkel, 2011), the present studies showed that thinking of supportive partners may bolster one's goal-relevant intentions.

## Interpretation of Findings

In Study 1, participants significantly differed on their intentions to engage in goal relevant behavior depending on their assigned condition, such that those who thought of target-goal supportive partners (versus non-target goal supportive partners) reported significantly greater intentions to engage in goal-relevant behavior in the upcoming week. These results are in line with research on social support, which suggests that perceived support from significant others can bolster goal pursuit (Brunstein, Dangelmayer, & Schultheiss, 1996; Feeney, 2004; Rusbult, Finkel, & Kumashiro, 2009). This finding is also in line with Kruglanski and colleagues' (Kruglanski et al., 2002) goal systems theory, which suggests that when a means has been activated (such as a partner's instrumentality), commitment towards the goal increases, in part because the activation of an instrumental means can increase the expectancy of attaining the goal.

The effect of partner instrumentality on intentions to engage in goal-relevant behavior was especially strong for participants who had been cognitively depleted, suggesting that when one is exhausted, he or she is especially likely to increase intended goal-directed effort when reminded of a supportive partner. The idea that cognitive depletion enhances the effect of partner instrumentality on planned goal pursuit is in line with ego-depletion theory (Baumeister et al., 1998), which suggests that self-control and self-regulation are limited resources (cf. Lurquin et al., 2016); when one has had one's resources depleted, the idea that a partner can help achieve one's goals may be especially motivationally bolstering, because one's own perceived ability to pursue his or her goal has been undermined by cognitive exhaustion. This interaction between depletion and partner instrumentality was also observed in the original Outsourcing Self-Regulation paper (Fitzsimons & Finkel, 2011), in which those who were more cognitively depleted were influenced to a greater degree by the instrumentality manipulation than those who were not cognitively depleted.

The follow up exploratory mediation analyses revealed that partner instrumentality positively predicted goal commitment, which in turn led to increased goal relevant intentions. These results are again in line with goal systems theory (Kruglanski et al., 2002), suggesting that when partner instrumentality is made accessible, this functions to activate a means to the health and fitness goal, which increases commitment to the goal; since goal commitment is posited to be a function of the value of the goal as well as goal-attainment expectancy, it makes sense that increasing accessibility of an instrumental means (one's partner) increases goal-attainment expectancy, which increases goal commitment. Furthermore, the more committed one

is to a goal, the greater we expect their goal pursuit intentions to be. Thus, the finding that partner instrumentality increases goal commitment, which in turn increases goal relevant intentions is intuitively understandable through the lens of goal systems theory (Kruglanski et al., 2002) and advances the idea that perceived social support enhances goal pursuit through increasing goal commitment.

In Study 2, a different dependent variable was of interest; time spent procrastinating on an "entertaining puzzle task" was used as an index of outsourcing self-regulation, rather than planned goal pursuit. While we expected 1) that participants would spend more time procrastinating when reminded of an instrumental partner (compared to those reminded of a non-instrumental partner), 2) that participants would spend less time procrastinating on an entertaining puzzle task when they were told that the entertaining task depleted their cognitive resources (versus did not deplete resources), and 3) that when the puzzle task was framed as depleting, those reminded of an instrumental partner would spend more time procrastinating (compared to those reminded of a non-instrumental partner), there were no significant main effects or interactions. Participants spent approximately the same amount of time procrastinating before an ostensibly difficult academic task regardless of whether they thought of how a partner supported their academic goals (target goal condition), how a partner helped with a recreational goal (control goal condition) or one thing they liked about their partner (control non-goal condition). Procrastination times were also the same, on average, regardless of whether the entertaining task was framed as depleting or non-depleting of cognitive resources. Finally, among those who had the task framed as depleting, those who were reminded of an instrumental partner spent approximately the

same amount of time procrastinating as those who were in the control-goal and control-non-goal conditions. These null findings may indicate that participants did not pay particular attention to the instructions on the depletion frame of the entertaining task, which constituted a very subtle experimental manipulation in Study 2. As this study was conducted on MTurk, in which compensation for spending time on any task is considered extremely important, it is possible that all participants were motivated to complete the study as quickly as possible in order to move on to the next paid task, regardless of what the instructions stated. A follow up study during the academic year and using a university subject pool may clarify why there were no significant effects.

Study 3 essentially replicated Study 1 without a manipulation of depletion, and with the addition of a control non-goal condition and partner commitment measure. In Study 3, the findings were not supportive of the original outsourcing self-regulation study and were not in line with our original hypotheses; results showed that participants' intentions to engage in goal-relevant behavior did not differ as a function of partner instrumentality. However, Study 3 findings did conceptually replicate the mediation results found in Study 1. It is not entirely surprising that the hypothesized main effect of partner instrumentality was not detected; the results from Study 1 suggested that the overall significant main effect of partner instrumentality on intentions was largely driven by those in the "high depletion" condition; that is to say, when only looking at participants in the "low depletion" condition in Study 1, partner instrumentality did not significantly influence goal intentions. Since Study 3 essentially conceptually replicated Study 1 with non-depleted participants, a null main effect is not entirely surprising. Interestingly, the combined results from Studies 1 and 3 suggest that people draw upon

their significant others for motivation to pursue their goals only when they feel as if they do not have the resources to pursue the goal themselves.

Study 3 additionally investigated the idea, stemming from interdependence theory (Drigotas & Rusbult, 1992; Kenkel, Thibaut & Kelley, 1959) that greater reliance (or dependence) on one's partner for goal pursuit motivation would lead to greater commitment to one's partner. However, partner instrumentality alone and the interaction between partner instrumentality and goal-relevant intentions did not predict commitment to one's partner. Again, since Study 1 suggested that these effects may only emerge when participants are depleted, this finding is not particularly surprising in the non-depleted sample of Study 3. In order to follow up the mediation pattern that emerged in Study 1, another exploratory follow-up mediation analysis revealed, as in Study 1, that partner instrumentality increased commitment to the target goal, which in turn increased goal relevant intentions. Further exploratory analyses suggested that partner commitment strengthened this mediation effect, although the index of moderated mediation did not reach significance. These results suggest that social support bolsters motivation for goal pursuit, and these effects may potentially be moderated (strengthened) as commitment to one's romantic partner increases.

Although it is difficult to interpret null findings in Study 2, taken together, the results from Studies 1 and 3 suggest that partner instrumentality increases goal commitment, which in turn increases goal relevant intentions, regardless of how depleted one is. These results also suggest that a partner's perceived support bolsters goal-relevant intentions for people only when they feel that they do not have the resources to pursue their goal themselves.

**Strengths and Limitations**

The present studies had a number of strengths and weaknesses. Although some have argued that direct replication studies can be executed without procedural and methodological precision, at times casting unsubstantiated doubt on original findings (Gilbert, King, Pettigrew, & Wilson, 2016), others have argued that replication studies do function to determine the robustness and replicability of effects (OSC, 2015). Furthermore, when effects are found to be systematically oppositional, this can help shape the social psychological theories applied to research. Kahneman (2012) argued in an open letter that collaborating with original authors when attempting to replicate their work is paramount for ensuring appropriate adherence to original methods and procedures, which is precisely the strategy that was used for the replication studies in this paper.

Although none of the studies replicated the original Outsourcing Self-Regulation findings, the current Studies 1 and 3 systematically found the same pattern that partner instrumentality boosts goal-relevant intentions via goal commitment. This finding cannot be easily attributed to differing methods or procedures from the original studies, and this finding is in line with research on social support and goal systems theory, adding to the literature on interpersonal influences on goal pursuit. Study 1 was very well powered to detect effects, and in an additional *re*-replication of Study 1, ($N$ = 337)[1], which was conducted to be certain of the direction of the surprisingly oppositional effects, results were indeed consistent with the first replication study conducted. The consistent results

[1] Full results from the re-replication of study 1 will be provided upon request

across two replications of Study 1 and one replication of Study 3 increases confidence that the effects revealed in this paper are robust.

Some limitations to these replication studies were revealed in the post hoc power analysis for Studies 2 and 3, which showed that the effect sizes were estimated to be too large in a priori power analyses, and suggested that larger samples would have been needed to detect very small effect sizes. All three studies were conducted on MTurk, which tempers the confidence that results are broadly generalizable (cf. Buhrmester, Kwang, & Gosling, 2011). Finally, only women were recruited for Studies 1 and 3, as research has suggested that women care more about health and fitness goals than men (Fishbach, Friedman, & Kruglanski, 2003); since "goal importance" and "goal commitment" do seem to play a substantial role when drawing on a partner's support, a sample including men would likely make study findings more generalizable.

**Future Directions and Suggestions for Future Research**

The present replication studies systematically detected the opposite pattern of results compared to the original Outsourcing Self-Regulation paper (Fitzsimons & Finkel, 2011), and future research should explore the conditions under which partner instrumentality might sometimes undermine goal-relevant intentions vs. boost goal-relevant intentions. The oppositional patterns suggest several possibilities: It may be the case that the original Outsourcing Self-Regulation studies were underpowered, and perhaps were unable to detect the effects that we discovered in the present replication studies. However, it may also be the case that there are moderators that determine when one will outsource self-regulatory effort, and when partner support simply bolsters motivational effort. For example, research on social support has suggested that the *type*

of perceived support (informational, emotional, or instrumental) differentially affects goal pursuit and goal outcomes (Malecki & Demaray, 2003). Cognitive evaluation theory (Deci & Ryan, 1985) posits that social contexts facilitative of competence, autonomy, and relatedness are key determinants for enhancing motivation. It follows that emotional support from others may be especially important for increasing autonomy, competence, and relatedness, while instrumental support might (in some instances) undermine autonomy and competence. The way in which one perceives a goal may also influence which type of social support (or which combination of social support) is most effective for increasing goal-directed effort. This idea is in line with the stress buffering hypothesis (Cohen & Wills, 1985), and more specifically, the specificity theory of optimal matching, which suggests that the nature of a particular stressor determines the nature of the required resources (and social support type) for coping with the stressor (Baron et al., 1990). Thus, if someone's health and fitness goal is associated with *emotional* difficulty and they receive *instrumental* support, the support provision is unlikely to enhance motivation for goal-directed action, and may in fact facilitate feelings of incompetence, which could undermine motivation.

Taking this one step further, it may be the case that when people do not experience a great deal of stress or discomfort associated with their goal, yet they receive social support, their motivation to engage in goal-directed action is reduced. In other words, if a particular goal is not perceived to be stressful, any additional support may serve to undermine goal-directed effort. For example, if the couple Jack and Jane go tandem biking, and Jack has the goal to get to the store (which is not stressful or difficult to achieve), but Jane peddles with all her might, Jack may not feel the need to

put effort into peddling hard himself—Jane is advancing the goal *for him,* which may undermine his peddling effort. It may be the case that there is an "optimal level" of support that will boost goal-relevant intentions and goal-directed effort, with both "less than optimal support" and "greater than optimal support" undermining goal-relevant intentions and effort. To again draw upon the "Jack and Jane" example, if on the way to the store, the couple reaches a difficult, steep hill, and Jane is still peddling mightily, Jack may not be motivated to pedal hard—again, his goal is being advanced for him already, and Jane's immense peddling support may undermine his goal-directed effort (because it seems likely that his goal will be achieved through Jane's effort alone). However, if Jane suddenly reduces her pedaling effort at the base of the hill, and Jack must face the difficult, stressful climb alone, he may not believe that he is capable of peddling up the hill with no support; thus, with suboptimal support, his expectation of completing the goal may diminish, and he may decide to reduce his goal-directed effort or even abandon the goal of going to the store altogether. However, in an optimal scenario, if Jack and Jane face the difficult hill together, and Jane provides some support (i.e., pedals steadily but not enough to get them both up the hill by herself), her appropriate level of support may increase Jack's expectations of making it up the hill, while still necessitating effort from Jack to advance his goal. Thus his goal directed effort may be bolstered by the optimal support provided by Jane. Future research could further investigate and manipulate perceived support provision to see if too much or too little social support undermines goal-directed effort.

Another factor that may influence how perceived partner support affects goal directed effort is how controlling one's partner is perceived to be; research has shown

that when a partner espouses a goal for their significant other and is perceived to be controlling, this may motivate the significant other to pursue the opposite goal (Chartrand, Dalton, & Fitzsimons, 2007). Thus the "perceived controlling nature of the significant other" may moderate the effect of perceived partner support on goal-directed effort, with more controlling partners leading to undermined goal pursuit.

Finally, studies that examine how romantic partners influence each other's goal pursuit in daily life would provide a great deal of insight for how interpersonal relationships affect personal goal pursuit. An observational daily diary study could gather information on goals that people hold for themselves, goals held for their partners, and both perceived and provided support from both members of the couple. Though complicated, the benefits of gathering dyadic data include allowing us to comprehensively map how support provision and receipt are perceived, and how this influences goal commitment, relationship commitment, goal pursuit intentions, and goal attainment.

**Practical Implications**

These studies suggest that, indeed, romantic partners influence both commitment to health goals and intentions to engage in health goal-relevant behavior. A daily diary study could reveal the nuances of how romantic partners influence each other's health goal pursuit, which may importantly enhance researchers' and health care providers' understanding of health behavior and health goal pursuit. As mentioned previously, obesity is one health issue that affects millions, but is still poorly understood and difficult to treat and prevent; examining the interpersonal influences on health goal

behavior may be an important step towards understanding the most effective treatment and prevention of obesity in the United States.

Table 1.

*Descriptive Statistics of Demographic Study Variables*

| | Study 1 | | Study 2 | | Study 3 | |
|---|---|---|---|---|---|---|
| | *N* = 210 | | *N* = 316 | | *N* = 293 | |
| **Variables** | Mean | SD | Mean | SD | Mean | SD |
| Age | 35.03 | 11.38 | 26.41 | 6.03 | 33.26 | 9.89 |
| Gender (% Female) | 100% | n/a | 55.4% | n/a | 100% | n/a |
| Ethnicity (% Non-White) | 25.7% | n/a | 30.1% | n/a | 28.3% | n/a |

Table 2.

*Descriptive Statistics of Study 1 Dependent Variables*

| | Goal-Relevant Intentions | | Goal Commitment | |
|---|---|---|---|---|
| **Conditions** | Mean | SD | Mean | SD |
| Low Depletion Target Goal | 3.16 | 1.01 | 5.56 | 1.23 |
| Low Depletion Career Goal | 3.07 | 0.83 | 5.39 | 1.41 |
| High Depletion Target Goal | 3.59 | 1.02 | 5.92 | 1.22 |
| High Depletion Career Goal | 2.81 | 0.75 | 5.07 | 1.56 |

Table 3.

*Summary of Two-Way ANOVA Results for Study 1*

| Source | Sum of Squares | df | Mean Square | F |
|---|---|---|---|---|
| Corrected Model | 14.20 | 3 | 4.73 | 5.66** |
| Intercept | 2048.38 | 1 | 2048.38 | 2447.30** |
| Depletion | 0.38 | 1 | 0.38 | 0.45 |
| Goal Type | 9.64 | 1 | 9.64 | 11.52** |
| Depletion X Goal Type | 6.10 | 1 | 6.10 | 7.29** |
| Error | 172.42 | 206 | 0.84 | |
| Total | 2273.50 | 210 | | |

**$p < 0.01$

Table 4.

*Descriptive Statistics of Study 2 Variables*

| | Time Spent Procrastinating (Minutes) | |
|---|---|---|
| **Conditions** | Mean | SD |
| High Depletion Frame Target Goal | 5.07 | 2.41 |
| High Depletion Frame Control Goal | 4.45 | 2.59 |
| High Depletion Frame Non-Goal | 4.76 | 2.57 |
| Low Depletion Frame Target Goal | 4.89 | 2.67 |
| Low Depletion Frame Control Goal | 5.26 | 2.26 |
| Low Depletion Frame Non-Goal | 4.87 | 2.45 |

Table 5.

*Summary of Two-Way ANOVA Results for Study 2*

| Source | Sum of Squares | df | Mean Square | F |
|---|---|---|---|---|
| Corrected Model | 72186.21 | 5 | 14437.24 | 0.64 |
| Intercept | 27024716.30 | 1 | 27024716.30 | 1199.78** |
| Depletion | 16715.45 | 1 | 16715.45 | 0.74 |
| Goal Type | 5628.06 | 2 | 2814.03 | 0.13 |
| Depletion X Goal Type | 49361.59 | 2 | 24680.79 | 1.10 |
| Error | 6982655.41 | 310 | 22524.70 | |
| Total | 34053814.50 | 316 | | |

**$p < 0.01$

Table 6.

*Descriptive Statistics of Study 3 Variables*

| | Goal-Relevant Intentions | | Goal Commitment | | Partner Commitment | |
|---|---|---|---|---|---|---|
| **Conditions** | Mean | SD | Mean | SD | Mean | SD |
| Control Goal | 3.16 | 0.91 | 5.40 | 1.45 | 6.46 | 0.93 |
| Target Goal | 3.16 | 0.78 | 5.72 | 1.23 | 6.51 | 0.85 |
| Non-Goal | 3.14 | 0.85 | 5.44 | 1.40 | 6.31 | 1.11 |

Table 7.

*Summary of One-Way ANOVA Results for Study 3: Goal Relevant Intentions Do Not Differ Between Instrumentality Conditions*

| Source | Sum of Squares | df | Mean Square | F |
|---|---|---|---|---|
| Between Groups | 0.03 | 2 | 0.01 | 0.98 |
| Within Groups | 209.56 | 290 | 0.72 | |
| Total | 209.59 | 292 | | |

$^{**}p < 0.01$

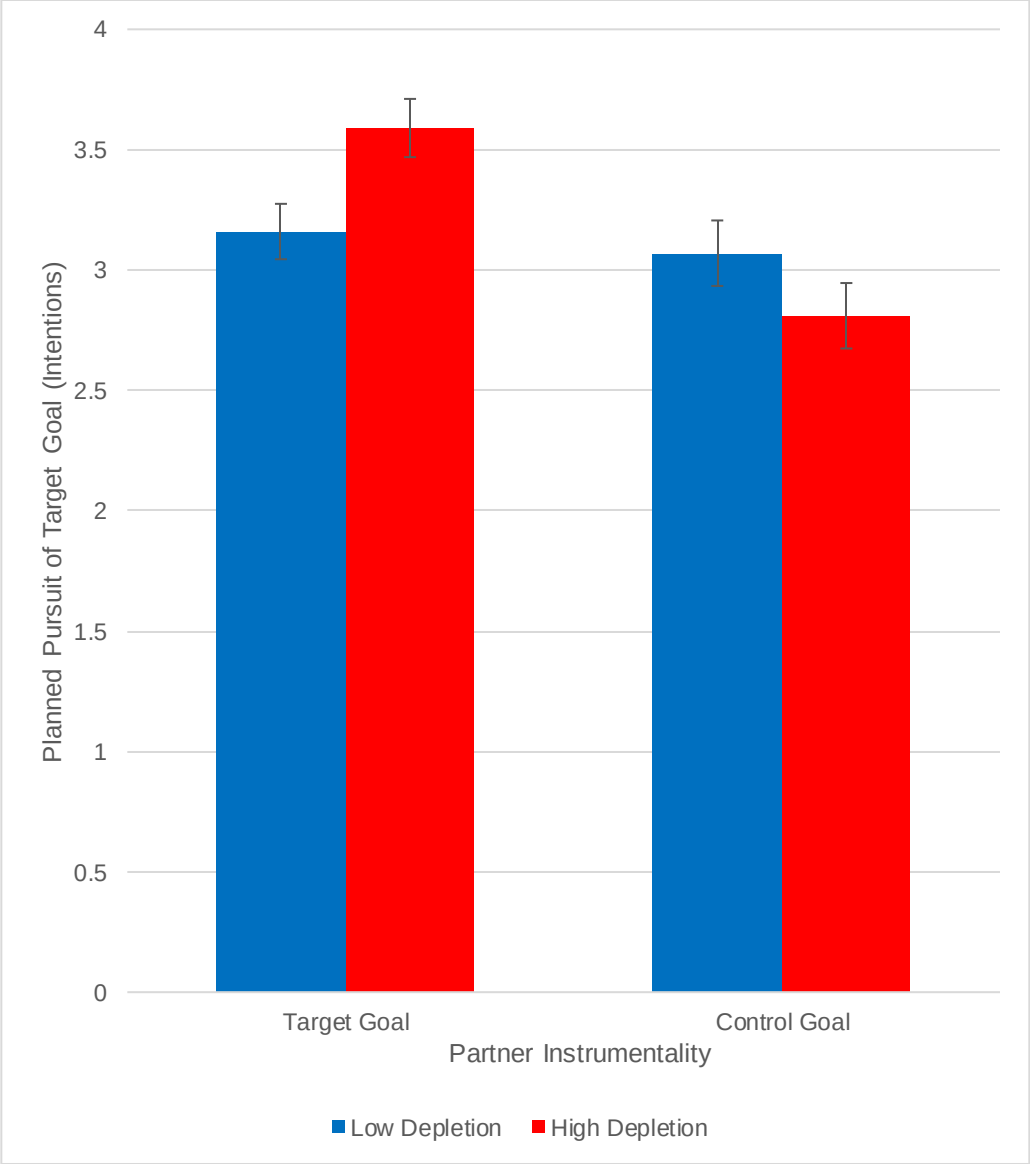



*Figure 1*. Planned Goal Pursuit Differs by Instrumentality Condition and Depletion Level.

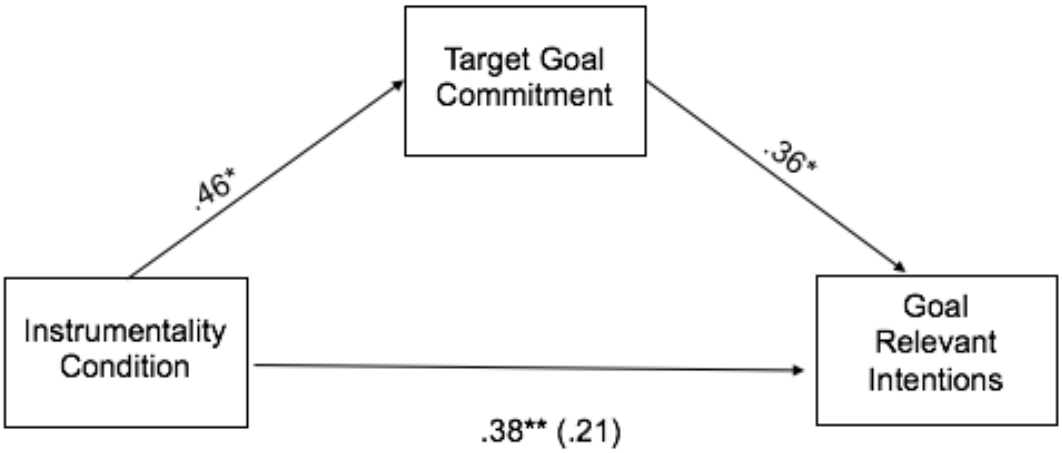



*Figure 2*. The Effects of Instrumentality Condition on Planned Goal Pursuit via Goal Commitment in Study 1. Unstandardized regression coefficients are displayed above; the direct effect of instrumentality condition on goal relevant intentions became non-significant when goal commitment was included in the model. The indirect effect of instrumentality condition on goal relevant intentions was 0.17, which was statistically significant 95% CI [.0387, .3139]. *Note*: $p < .05$*, $p < .01$**.

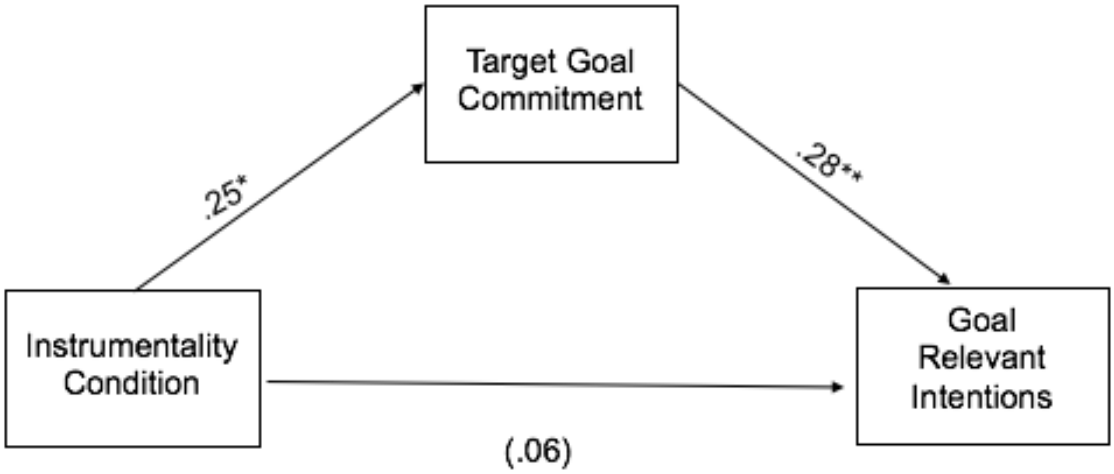
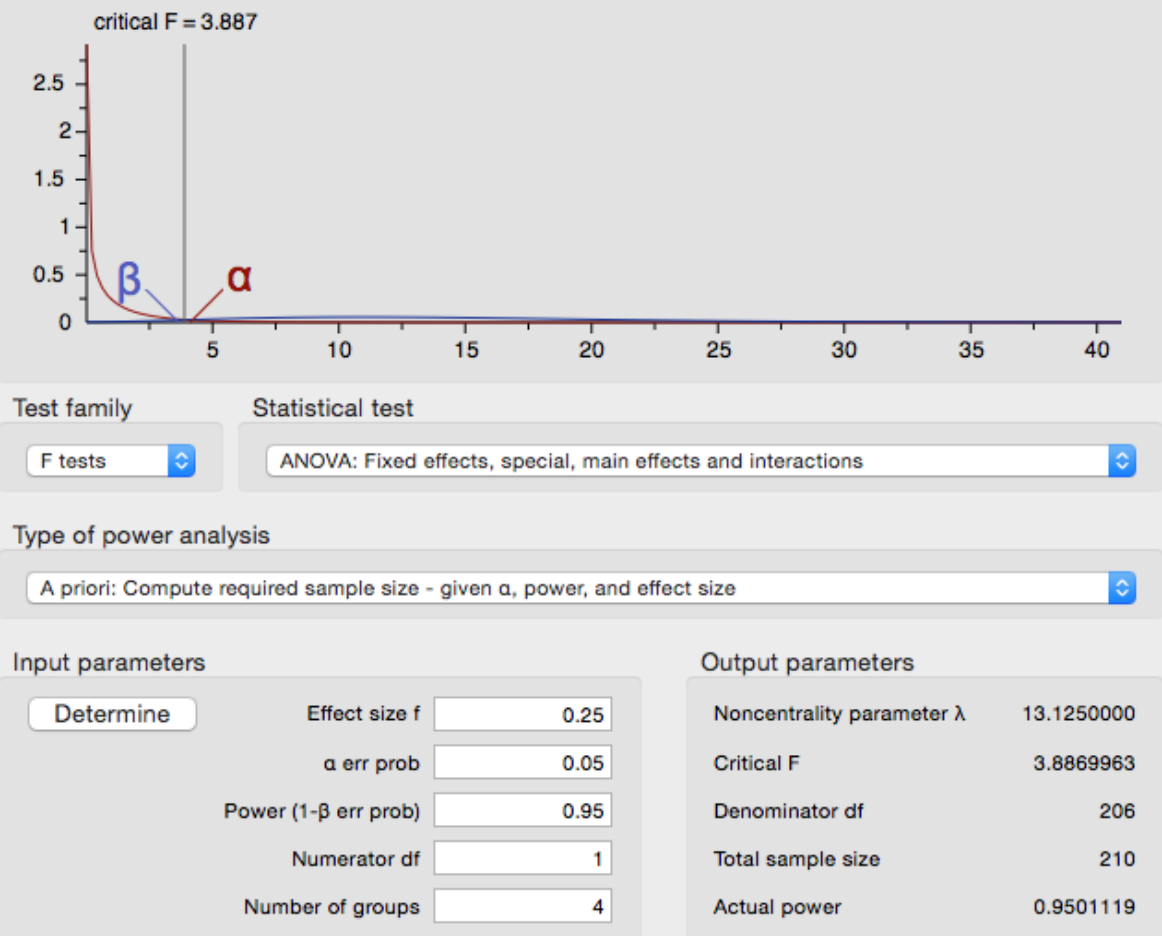



*Figure 3*. The Effects of Instrumentality Condition on Planned Goal Pursuit via Goal Commitment in Study 3. Unstandardized regression coefficients are displayed above; the indirect effect of instrumentality condition on goal relevant intentions was 0.07, which was statistically significant 95% CI [.0176, .1334]. *Note*: $p < .05$*, $p < .01$**.

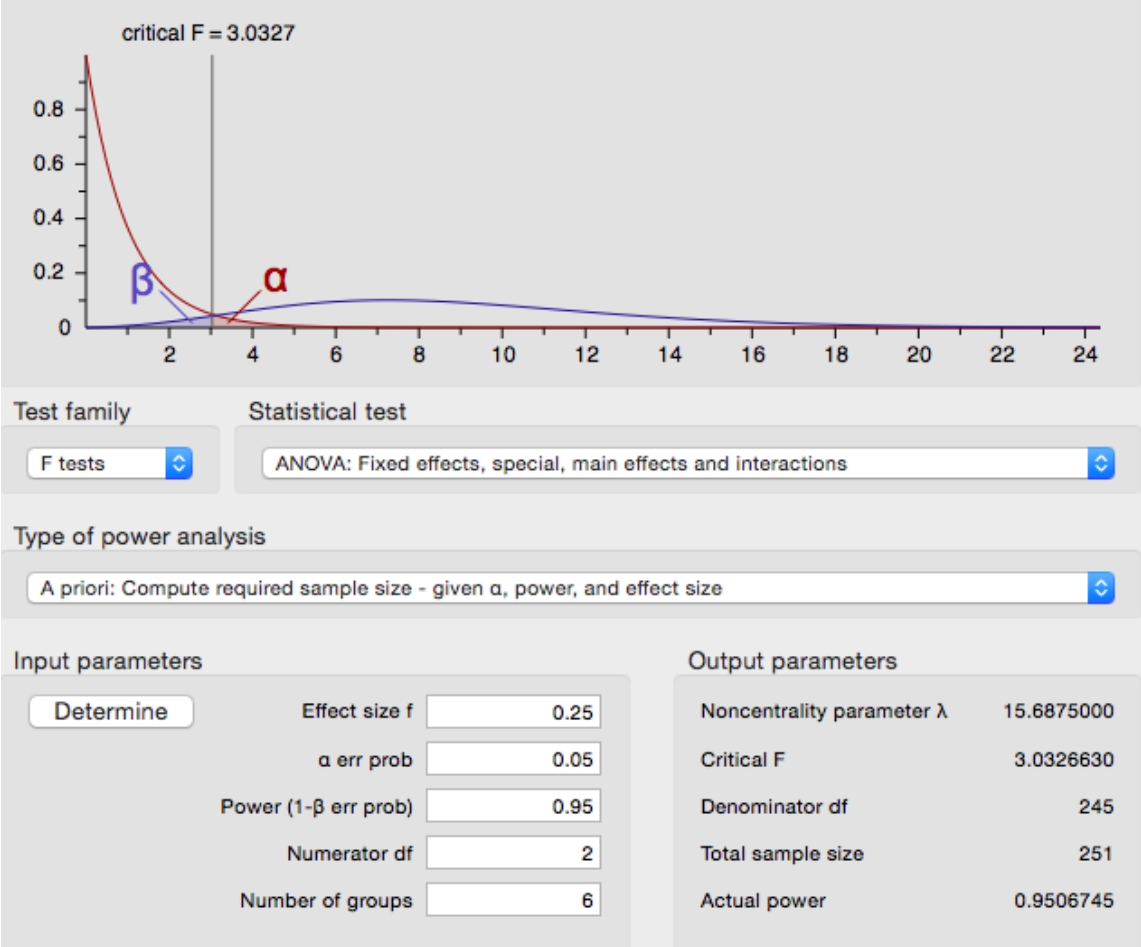
# APPENDIX A

## G.POWER SOFTWARE FOR A PRIORI POWER ANALYSIS STUDY 1



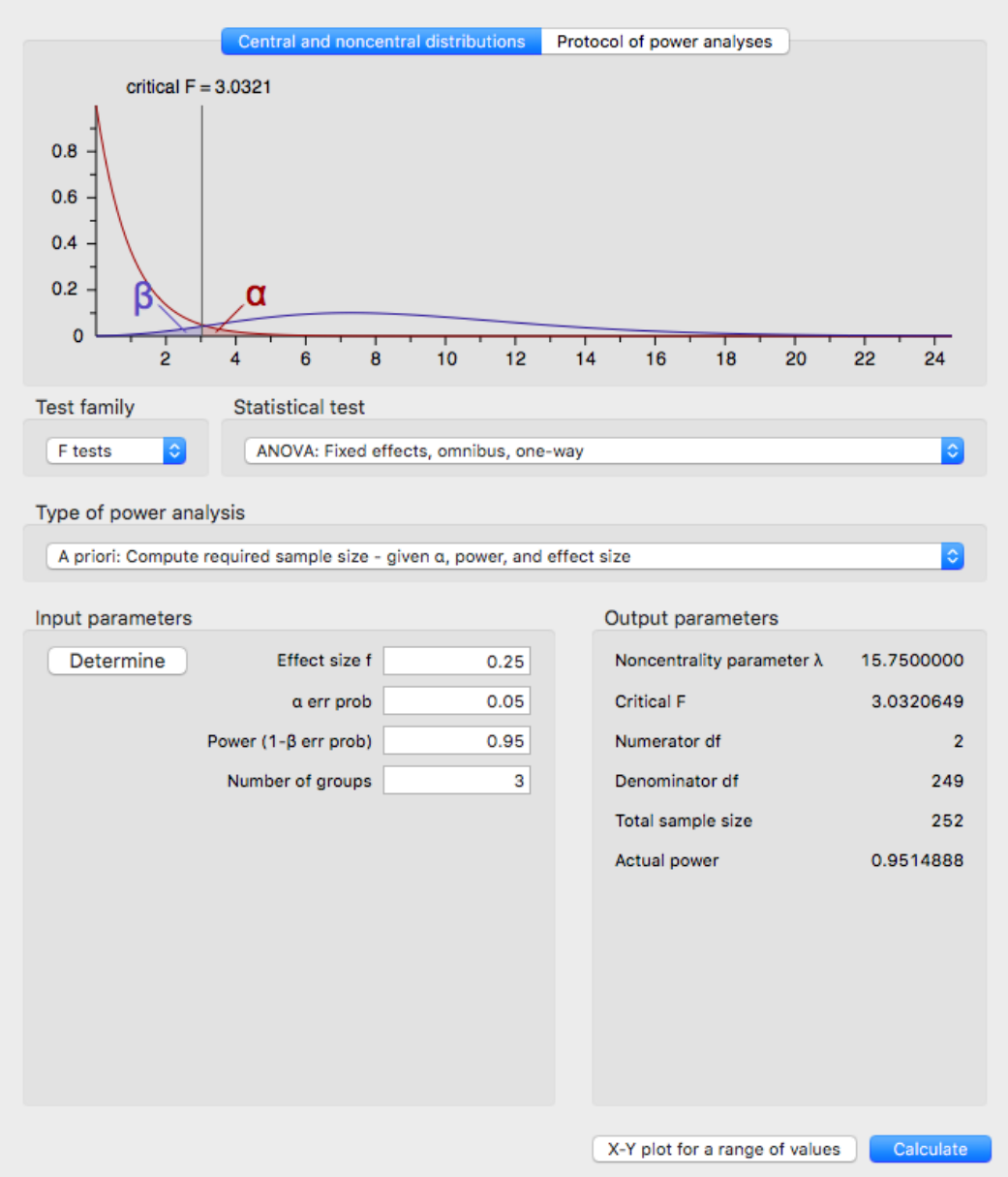
# APPENDIX B

## G.POWER SOFTWARE FOR A PRIORI POWER ANALYSIS STUDY 2



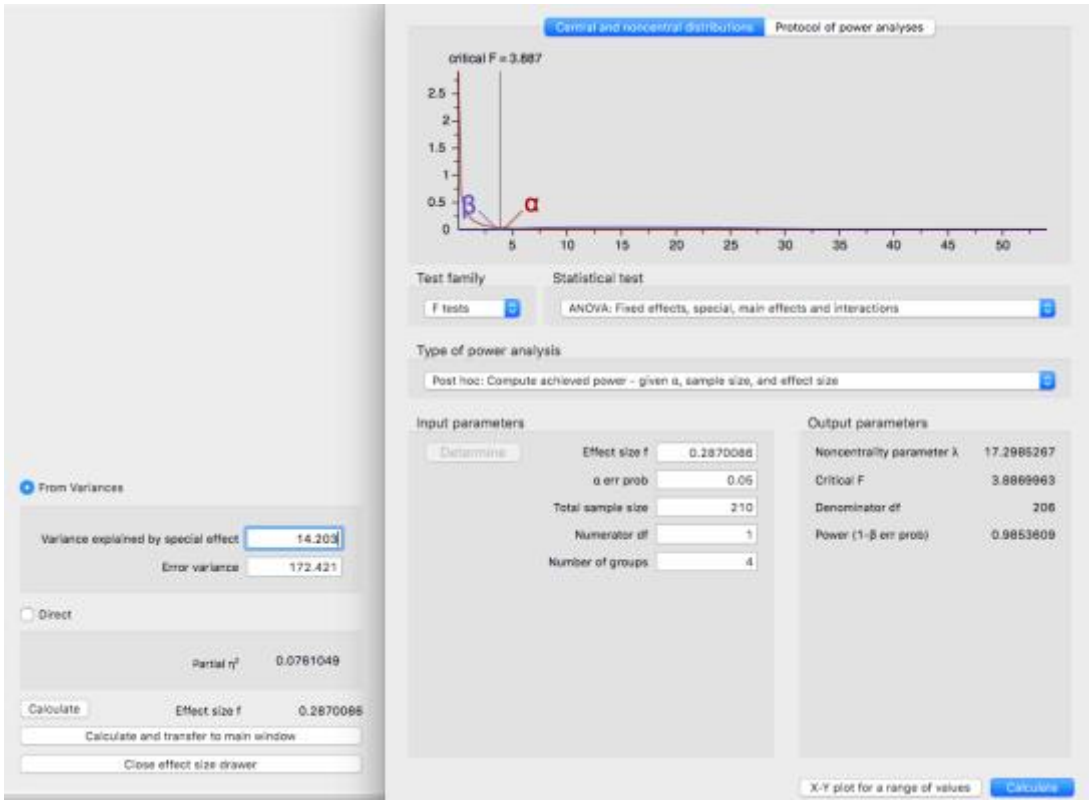
# APPENDIX C

## G.POWER SOFTWARE FOR A PRIORI POWER ANALYSIS STUDY 3



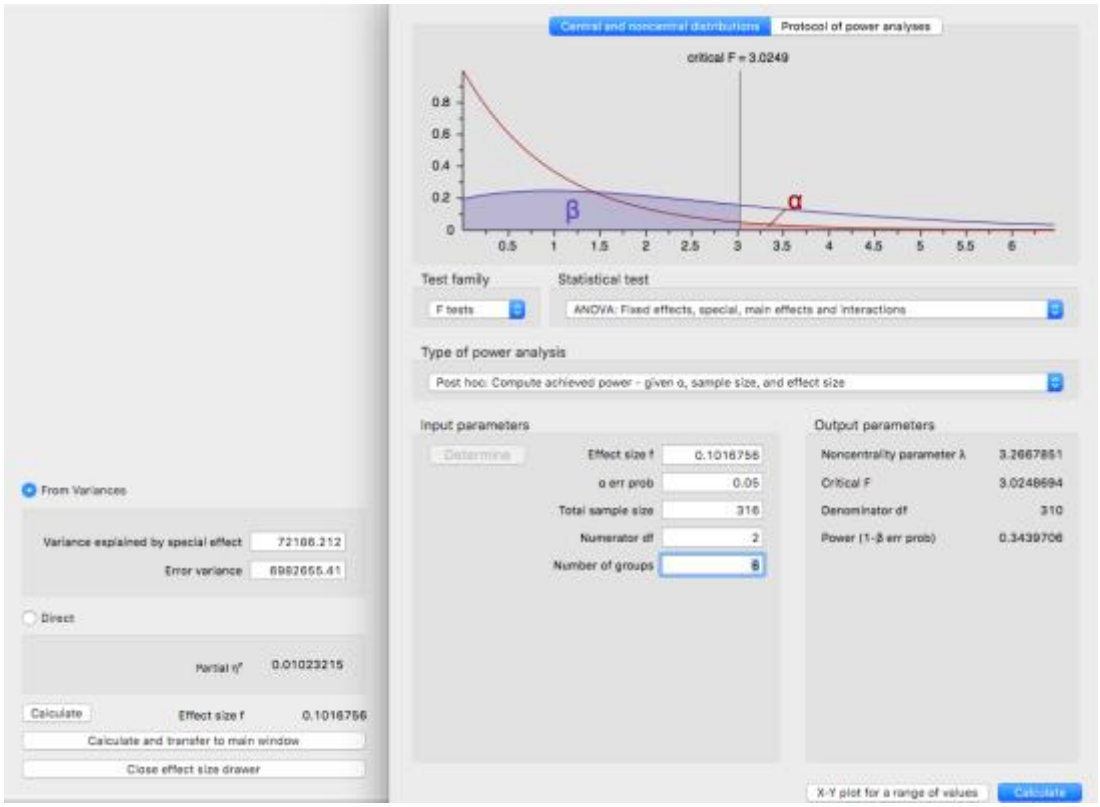
# APPENDIX D

## POST HOC POWER ANALYSIS STUDY 1



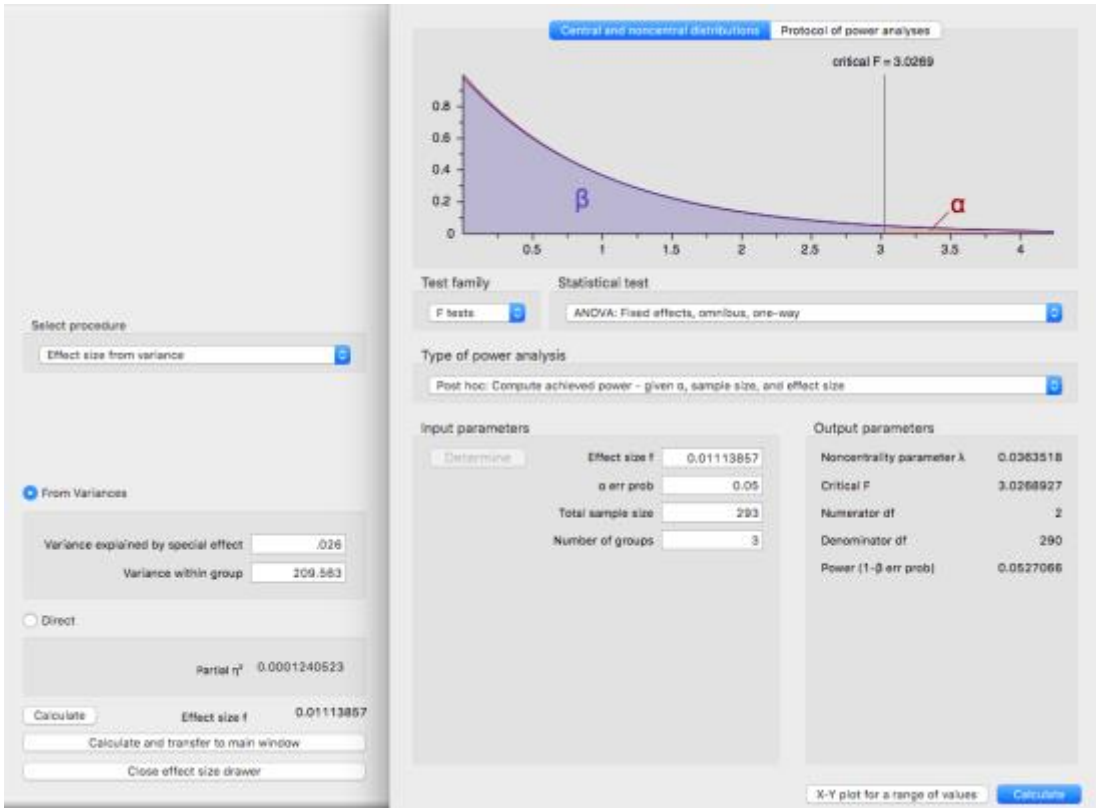
# APPENDIX E

## POST HOC POWER ANALYSIS STUDY 2



# APPENDIX F

## POST HOC POWER ANALYSIS STUDY 3



## APPENDIX G

## STUDY 1 DEPLETION MANIPULATION

Please retype this section of text into the space provided. SKIP ALL VOWELS when you retype this section (condition 1) versus Please SKIP ALL VOWELS THAT COME TWO LETTERS AFTER ANOTHER VOWEL when you retype this section (Condition 2).

The amount of mediation, which is called the indirect effect, is defined as the reduction of the effect of the initial variable on the outcome or c - c'. This difference in coefficients is theoretically exactly the same as the product of the effect of X on M times the effect of M on Y or ab; thus it holds that ab = c - c'. The two are exactly equal when a) multiple regression (or structural equation modeling without latent variables) is used, b) there are no missing data, c) and the same covariates are in the equation. However, the two are only approximately equal for multilevel models, logistic analysis and structural equation model with latent variables. For such models, it is probably inadvisable to compute c from Step 1, but rather c (sometimes called the total effect, should be inferred to be c' + ab and not directly computed. Note that the amount of reduction in the effect of X on Y is not equivalent to either the change in variance explained or the change in an inferential statistic such as F or a p value. It is possible for the F from the initial variable to the outcome to decrease dramatically even when the mediator has no effect on the outcome. It is also not equivalent to a change in partial correlations.

## APPENDIX H

## INSTRUMENTALITY MANIPULATIONS

**Study 1: Target goal instrumentality condition manipulation.** "Please give one brief example of how your romantic partner helps you with a health and fitness goal."

**Study 1: Control goal instrumentality condition manipulation.** "Please give one brief example of how your romantic partner helps you with a career goal."

**Study 2: Target goal instrumentality condition manipulation.** "Please give one brief example of how your romantic partner helps you with your current academic goals."

**Study 2: Control goal instrumentality condition manipulation.** "Please give one brief example of how your romantic partner helps you with your ongoing recreational/hobby goals (e.g., to learn a new skill, to read more, to play a sport)."

**Study 2: Control non-goal condition manipulation.** "Please give one brief example of something you like about your romantic partner."

**Study 3: Target goal instrumentality condition manipulation.** "Please give one brief example of how your romantic partner helps you with a health and fitness goal."

**Study 3: Control goal instrumentality condition manipulation.** "Please give one brief example of how your romantic partner helps you with a career goal."

**Study 3: Control non-goal condition manipulation.** "Please give one brief example of something you like about your romantic partner."

## APPENDIX I

## SCALE ITEMS

1. "Please rate how much time you will spend on health and fitness in the upcoming week." (1= much less than usual to 5 = much more than usual)

2. "Please rate how much energy you will spend on health and fitness in the upcoming week." (1= much less than usual to 5 = much more than usual)

3. "My health and fitness goals are important to me." (1 = I completely disagree to 7 = I completely agree)

4. "I care about my progress on my health and fitness goals." (1 = I completely disagree to 7 = I completely agree)

5. "I feel satisfied with my recent progress on my health and fitness goals." (1 = I completely disagree to 7 = I completely agree)

6. "My academic achievement goals are important to me." (1 = I completely disagree to 7 = I completely agree)

7. "I care about my progress on my academic achievement goals." (1 = I completely disagree to 7 = I completely agree)

8. "I have made good progress on my academic achievement goals lately." (1 = I completely disagree to 7 = I completely agree)

9. "I am pleased with my progress in academic achievement." (1 = I completely disagree to 7 = I completely agree)

10. "I feel satisfied with my progress on my academic achievement goals lately." (1 = I completely disagree to 7 = I completely agree)

11. "I have made good progress on my career goals lately." (1 = I completely disagree

to 7 = I completely agree)

12. "I am pleased with my progress towards my career." (1 = I completely disagree to 7 = I completely agree)

13. "I feel satisfied with my progress on my career goals lately." (1 = I completely disagree to 7 = I completely agree)

14. "I am highly committed to my current partner." (1 = I completely disagree to 7 = I completely agree)

15. "I believe I will stay with this partner for the rest of my life." (1 = I completely disagree to 7 = I completely agree)

## APPENDIX J

## STUDY 2 DEPLETION FRAME INSTRUCTIONS

Please read these instructions carefully!

Next, you will complete two tasks, for a total of ten minutes. The first task is an entertaining puzzle task. The second is a challenging academic task designed to help you improve your performance on tests.

You can decide how much time to spend on the first before moving on to the second. Whenever you want to move on, just click on the button onscreen that says "skip to next task". If you spend less time on the first task, the computer will give you more time to complete the second task. The computer will give you ten minutes total, so choose to split up that ten minutes however you like.

**Depletion Frame Condition.** Important Note! Engaging in the first task will drain cognitive resources that will help you learn the most from the academic task. Still, how much time you spend is your own choice. Click next to begin.

**Non-Depletion Frame Condition.** Important Note! Engaging in the first task will NOT drain cognitive resources, and will not affect how much you learn from the academic task. Still, how much time you spend is your own choice. Click next to begin.

## APPENDIX K

## STUDY 2 ENTERTAINING PUZZLE TASK

Word Puzzles

Type in the correct answer: What is the common bond? Please complete each of the following. If you can't see a solution, just type "no solution".

Again, remember, you can move on to the difficult academic task whenever you like.

1. Elephant, Car, Tree

2. A Ball - A Salad - A Coin

3. Fishing pole, broken arm, broadway play

4. A Bottle - A Baseball Player - A Mushroom

5. A Bell - Mouth - A Shoe

6. A Tug of War - The Nightly News - A Boat

7. Sea, m&ms, turtle

8. A Basketball Court - A Highway - A Bowling Alley

9. Joke, safe, whip

10. A Hockey Game - A Restaurant - A Bank

11. A Bull - A Car - A Shoe Salesman

12. A Courtroom - A Dugout - A Park

13. A Football Team - A Phone - A Stereo

14. Conspirators, novels, cemetaries

In the next section, each of these words can be turned into another word to form a rhyme. For example, "hog dance" can become "pig jig". Please complete each of the following. If you can't see a solution, just type "no solution."

1. Head policeman

2. Insect carpet

3. Insect carriage

4. Horse gaze

5. Home mate

6. Jail odor

7. Intelligent body organ

8. Jelly made from a shell fish

9. Heavy metal sleigh

10. A large branch

11. A contest for who ties their shoes the fastest

12. A daring removal of hair from the face

13. A fake formal dance

14. A farm house used to store the favorite string

15. A feathered animals droppings

16. A fragile end of the finger

17. A green mineral made into a cutting device

18. A happy post high school student

19. A keen eyed bird's discussion

## APPENDIX L

## DEMOGRAPHIC QUESTIONNAIRE

Please respond to the following questions.

1. Please indicate your gender:
   Female
   Male

2. Please indicate your ethnicity:
   a. African American / Black
   b. Arabic or Middle Easterner
   c. Asian, East Asian, or Pacific Islander
   d. Caucasian / White
   e. Hispanic
   f. Native American / American Indian
   g. Multiracial
   h. Other

3. Please provide your age:_____

4. Please indicate if you are in a romantic relationship:
   Yes
   No

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## ABSTRACT

**OUTSOURCING SELF-REGULATION: A DIRECT REPLICATION**

by

**JULIA BRISKIN**

**December 2016**

**Advisor:** Richard Slatcher, PhD

**Major:** Psychology (Cognitive, Developmental, & Social)

**Degree:** Master of Arts

This paper examines health and fitness goal pursuit from a social psychological perspective, and the question of how outsourcing self-regulation influences goal-relevant behavioral intentions for members of romantic couples is addressed. A direct, preregistered replication study of the sole outsourcing self-regulation paper (Fitzsimons & Finkel, 2011) was conducted. In three replication studies, participants' "perceived partner instrumentality" was manipulated, and in Study one ($N$ = 210) and Study three ($N$ = 293), planned health goal pursuit was assessed as the dependent variable; in Study two ($N$ = 316), procrastination time on an entertaining task was used as a measure of self-regulatory outsourcing. Interestingly, results showed the opposite pattern of findings from the original studies; increased perceived partner instrumentality led to *increased* goal relevant intentions in studies one and three, mediated by goal commitment. Findings are in line with social support literature, and suggest that partner support bolsters goal commitment and health goal intentions. Suggestions for future research include examining outsourcing self-regulation in daily life, and implications for understanding and treating health issues (such as obesity) are discussed.

## AUTBIOGRAPHICAL STATEMENT

Julia Briskin graduated magna cum laude with a Bachelor of Arts in Psychology from the University of Michigan in 2012. She is currently a social-personality doctoral student at Wayne State University, working with Dr. Rich Slatcher, Dr. Tim Bogg, and Dr. Catalina Kopetz. Her research interests focus on how relationship processes and self-regulation processes interact to influence physical and psychological health in romantic couples. Specifically, her research investigates interpersonal influences on self-regulation, the effects of social support on goal pursuit in romantic couples, technology interference in relationships, and day to day relationship conflict. She is also interested in how mindfulness may influence self-regulation, relationship processes, and relationship conflict.